SVANTEK

USER MANUAL

Supervisor Lite

SOFTWARE

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Rev. 1.00

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The succeeding software revisions (marked with the higher numbers) can change the view of some displays presented in the text of the manual.

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1 INTRODUCTION

The Supervisor software is designed to extend the functionality of the Svantek instruments for Health and Safety professionals. Supervisor can be used in two modes - Advanced (*Supervisor*) or Simple (*Supervisor Lite*). *Supervisor Lite* is complementary module of the *Supervisor* software for Health and Safety professionals who are just starting to work with the program.

1.1. ABOUT SUPERVISOR

General characteristics:

- Easy to use, intuitive interface
- Easy measurement database management and browsing
- Very convenient and fast generation of reports with templates and by free hand
- Powerful tools for data analysis
- Easy installation including sample measurement files
- Available in English, German, Spanish, French, Hungarian, Italian, Polish, Russian, Chinese (Traditional / Simplified), Portuguese (Brazilian), Korean
- Contextual help

Main applications:

- Noise dosimetry
  - Exceedance data presentation from measurement files
  - Noise exposure recalculations in accordance with ISO 9612
  - Hearing protection adjustment in accordance with ISO 4869-2
  - *What-if* analysis to simulate effects of noise source insulation
- Sound level meters
  - Time history logger-based recalculations with possibility of break-time and disturbance removal
  - 1/1 and 1/3 octave band sound analysis
- Vibration dosimetry
  - Hand-Arm dose recalculations in accordance with ISO 5349-2
  - Whole-Body dose recalculations in accordance with ISO 2631-1

Measurement instruments management:

- Easy access to instrument configuration and data
- Quick measurement data download
- Clear setup editor with presets for compliance with health & safety legislation
- Inventory management with calibration certificate validity notifications

Analysis tools:

- Wide range of available charts for adjustable data presentation in plot and table
- Quick in-blocks recalculations on time history data
- Time history data shifting, clipping and cutting
- 1/1 octave and 1/3 octave bar and spectrogram plots
- Statistical levels presentation

Additional features:

- Easy maintenance with assigning measurement data to locations, users and tasks
- Summary reports across wide ranges of measurement data
- Widely used intuitive drag-and-drop convention
- Audio events, voice comments and WAVE files support

1.2. SYSTEM REQUIREMENTS

- 1.6 GHz CPU
- 1 GB RAM
- 1280×768 pixels colour display
- 500 MB free disk space (more disk space may be necessary in the case of large databases)
- MS Windows 7 / 8 / 10 / 11
- (*recommended*) MS Word 2003 or newer for extended reporting capabilities

Supervisor supports all Svantek instruments for Health and Safety professionals: SVAN 971, SV 971A, SV 973 and all modifications of SV 104, SV 106, SVAN 977, SV 102, SV 101 and SV 100.

1.3. SOFTWARE INSTALLATION

In order to install Supervisor, open the installation file which can be downloaded from the Svantek website. After opening it, follow the installation instructions.

You will be asked whether to install Supervisor for yourself, or for anyone who uses the computer on which Supervisor is being installed. This choice determines the area in which Supervisor settings and shortcuts are stored and hence its availability to users sharing the workstation.

Note: The USB drivers are integrated with the installation file and you do not have to download them yourself from the website.

1.4. CHOOSING SUPERVISOR MODE

When you open Supervisor for the first time, the welcome dialog box proposes you choosing the program mode: Advanced (SUPERVISOR) or Simple (SUPERVISOR Lite).

You can disable the appearance of this dialog box at the next opening of the program in the Main Options window – see Chapter 1.6.

Fig. 1-1. Choosing the Supervisor mode

You can also switch between the modules when Supervisor is running by clicking the Svantek icon and clicking in the opened menu **Run as Supervisor Advanced** or **Run as Supervisor Lite**.

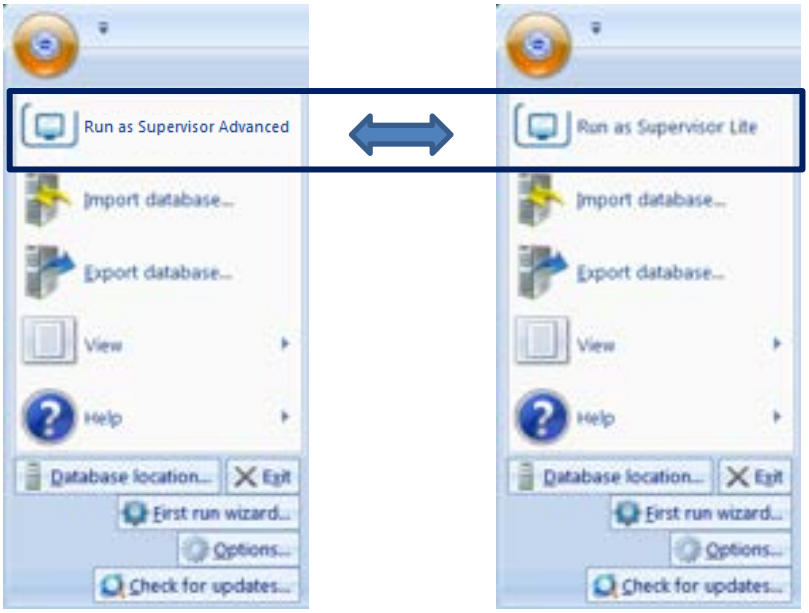


Fig. 1-2. Switching the Supervisor module

1.5. HOW TO USE SUPERVISOR

Supervisor have three tools:

- *Instrument*,
- *Data Browser*,
- *Sessions*.

You can select the tool using the tabs located below the title bar (Fig. 1-3). There can be multiple Sessions opened simultaneously, and a tab is created for each opened *Session*.

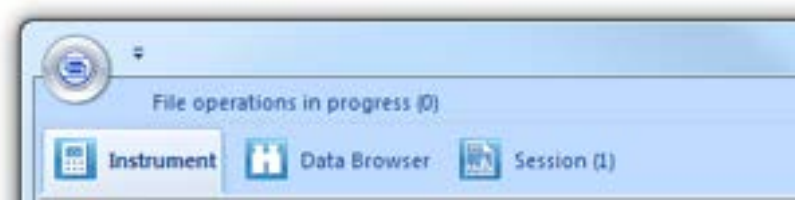


Fig. 1-3. Buttons for the selection of modes in which Supervisor can be used

Instrument allows for:

- Managing Svantek instruments used with Supervisor,
- Exchanging data (measurement results as well as the instruments' settings) between Svantek instruments and a PC.

Data Browser allows for:

- Viewing and organizing the database of measurement results downloaded from Svantek instruments,
- Creating *Sessions*.

Sessions allow for:

- Displaying the measurement results downloaded from Svantek instruments,
- Analysing data and performing calculations,
- Generating reports.

More details on using the Supervisor tools can be found in subsequent sections of this manual, as well as in the contextual HTML help, which can be accessed by pressing F1 when using Supervisor or using the **Help topics** command in the main menu.

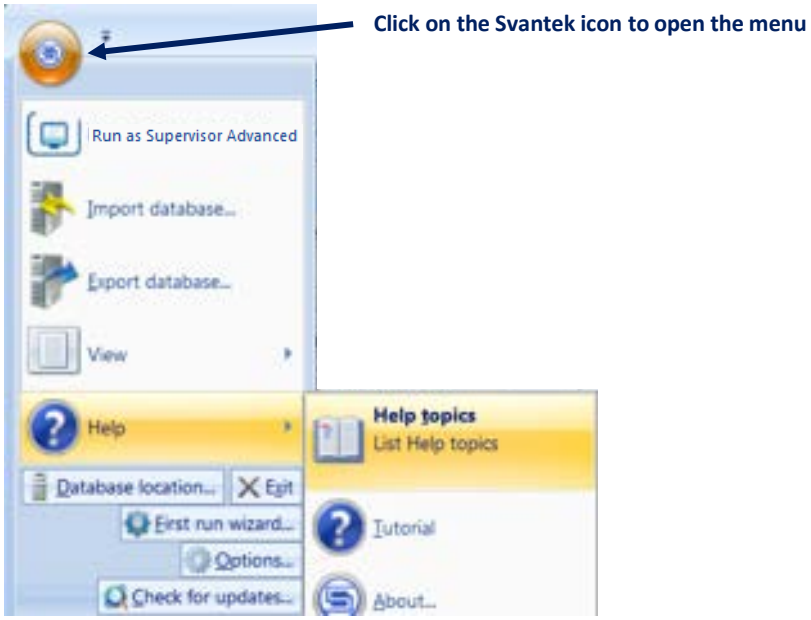


Fig. 1-4. Opening the HTML Help using the main menu

The contents of the HTML Help are the same as of this manual. The HTML Help also includes several mechanisms that are useful for finding information on a particular subject, such as Help Context Tool: in order to open the help topic related to a particular element of the Supervisor application's graphical user interface, press SHIFT+F1 and click on that element.

