

DeltaLog5 ShortForm

Introduction

DeltaLog5 program allows to manage from your own PC the HD2110 sound level meter in an easy and intuitive way: you can start and stop logging, set configuration parameters, dump data stored on the instrument memory and display them both in table and graph form, view and save in a file the measurements recorded by the instrument in real time, print data and export them either in Excel® or in text format, copy the content of the main window and paste it in another application as a graph or a text, upgrade the instrument firmware,...

See the user's manual for a detailed description of the instrument functions.

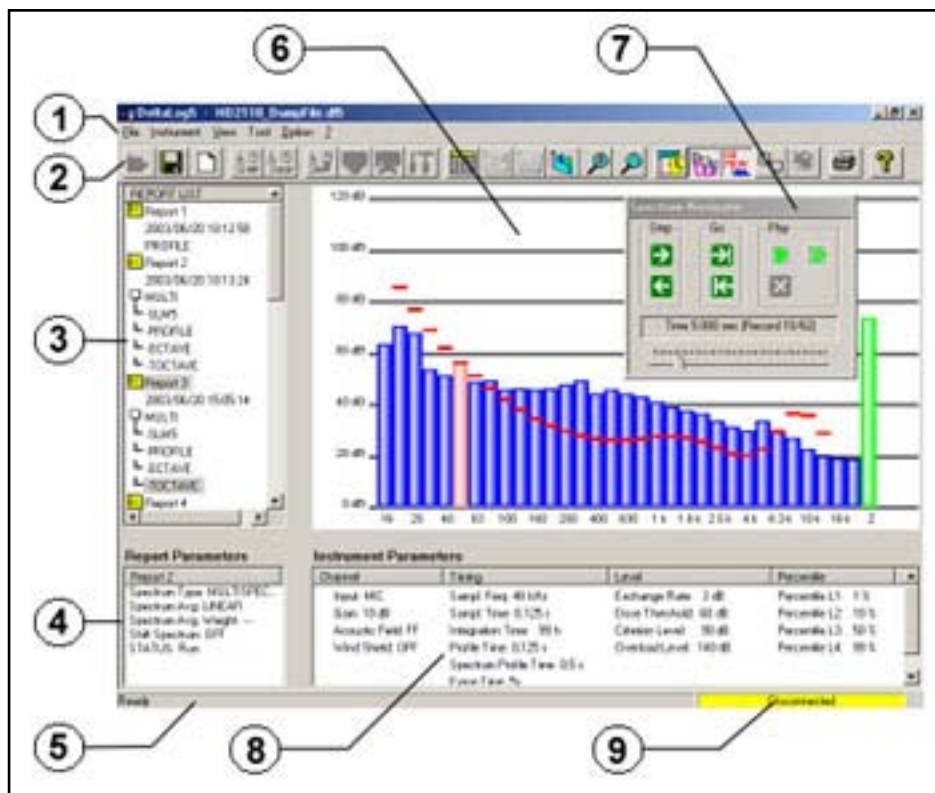
Data Dump

This function is used to download to a PC the data logged through the Logging procedure and stored on the instrument memory.

These data can then be displayed on the PC monitor and saved in a file.

Data View

DeltaLog5 window appears as follows:



The following areas can be identified:

- 1. Main menu:** encloses all **menu** items.
- 2. Toolbar:** all of the **icons** corresponding to the program main commands.
- 3. Report List:** area including information on **downloaded files**.
- 4. Report Parameters:** parameters of the currently selected report.
- 5. Status Bar.**
- 6. Main Window:** displays the current report in table or graph format.
- 7. Spectrum Navigator: Set of Commands** to move among the multiple spectrums.
- 8. Instrument Parameters:** lists the instrument settings relevant to the selected report.
- 9. Connection Status** with the serial port.

The content of the instrument memory can be displayed either in table or in graph format. The graph format itself changes according to the type of data: a continuous function for time profiles, an histogram for single spectrums, an histogram or a 3D (three-

dimensional) graph for multiple spectrums.

Single Reports

Data come out as single reports or as multiple reports according to the way they have been logged: pressing **the REC key only** (on the sound level meter) for more than 2 seconds, will produce a **single report**, which could be:

- SLM5
- PROFILE
- OCTAVE
- TOCTAVE

SLM5 provides the value of the 5 parameters displayed when the REC key was pressed.

PROFILE consists of a sequence of values that constitute the time profile (or History Profile) of a variable with a sampling interval corresponding to the *Profile Time*.

OCTAVE and *TOCTAVE* represent a single spectrum per octaves or per 1/3 octaves.