Note: Please be advised that the easy-to-follow Supervisor Lite tutorial can be found on the Svantek YouTube website or via the links provided in the top right corner of Supervisor Lite.

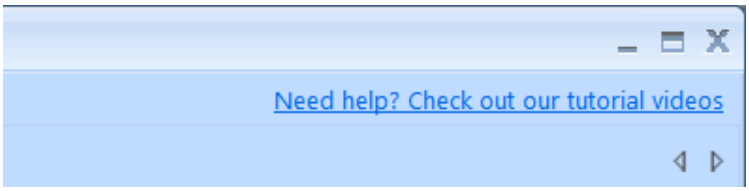


Fig. 1-5. Links to the tutorial Videos

1.6. SUPERVISOR PERSONALIZATION

Supervisor can be personalized using the *Main Options* tool. To open the *Main Options* window, click on the Svantek menu and then click on *Options…* in the drop-down list.

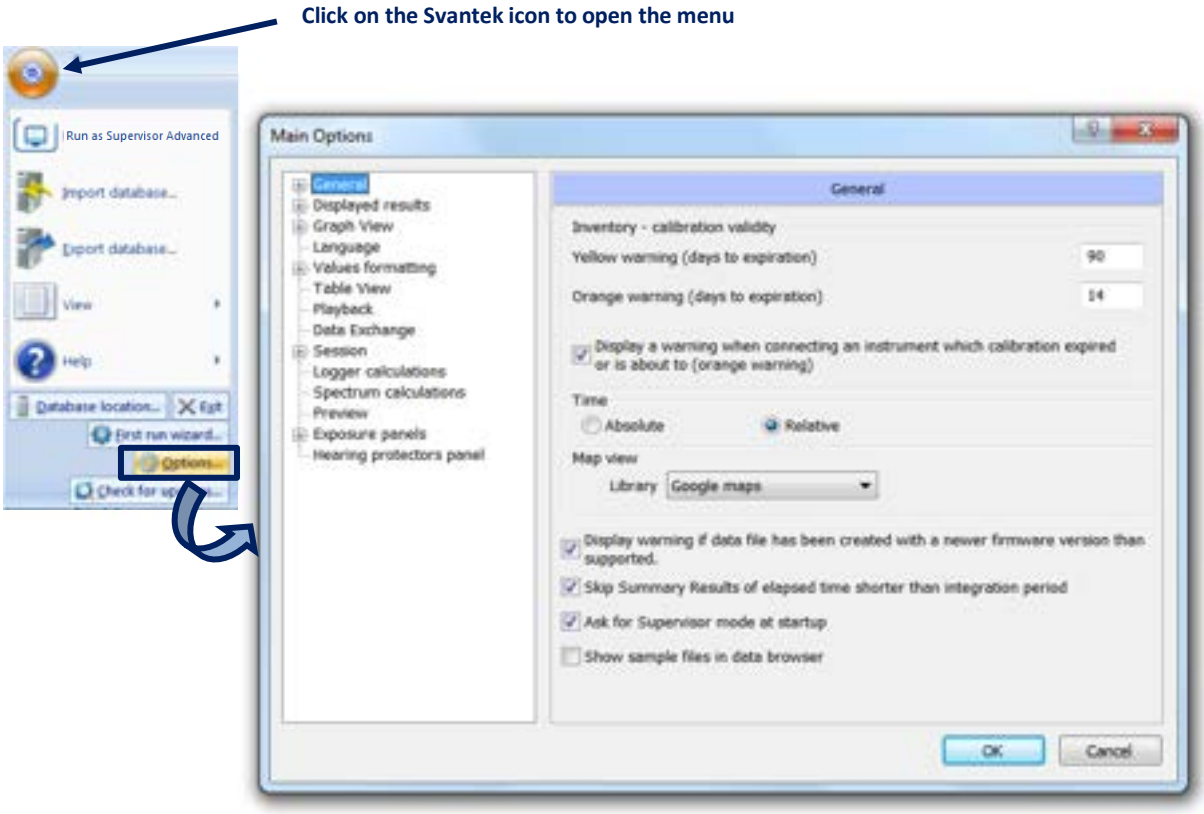


Fig. 1-6. General settings in the *Main Options* dialog box

The left panel of the *Main Options* window presents the tree of sections in which you can configure program settings.

In the *General* section you can define warnings for calibration validity, format of the time axis at the time-history plot (absolute or relative to the measurement start), select the library for the map (Google or Open Layers), display warnings if datafile has been created with a firmware version not supported by Supervisor, skip Summary results which integration period was cut by stopping the measurement earlier, decide whether to ask for Supervisor mode at startup and decide whether to show sample files in the data browser.

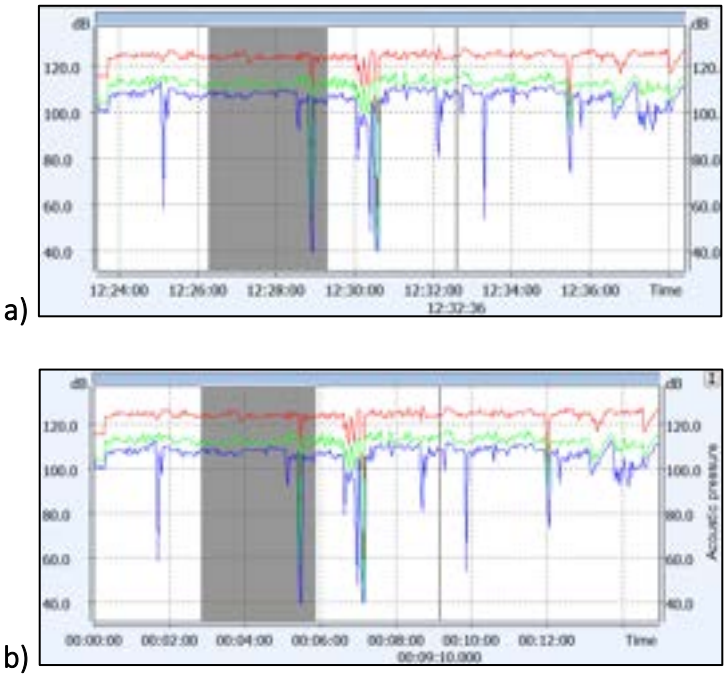


Fig. 1-7. Example of time-history plot with the Absolute a) and Relative b) Time

Other settings are described in the appropriate chapters of this manual.

1.7. SUPERVISOR UPDATE

SVANTEK constantly improves their products, including Supervisor. You can find the information about new version. To check the information about new version, click on the Svantek menu and then click on *Check for updates…* in the drop-down list.

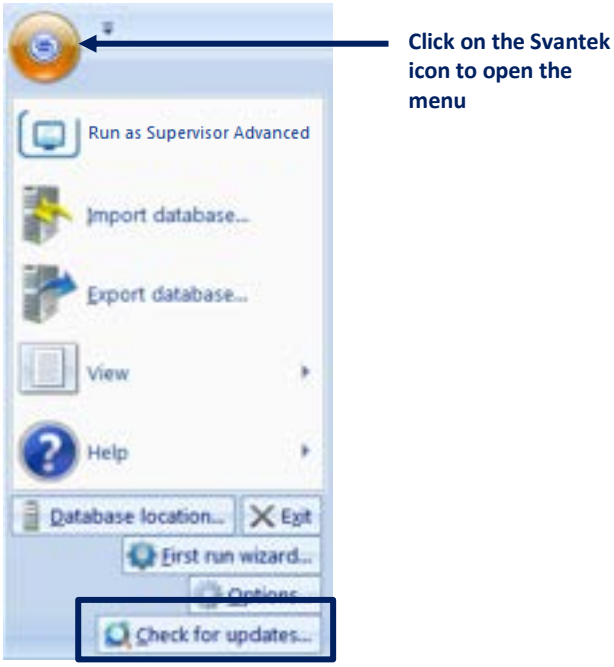


Fig. 1-8. Checking for updates

2 COMMUNICATION WITH SVANTEK INSTRUMENTS

2.1. ESTABLISHING CONNECTION

Supervisor supports the USB interface for direct communication. It requires appropriate drivers being installed, as described in Section 1.3. Supervisor will automatically detect a Svantek instrument when it is connected to the PC by USB.

2.2. MANAGING SVANTEK INSTRUMENTS

2.2.1. INSTRUMENTS AND INVENTORY PANELS

When a connected Svantek instrument is detected by Supervisor, it is added to the *Instruments* panel. The currently selected instrument is in the orange frame. The instrument information is presented in the Inventory panel (Fig. 2-1).