Multiple Records

Pressing both **REC and START keys**, will run a **multiple** section, named **MULTI** in the Report List. The content of the multiple session is defined, on starting recording, according to the *DataLogger* item setup in the HD2110 menu. It consists of one or more of the following items:

- SLM5
- PROFILE
- OCTAVE

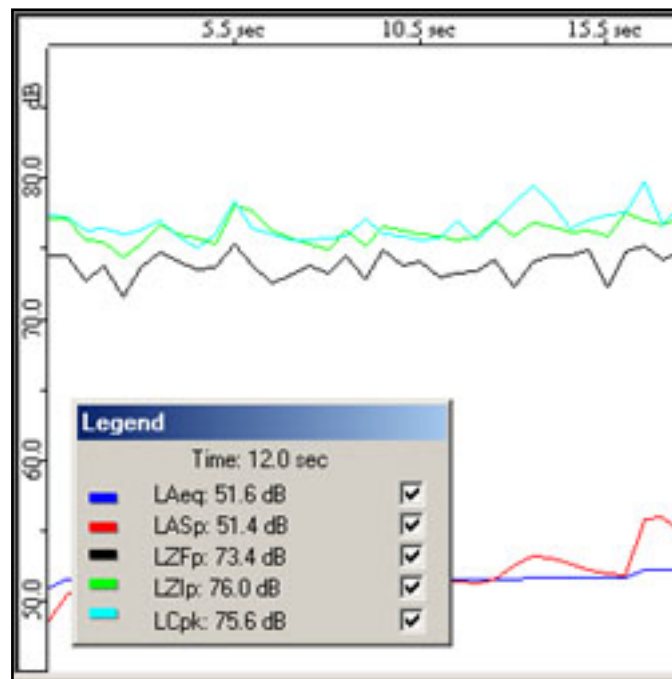
- TOCTAVE

Multiple Reports >> SLM5

MULTI >> SLM5 represents the value of the Sound Level Meter 5 parameters, logged according to a fixed interval of 0.5 seconds, as shown in the table below.

Time (sec)	LAeq (dB)	LASp (dB)	LZFP (dB)	LZIp (dB)	LCpk (dB)	Status
0.5 sec	51.9	53.3	74.4	77.2	76.4	
1.0 sec	52.2	53.0	75.7	77.6	78.1	
1.5 sec	52.2	52.8	72.8	76.5	75.4	
2.0 sec	52.2	52.6	74.6	77.1	77.8	
2.5 sec	52.2	52.3	74.6	76.8	76.8	

Press *View Graph* to change to data display in graph format:



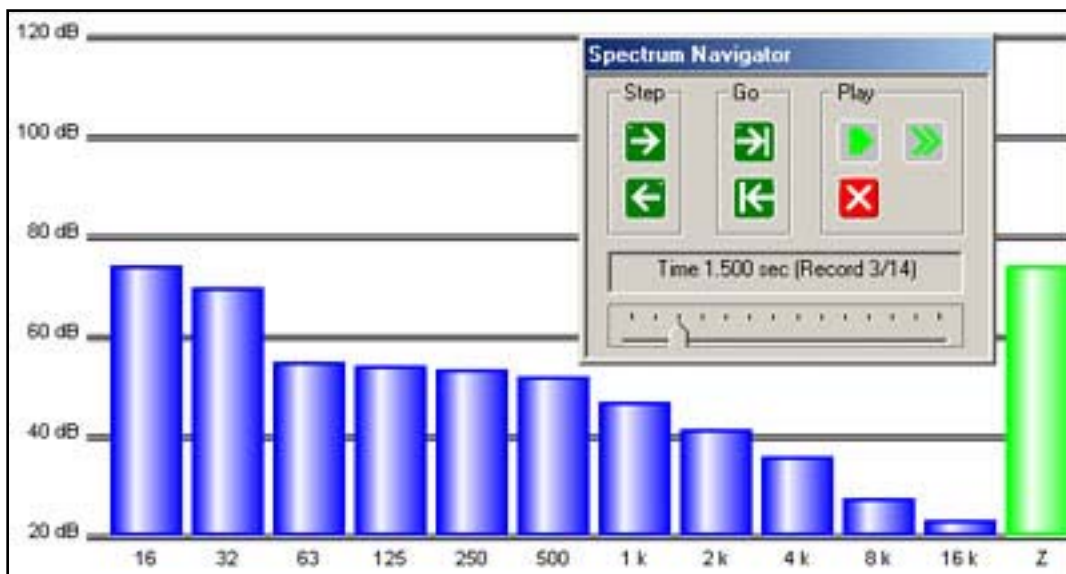
Multiple Reports >> Profile

PROFILE represents the time profile (or History Profile) of a

variable logged with a sampling interval equal to the *Profile Time*. It is represented as a table of values or as a continuous graph.