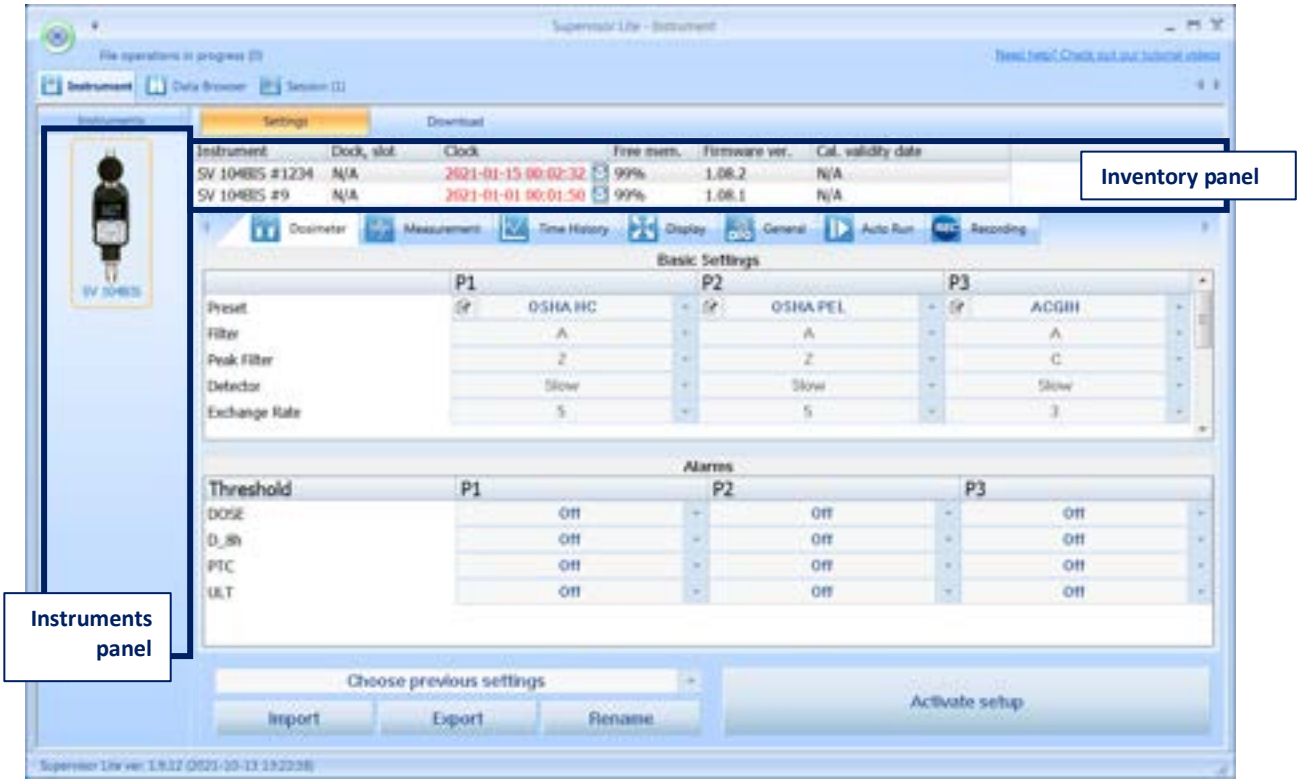


Fig. 2-1. *Instruments* and *Settings* panels of the *Instrument* window

Settings and *Download* panels relate to the selected instrument type. If you click the instrument in the *Instruments* panel the program automatically downloads the setup file from this instrument and shows its settings in the *Settings* panel. At the same time the program downloads the list of instrument files and shows it in the *Download* panel.

Both panels can be switched by clicking the appropriate tabs.

Note: If you have more than one instrument of the same type, the Inventory panel will be extended to present credentials of all these instruments. The *Settings* panel will present the setup of the first connected instrument and the *Download* panel will present the list of files of all connected instruments.

The columns of the Inventory table contain information about the Svantek instruments. You can customize the table in order to display only selected information. To do this, right-click the header to display the context menu, then check the options you want to be shown and uncheck the ones you want to hide. The available columns are:

- *Name* – the instrument's name; only available for SV 104 instruments.
- *Clock* – the date and time set in the real-time clock of the Svantek instrument; you can adjust it to match the PC's date and time by pressing the button. You can also right-click on the row corresponding to the selected instrument in order to open a context menu, allowing to specify the date and time manually.
- *Free memory* – the amount of free space on the instrument's SD card in percent. This option is available only for selected types of Svantek instruments.
- *Firmware version* – the version number of firmware installed on the instrument.
- *Last setup upload date* – the date and time when the last setup file was uploaded from Supervisor to the Svantek instrument.
- *Last uploaded setup name* – the name of the last setup file uploaded from Supervisor to the Svantek instrument.
- *Last setup activation date* – the date and time when the last setup file was activated (applied) in the Svantek instrument using Supervisor.
- *Last activated setup name* – the name of the last setup file activated (applied) in the Svantek instrument using Supervisor.
  Note: The information about the last uploaded / activated setup files concerns only the setup files uploaded from Supervisor installed on the particular PC, so the setup file in the Svantek instrument can be different (newer) than displayed if it was modified in any other way.
- *Instrument calibration certificate* – the title of the calibration certificate.
- *Calibration validity date* – date of calibration certificate's validity.
- *Calibrator Serial Number* – serial number of the instrument's calibrator.
  Note: The information about calibration can be specified by right-clicking on the table row containing a particular Svantek instrument and, in the context menu, selecting the *Edit calibration info* command (Fig. 2-2).
- *Instrument Calibration Report* and *Calibrator Calibration Report* – for details, see Chapter 2.2.2 below.

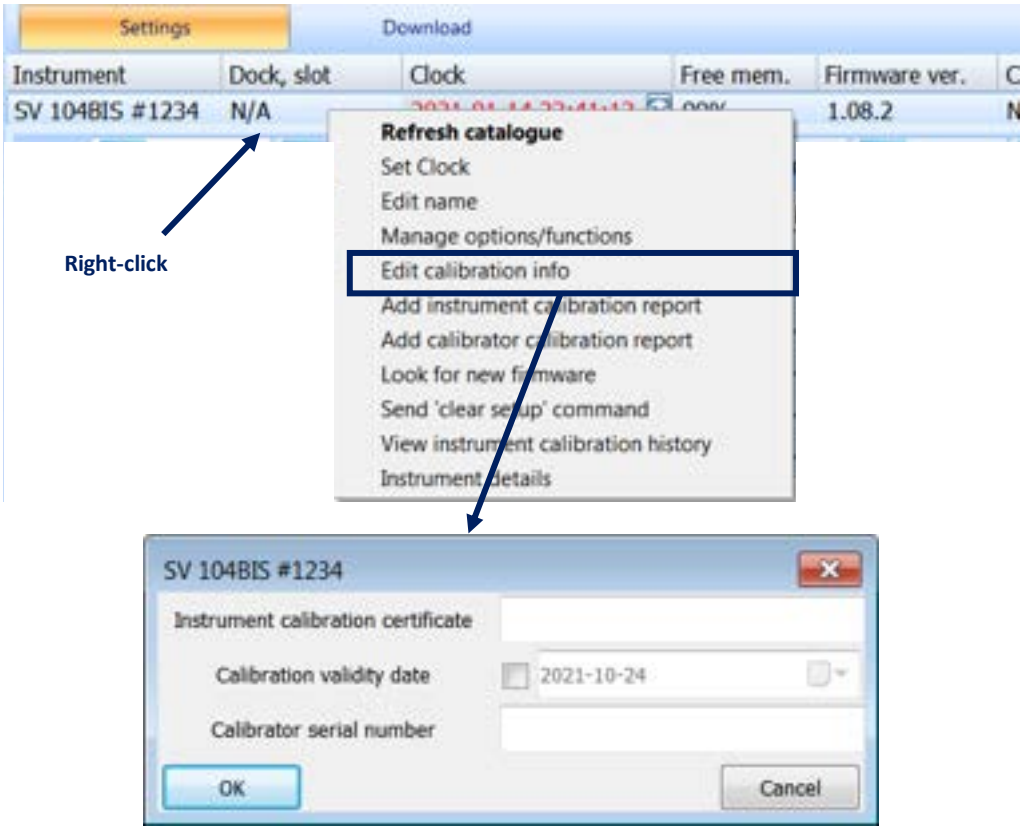


Fig. 2-2. Editing calibration information

The calibration validity date in the Inventory panel is coloured according to the time remaining until the validity period is exceeded. By default, the colours mean the following:

– Black means that there are at least 90 days left;
– Yellow means that there are at least 14, but less than 90 days left;
– Orange means that there are less than 14 days left;
– Red means that the calibration validity period is already exceeded.

These periods can be modified in the *General* settings in the *Main Options* dialog box.

Connected	Instrument	Cal. validity date
No	SV 104 #64	2013-11-03
No	SV 104 #40	2014-01-01

Fig. 2-3. Calibration validity date is coloured according to the proximity of the expiration date

In order to search for the latest firmware for your Svantek instrument in the Internet, right-click on the instrument's line in the Inventory table and, in the context menu, select the *Look for new firmware* command.

In order to unlock additional options or measurement functions of the SV 100, SV 101, SV 103 or SV 104 instrument that are available on purchase, use the *Manage options/functions* command in the instrument's context menu. When you click on this command, Supervisor downloads a list of available functionalities from the connected instrument and displays it in the form of two lists: one for options and one for measurement functions (Fig. 2-4).

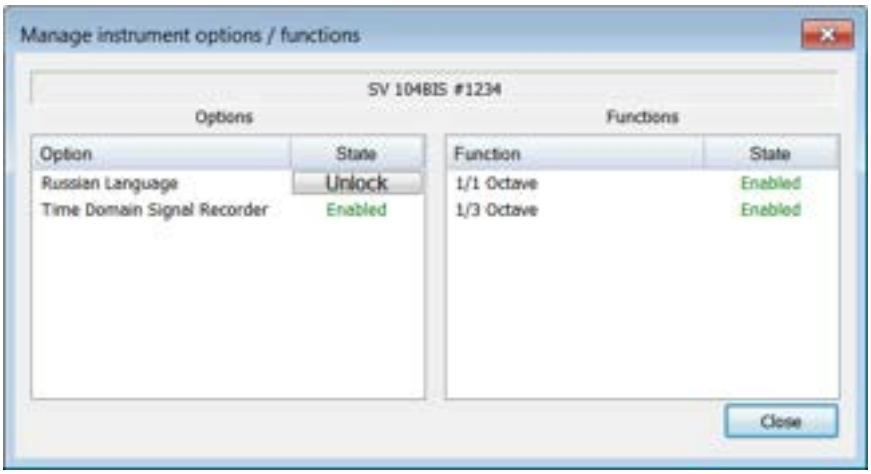


Fig. 2-4. *Manage instrument options / functions* dialog box

The *State* column, located at the right-hand side of each option / function, contains the 'Enabled' label for unlocked options / functions, and the 'Unlock' button for the ones that have not yet been unlocked. If you wish to unlock an option or function that you purchased, press the 'Unlock' button and enter the unlocking code in the window that appears.

Note: If wrong code is entered three times since the instrument was last turned on, any later attempt to lock or unlock an option will fail (regardless on whether the entered code is correct or not) until the instrument is restarted.

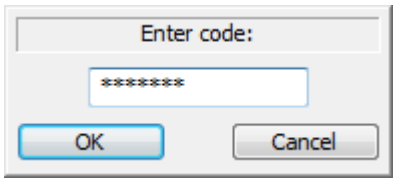


Fig. 2-5. *Window* allowing to enter code for unlocking an additional option or measurement function

You can also lock again an unlocked option / function by right-clicking on its name, selecting 'Lock' and entering the same code that was used for unlocking.

In case of the SV 104 instruments, the instrument's name can be specified using the *Edit name* command, available in the menu that opens by right-clicking on the row of the selected instrument in the Inventory table.

In case of the SV 104 instruments connected to a PC via the SA 104-5 Docking Station, an additional column is displayed, showing the serial number of the Docking Station and the number of the slot occupied by each SV 104 instrument, as illustrated in the figure below.

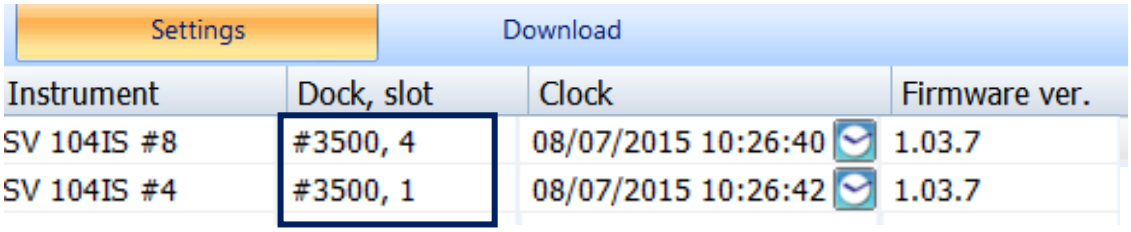


Fig. 2-6. Inventory panel view in case of SV 104 instruments connected via the SA 104-5 Docking Station

2.2.2. CALIBRATION REPORTS

Word and PDF documents presenting the Svantek instrument's calibration report and the calibrator's calibration report, can be assigned to each instrument in the Inventory database.

To add a calibration report, right-click on the row of the Inventory table corresponding to the Svantek instrument and, in the context menu, select the *Add instrument calibration report* or *Add calibrator calibration report* command. If the *Instrument Calibration report* or *Calibrator calibration report* columns are shown in the Inventory table, you can also use the corresponding buttons (Fig. 2-7). A dialog box will appear allowing you to select a file with the calibration report.

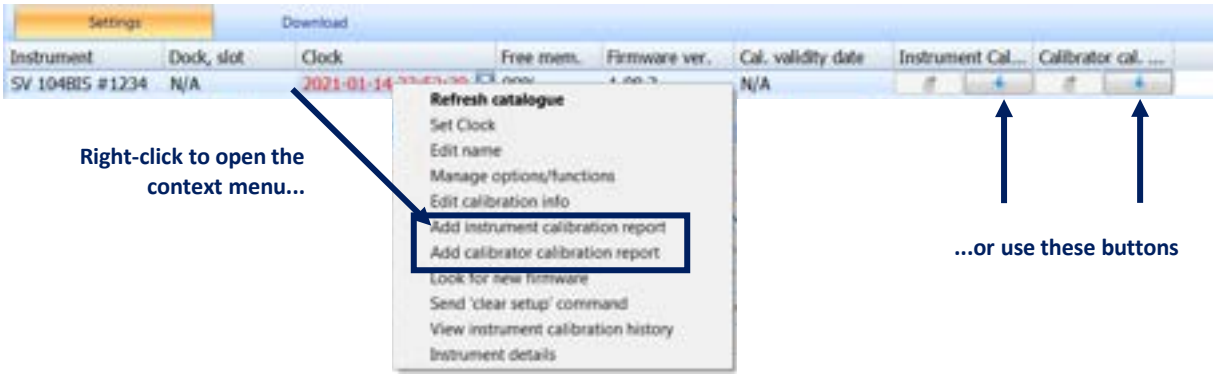


Fig. 2-7. Assigning calibration reports to a Svantek instrument

Once a calibration report is added, you can:

- open the assigned file using the context menu or the button,
- select another file to be assigned as the report using the context menu or the button,
- remove the report using the context menu.

Note: In order for the described buttons to be available, you have to enable the display of columns corresponding to the calibration reports in the Inventory table. For this, check the *Instrument Calibration Report* or *Calibrator Calibration Report* option in the context menu opened by right-clicking on the header of one of the Inventory table's columns.

2.3. EDITING THE INSTRUMENTS' SETTINGS

The *Settings* tool of Supervisor enables one to modify the instrument settings using the clear graphical interface and activate them on the connected instruments of the same type. In order to use the *Settings* tool, open the *Settings* tab in the *Instrument* window .

If you click the instrument in the *Instruments* panel the program automatically downloads the setup file from this instrument and shows its settings in the *Settings* panel.