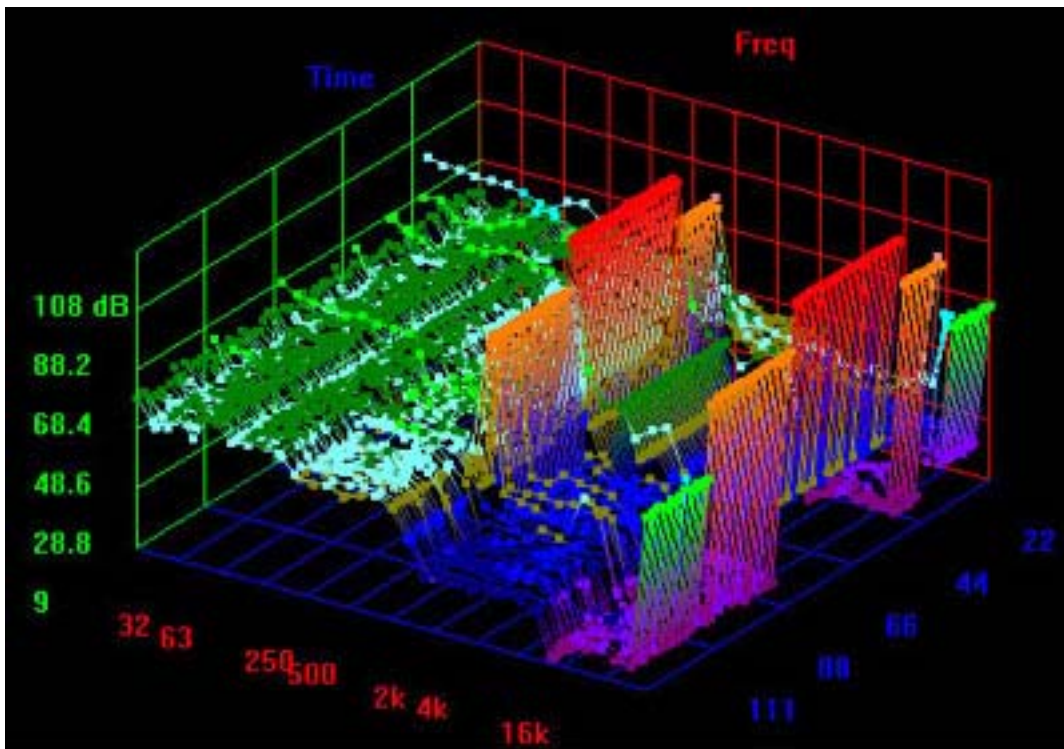
Multiple Reports >> Octave and TOctave

OCTAVE and *TOCTAVE* represent a succession of spectrums by octaves or 1/3 octaves logged according to a time interval equal to the *Spectrum Profile Time*. Logged spectrums will be displayed one at any one time: either as a data table, or as an histogram. Two instruments are available to analyse the whole set of spectrums: the *Spectrum Navigator* and the *3D graph*.



3D Graph

The simultaneous display of the whole set of spectrums requires a 3D graph showing all of the three variables: filter nominal frequency, report amplitude and progressive number.



Each of the elements part of the graph represents a single spectrum: the active one is red.

The 3D graph can be resized, rotated, moved.

Cross Reference

This function generates a cross reference between the reports of a single session of data. If you select a sample from one of the reports (SLM5, History Profile or spectrums) the samples from the other reports *corresponding to the same logging instant* will be highlighted.