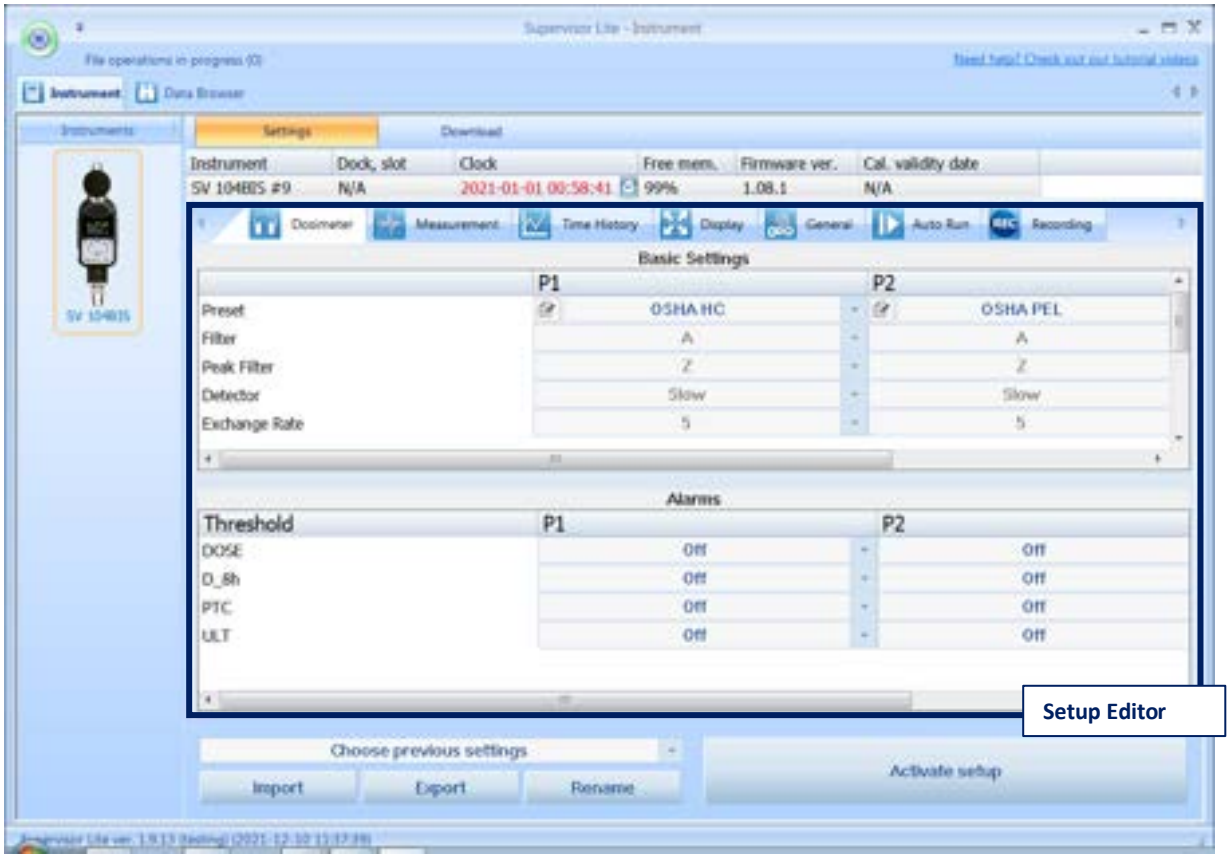


Fig. 2-8. Using Supervisor to edit Svantek instruments' settings

Using the buttons below the Setup Editor, you can:

- choose from up to ten previous settings that have been used most recently with this type of instrument,
- *Import* the setup file from a PC catalogue,
- *Export* the current settings as a setup file to a PC catalogue,
- *Rename* previous settings.

To rename previous settings, click the *Rename* button and in the *Rename* box enter the name for the selected Settings.

Note: After entering the name, press Enter or click the *Save* button!

This name will be added to the standard settings identification that shows data and time of their creation.

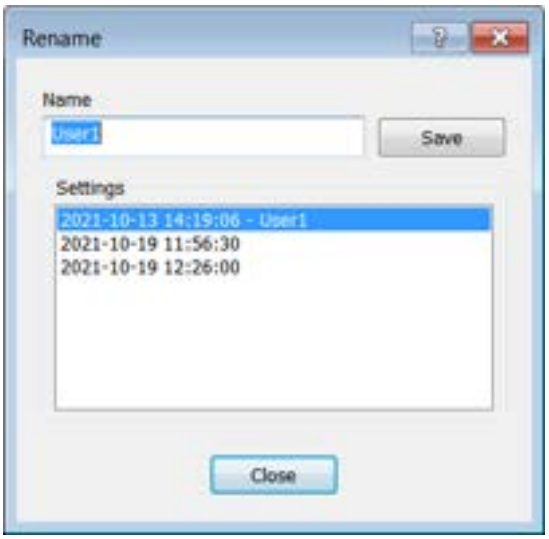


Fig. 2-9. Renaming the previous settings

Settings are shown in the Choose previous settings list with their name extension.

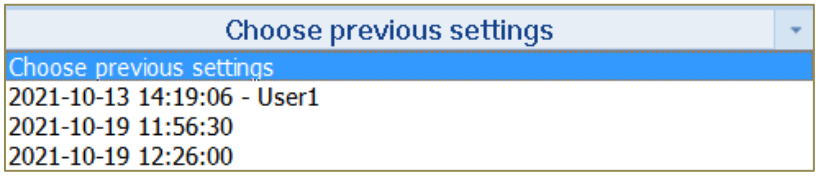


Fig. 2-10. List of previous settings

2.3.1. EDITING SETTINGS

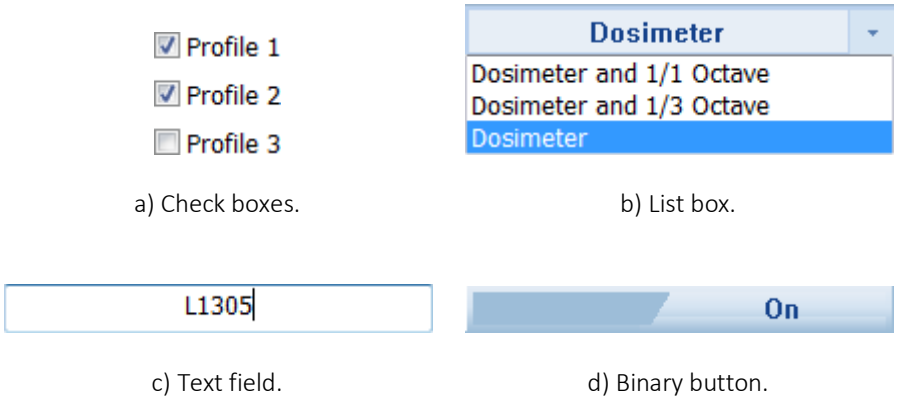
The settings are divided into several categories, such as *General*, *Measurement*, *Spectrum,* etc. They can be accessed using the tabs located on the bar at the top of the Setup Editor panel. The availability of particular categories depends on the type of instrument the edited setup file is compatible with. In case there are too many categories to display all the tabs simultaneously, you can use the and buttons to scroll the bar.

The settings available in the Setup editor correspond to those available via the Svantek instrument's interface. For details on the meaning of the available settings, please refer to the manual of your particular Svantek instrument.

The settings can be easily edited using the following elements of the Setup Editor's graphical interface:

– check boxes – allowing to select some out of several possibilities,
– list boxes – allowing to select one out of several possibilities,
– text fields – allowing to specify a text value (*e.g.* a file name),
– binary buttons – allowing to enable or disable an option.

These elements are shown in Fig. 2-11.



a) Check boxes. b) List box.

c) Text field. d) Binary button.

Fig. 2-11. Elements of the Setup Editor's graphical interface

In some cases, the 'Settings currently not available' message may appear, all settings in a particular category being unavailable for modification (Fig. 2-12). It only occurs if the particular category of settings is triggered by enabling an option from another category in the same setup file. For example, the *Spectrum* settings will be available only if an analyser function (*e.g.* 1/1 Octave) is selected in the *Measurement* category of settings.

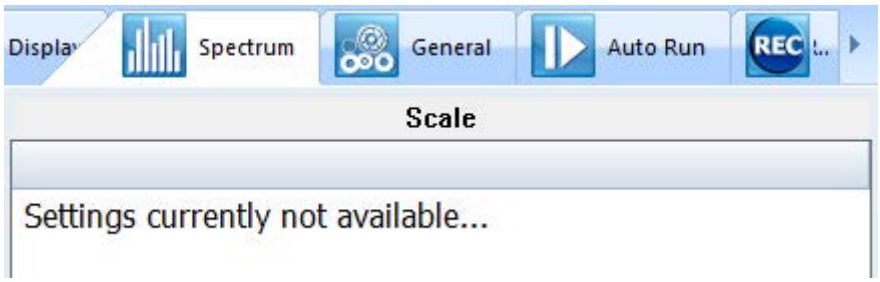


Fig. 2-12. Example of a category of settings unavailable due to some other options in the same setup file being disabled

2.3.2. APPLYING SETTINGS

Changes that are made in setup files using the Setup editor are not automatically applied. To apply settings, you should press the *Activate setup* button.

After changing the settings, the *Activate setup* button changes its colour.

If you changed the settings for the one instrument type but haven't activated them, the program will warn you about this before leaving the Setup editor.

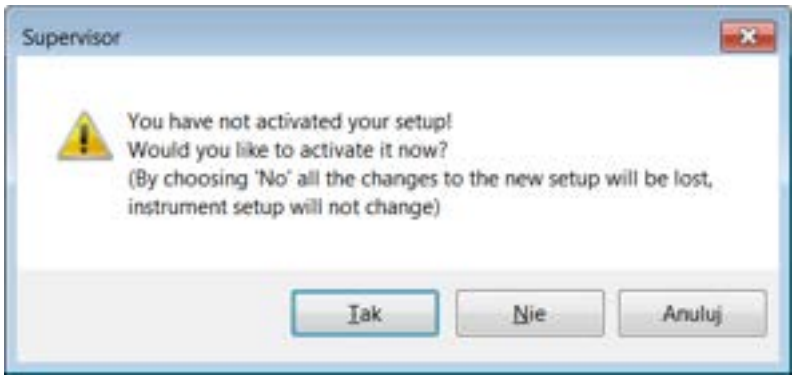


Fig. 2-1. Warning that the setup was not activated

If you want to reinstall previous settings, press the *Choose previous settings* button and select the date of previous settings.

2.3.3. USING PRESETS

In case of some types of Svantek instruments, the dosimetry profiles (available in the *Dosimeter* category of settings in the Setup editor) can be configured using so-called "presets". A presets is a set of values of parameters related to the dosimetry profile, such as *e.g.* Filter or Detector. There are two types of presets: predefined and user defined. The six predefined presets are provided with Supervisor by default and are compliant with the following health and safety norms:

- OSHA HC – Occupational Safety and Health Administration Hearing Conservation,
- OSHA PEL – Occupational Safety and Health Administration Permissible Exposure Level,
- MSHA HC – Mine Safety and Health Administration Hearing Conservation,
- MSHA PEL – Mine Safety and Health Administration Permissible Exposure Level,
- ACGIH – American Conference of Governmental Industrial Hygienists,
- Nordic – standards specific for the Nordic countries.

Except of these predefined presets, you can create up to three user defined presets, consisting of custom parameters values.

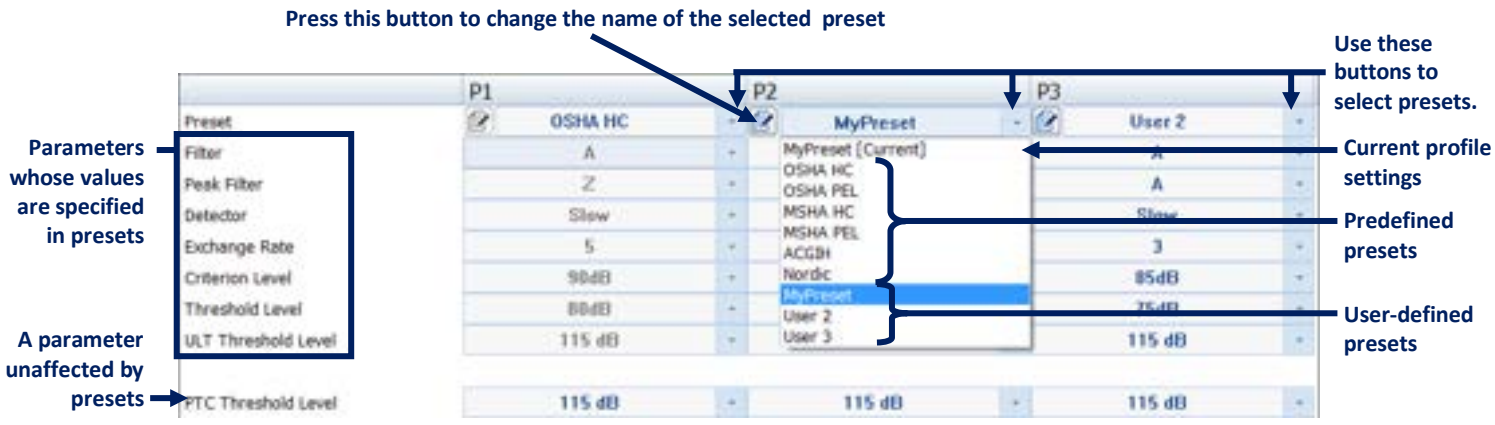


Fig. 2-2. Configuration of dosimetry profiles using presets

Different presets can be selected for each profile independently. In order to configure one of the profiles according to a preset, use the *Preset* list-box (Fig. 2-2). The first preset on the list, marked as *[Current]*, represents the profile configuration currently saved in the edited setup file. It is provided so you can reset the changes you made in Setup editor by selecting it. If you make any changes in the *Current* preset, its name will be cleared (the currently selected preset will be named *None*).

When you select one of the predefined presets, the elements of the interface related to the parameters whose values are specified by the preset will be disabled. In order to change the values of those parameters, you need to select the current preset or a user-defined preset.

Note: presets do not specify the values of all parameters; the parameters whose modification remains possible after selecting a predefined preset do not belong to the presets. These parameters are separated from the ones belonging to presets with a blank row.

You can create a user-defined preset by selecting one of the three last presets on the list and configuring the profile in a way you want it to be stored in the preset. The changes are automatically remembered by Supervisor. You can change the name of the preset using the button.

Note: The three user-defined presets correspond only to the currently selected type of Svantek instrument. Different three presets are stored for each instrument type.

3 MANAGING MEASUREMENT DATA

3.1. DOWNLOADING FILES

In order to download files from the connected Svantek instrument(s), open the *Download* tab in the *Instrument* window.

The *Download* panel contains a list of files stored in the connected Svantek instrument's memory in the form of a table. Various types of files are displayed there, *e.g.* measurement files, voice comment files, etc. The first three columns of the table contain basic information about the files: name, size in bytes and date of creation. The last three columns contain additional information (concerning location, users and tasks) assigned to files; it is described in detail in Chapter 3.3.1. Files that have not yet been downloaded are displayed with bold font.

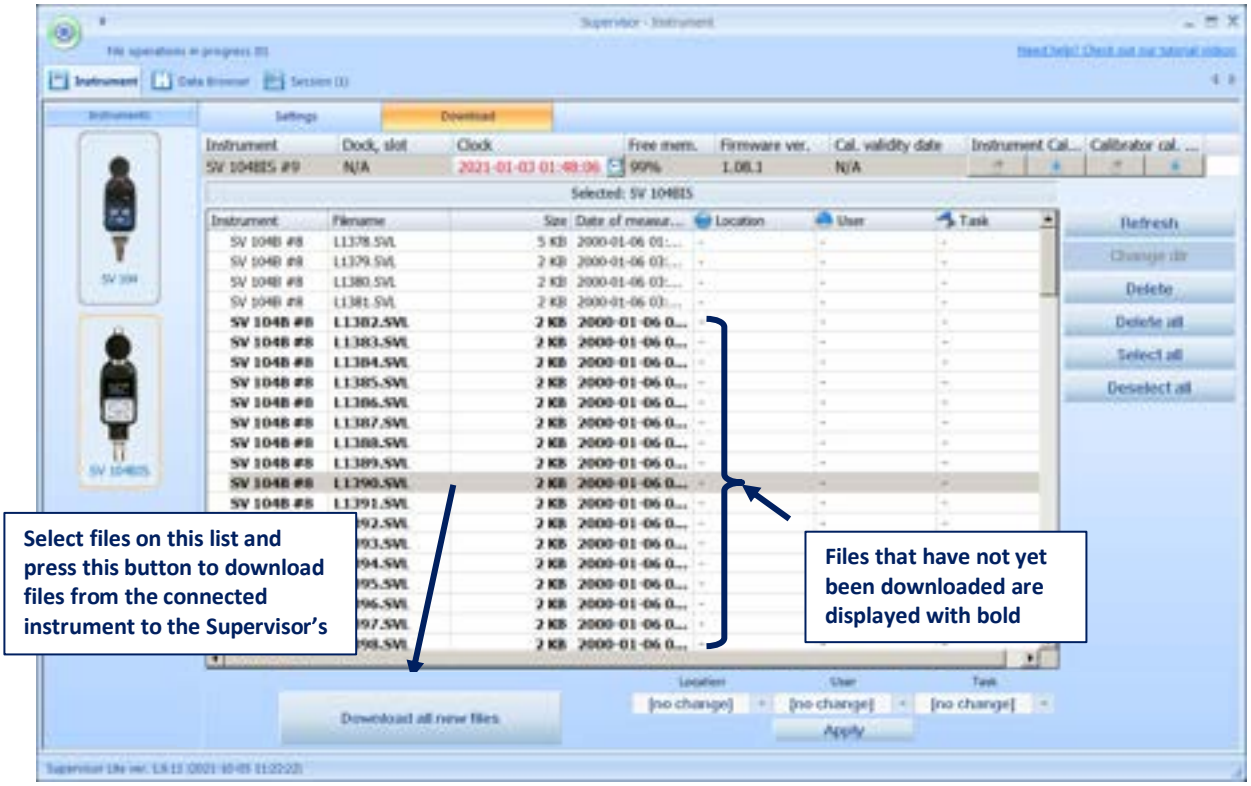


Fig. 3-1. Downloading files from a Svantek instrument using Supervisor

To download files, use the *Download* button located below the files table on the left side of the Download panel. If one or more files are selected in the table, pressing the *Download* button will cause the download of the selected files. Otherwise, pressing this button will cause the download of all of the files stored on the connected instrument.
Note: You can select files by clicking a row of the table. Clicking with the CTRL or SHIFT button pressed allows to select multiple files.