In tables, an arrow indicates the selected elements,

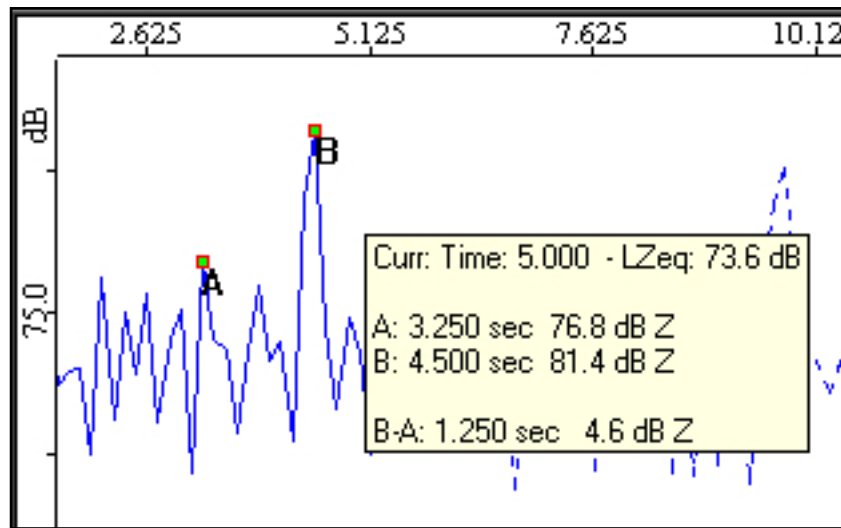
Time (sec)	LAeq (dB)	LASp (dB)	LZFp (dB)
0.5 sec	51.1	48.8	74.5
1.0 sec	51.7	50.5	74.6
1.5 sec	51.8	51.2	72.7
2.0 sec	51.7	51.1	73.9
2.5 sec	51.7	51.4	71.7
→ 3.0 sec	51.7	51.5	73.7
3.5 sec	51.6	51.4	74.9
4.0 sec	51.5	51.3	74.1

while in graphs they are identified by a vertical bar.

Functions of the Mouse Right Button

If you press the mouse right button when the main window shows a graph in SLM5 and History Profile mode, a menu will open with the following commands:

- **Point marks** views the sampling instants with some points on the graph.
- **Trace mouse coordinates** provides the indication of coordinates such as [sampling date and time, variable value] by tracing with the mouse.
- **Axis** applies a dotted grid on the graph.
- **Zoom** enlarges a selected area of the graph.
- **Fit...** fits graph dimensions in order to cover all available height (*Height*), width (*Width*) or the whole window (*Page*).
- **Set Marker A - Set Marker B - Clear Markers** The Trace Mouse Coordinates function can show the difference between two points (A and B) of the graph: to select the two points, click the first point with the mouse left button, then select *Set Marker A* with the right button; repeat the operation to mark the second point B and select *Set Marker B*. The label that appears on the graph will show the amplitude difference between the two points:



To clear the two markers, select *Clear Markers*.

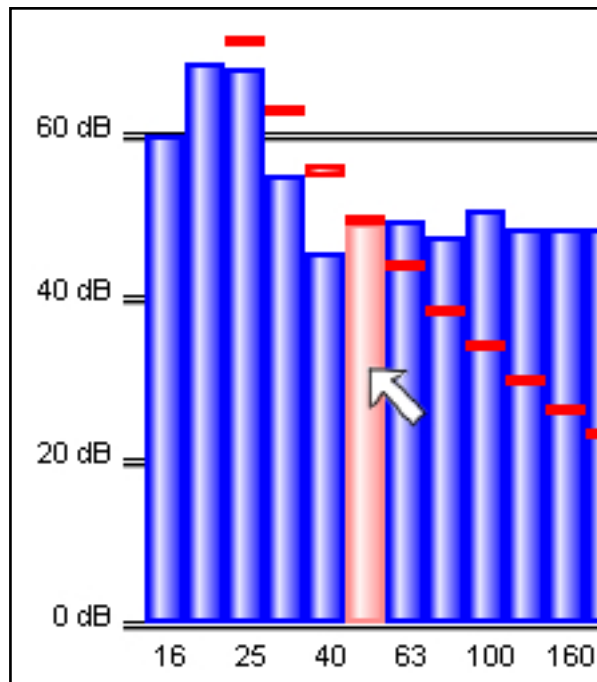
Back Erase Function

The sound level meter PAUSE/CONTINUE key is used, during the logging stage, to interrupt a measurement in progress. All data logged up to the moment the key is pressed, are used to calculate the integrated parameters. However, there are cases in which it is useful to remove the last measurements logged just before the PAUSE key was pressed, such as, for example, those which were generated by unexpected events and which are not typical of the sound being examined. This function of the sound level meter is called *Back Erase* (see the HD2110 manual).

Logged data, included in the eliminated interval, are marked by a X.

Isophone Curves

DeltaLog5 provides the tracing, in 1/3 octave spectrums, of isophone curves pursuant to ISO226/1987.



Exporting Data

Export to Excel

Data view in table format can be automatically exported to Excel simply by pressing *Export to Excel*.

Firmware Upgrade

The program that drives the HD2110 unit (*firmware*) can be upgraded through the **Firmware Upgrade** function in the *Option* menu.

Only version 2.1 (or higher) of HD2110 is provided with firmware upgrade function through DeltaLog5. Previous versions have to be updated by Delta Ohm only.