Files from the instrument are downloaded to the special internal Supervisor catalogues that are created automatically in the parent catalogue with the name “Catalogue”. Created catalogues by default have names of the instruments, for example, SV 104B, SV 104BIS, etc. (see Chapter 3.2.1).

After the downloading procedure is completed, a window, containing information about success or failure of downloading, is shown. You can disable showing these windows in cases when no errors occur in the downloading procedure; for this, check the *Don’t display Download Summary if no errors* checkbox in the Data Exchange settings in the Main Options. The same can also be done in the *Download result* window by checking the *don't show this message if all files were downloaded correctly* checkbox (Fig. 3-2).

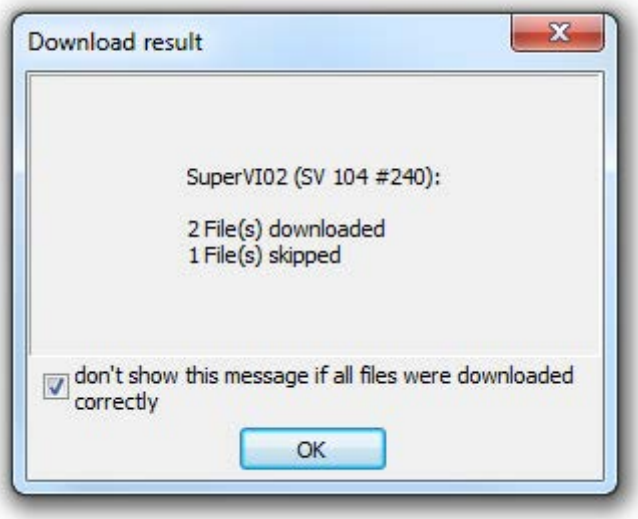


Fig. 3-2. *Download result* window

Note: You can download individual files by double-clicking on them.

The buttons located at the right side of the Download panel enable you to perform some basic operations concerning the files stored in the connected instrument:

- *Refresh* – updates the list of files, so that all the files created after you entered the Download panel will also be shown.
  Note: Every time the list of files is refreshed, a new “downloading session” begins, i.e. a new subdirectory is created for the downloaded files. This is why sometimes the overwrite warning does not appear even though two files of the same name are downloaded — after beginning a new download session, the file will be stored in a different location, thus eliminating the possibility of overwriting.

- *Change dir* – opens the *Change folder* dialog box, allowing to select a directory in the Svantek instrument’s memory for displayed files in the Download panel (Fig. 3-3).
  Note: For some types of Svantek instruments this button is inactive.

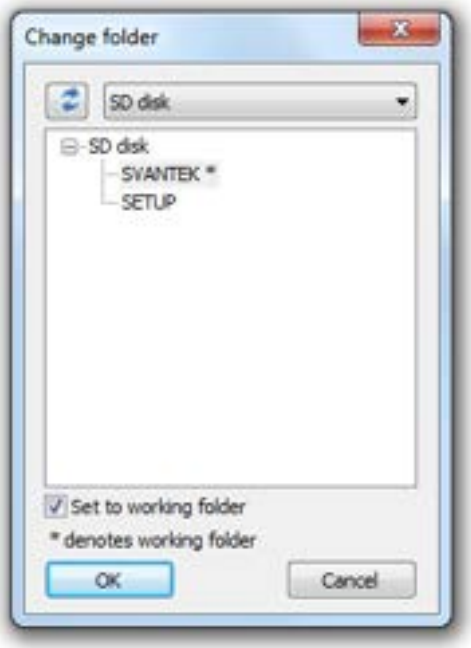


Fig. 3-3. *Dialog* box allowing to select the directory in the Svantek instrument's memory from which files are displayed in the Download panel

- *Delete* – deletes a selected file from the Svantek instrument's memory.
- *Delete all* – deletes all result, logger, and WAVE files in the instrument's current working directory.

  Note: In case of the SV 100, SV 101, SV 102 and SV 106 instruments where Summary results (main results) and Time-history results (logger results) are saved in separate files, it is not possible to delete a file with logger results. In this case, when only files with logger results are selected on the list, the *Delete* button is disabled; pressing *Delete* when both types of files are selected will only delete the files with main results; downloading files with logger results with the *Delete file(s) after downloading* option enabled will not cause the deletion of these files.

- *Select all* – selects all files in the table.
- *Deselect all* – clears the selection.

All downloaded files are stored in the Supervisor's database and they can be viewed and processed using the Data Browser, which is described in the following chapter. The Data Browser is automatically opened each time files are downloaded from a connected Svantek instrument.

Note: In case of the SV 100, SV 101, SV 102 and SV 106 instruments where main results and logger results are saved in different files, downloading the result files will also cause the associated logger files to be downloaded as well. This feature can be disabled by unchecking the *Automatically download associated logger files when downloading Result files* option in the Data Exchange settings in the Main Options.

Note: Details on downloading audio comment files are presented in Chapter 6.2.4.

Whenever you download / upload files from / to a connected instrument, Supervisor displays the progress in the *File operations* panel, located at the top-left corner of the application window.

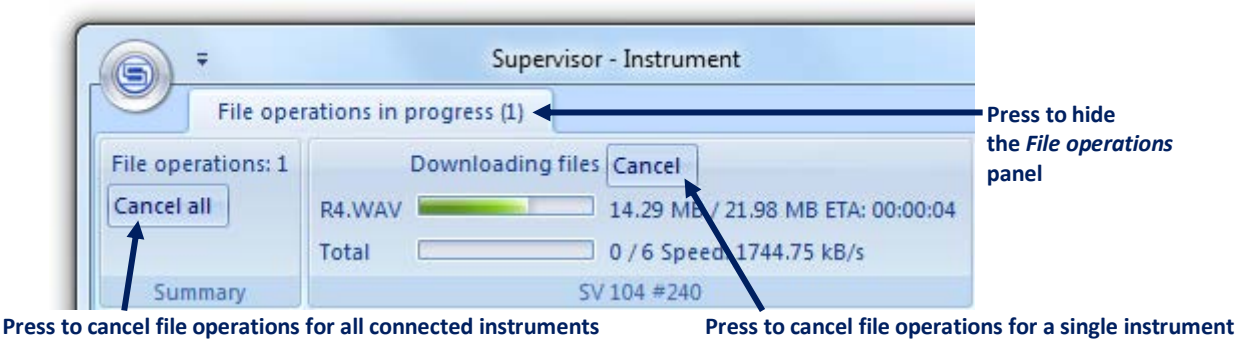


Fig. 3-4. *File operations* panel

Each instrument can perform one operation at a time. If multiple instruments are connected and performing file operations at the same time, you can cancel them all by pressing the *Cancel all* button.

You can show/hide the *File operations* panel by clicking on the *File operations in progress* tab.

3.2. DATA BROWSER

In order to view all the files downloaded from Svantek instruments and stored in the Supervisor's database, open the Data Browser using the button located in the top-left corner of the Supervisor window.

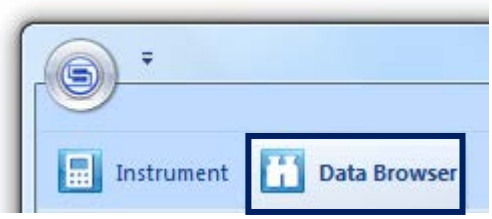


Fig. 3-5. Button for opening the Data Browser

The Data Browser is composed of three panels:

- on the left side of the window, the File manager panel contains a list of all files stored in the Supervisor's database and allows you to select a group of files to be displayed in detail
- on the right side of the window, the File list panel contains a list of files belonging to a selected group and allows to open a file for further processing
- below the file list panel, the File preview panel enables to preview data contained in a selected file.

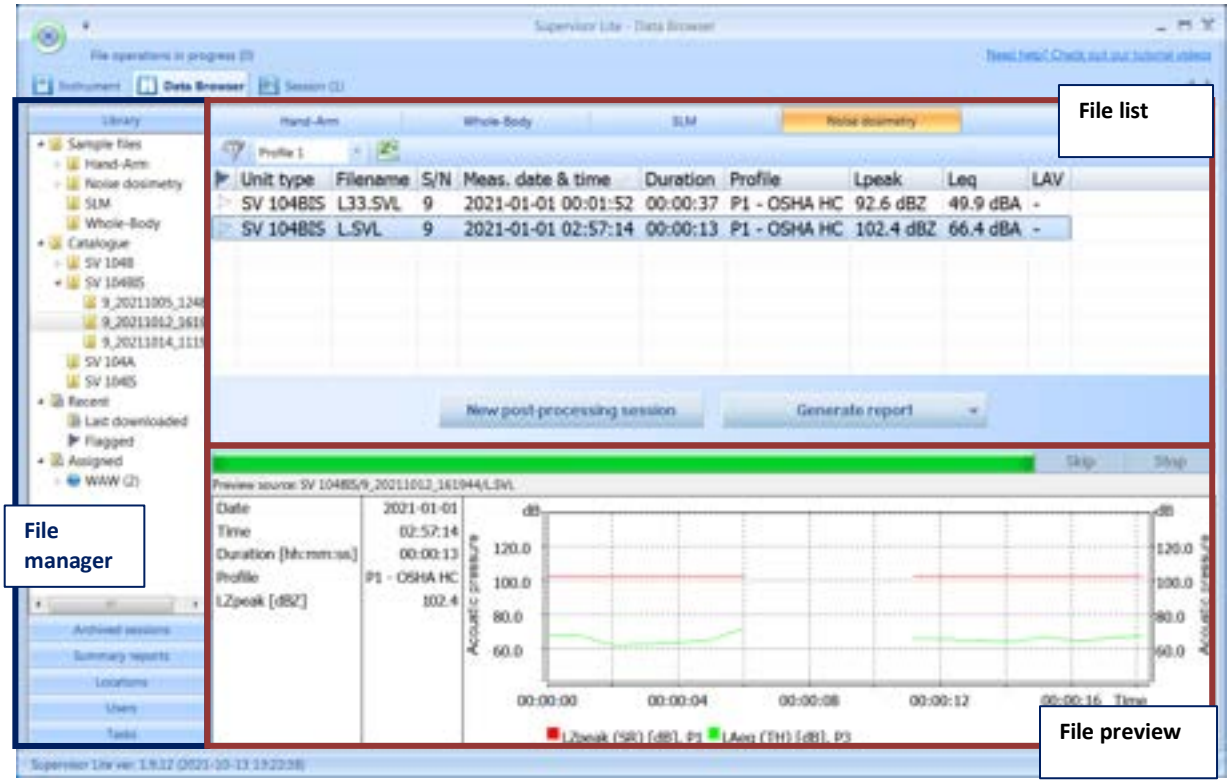


Fig. 3-6. *Data Browser* window

3.2.1. FILE MANAGER

The File manager panel can be used to select a group of files to be displayed in detail. It is divided into six sub-panels: *Library*, *Archived sessions*, *Summary reports*, *Locations*, *Users*, and *Tasks*. Each of them can be accessed by pressing the horizontal bar with the respective name (Fig. 3-7).

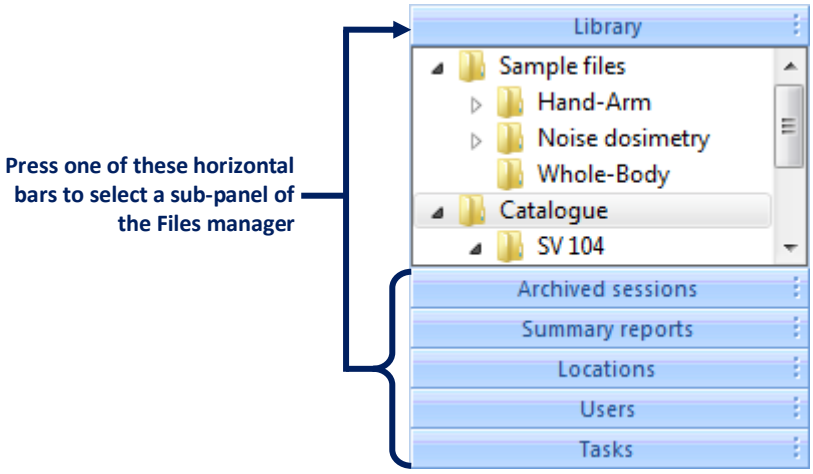


Fig. 3-7. File manager

Library

The *Library* sub-panel lists all the files stored in the database using a tree view. It contains four base items:

– *Sample files* containing some sample files provided with Supervisor, grouped further according to the type of measurement they refer to.
  Note: You can hide the *Sample files* section. To do this, go to the Main Options and uncheck the Show sample files in data browser (Fig. 1-6).
– *Catalogue* containing all the files downloaded from instruments. You can arrange the Catalogue in any way by adding, deleting, moving and renaming files and folders. You can easily move files and folders, as well as add them to the database from any location on the PC, using the drag & drop technique. You can also use the context menu, opened by right-clicking, for various operations on files and folders.
  Note: It is also possible to export files from the Supervisor's database using the drag & drop technique outside the application window (dropping files into Windows Explorer).
  Note: The catalogues for the downloaded files are created automatically in the *Catalogue*. Created catalogues by default have names of the instruments, for example, SV 104B, SV 104BIS, etc.

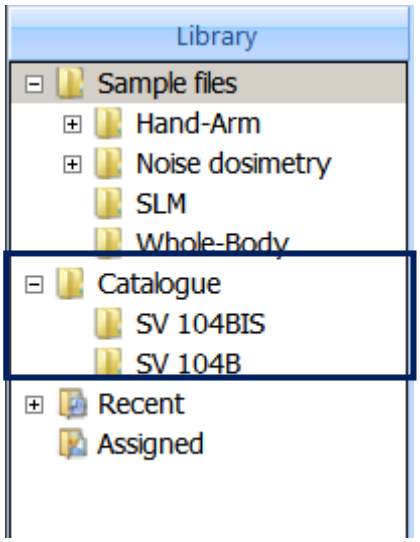


Fig. 3-8. Example of the *Catalogue* content

– *Recent* containing two sub-items: *Flagged*, which is a folder for grouping a number of selected files—in order to add a file to this group, you have to set its *flag*, which can be done in the File details panel; and *Last downloaded*, which contains a list of files downloaded since the last launch of Supervisor.
– *Assigned* containing all files to which additional information about location, user, and task performed during measurement have been assigned. For details on assigning additional information to files, see Chapter 3.3.

You can export selected folders and files as a Supervisor's database by right-clicking on an item in the Library and selecting the "Export database" command (Fig. 3-9). It opens the Database export wizard, automatically configured according to the selection made in the Library. For details on the Supervisor's databases, see Chapter 6.1.

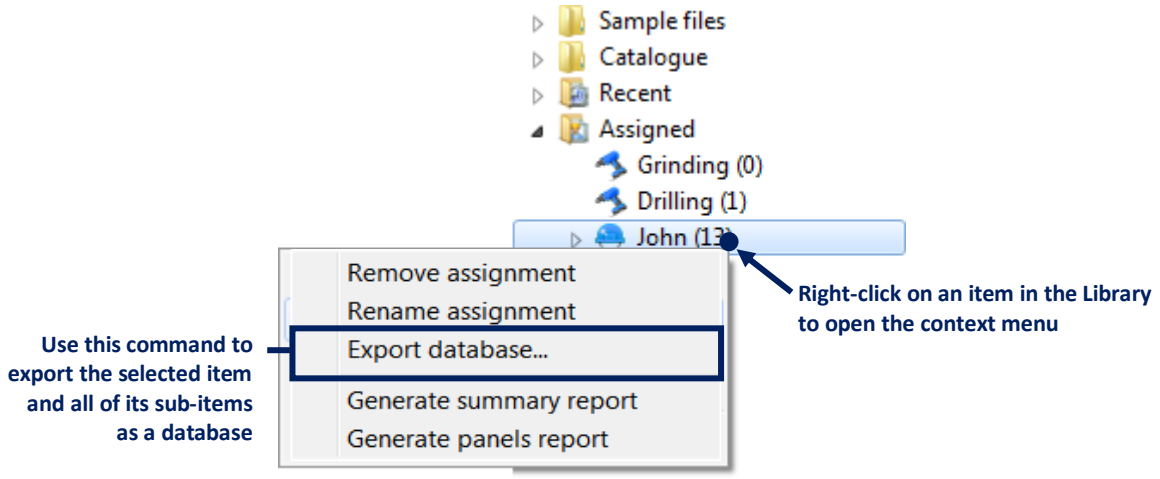


Fig. 3-9. Exporting a selected part of the database using the Library

Archived sessions

The *Archived sessions* sub-panel contains a list of all the sessions that have been moved to archive. You can use this list to restore an archived session for viewing and processing it again, or to use files which have been used to create that session. In case many sessions are archived, you can use filters to display only some of them (Fig. 3-10). Sessions are described in detail in Chapter 4.

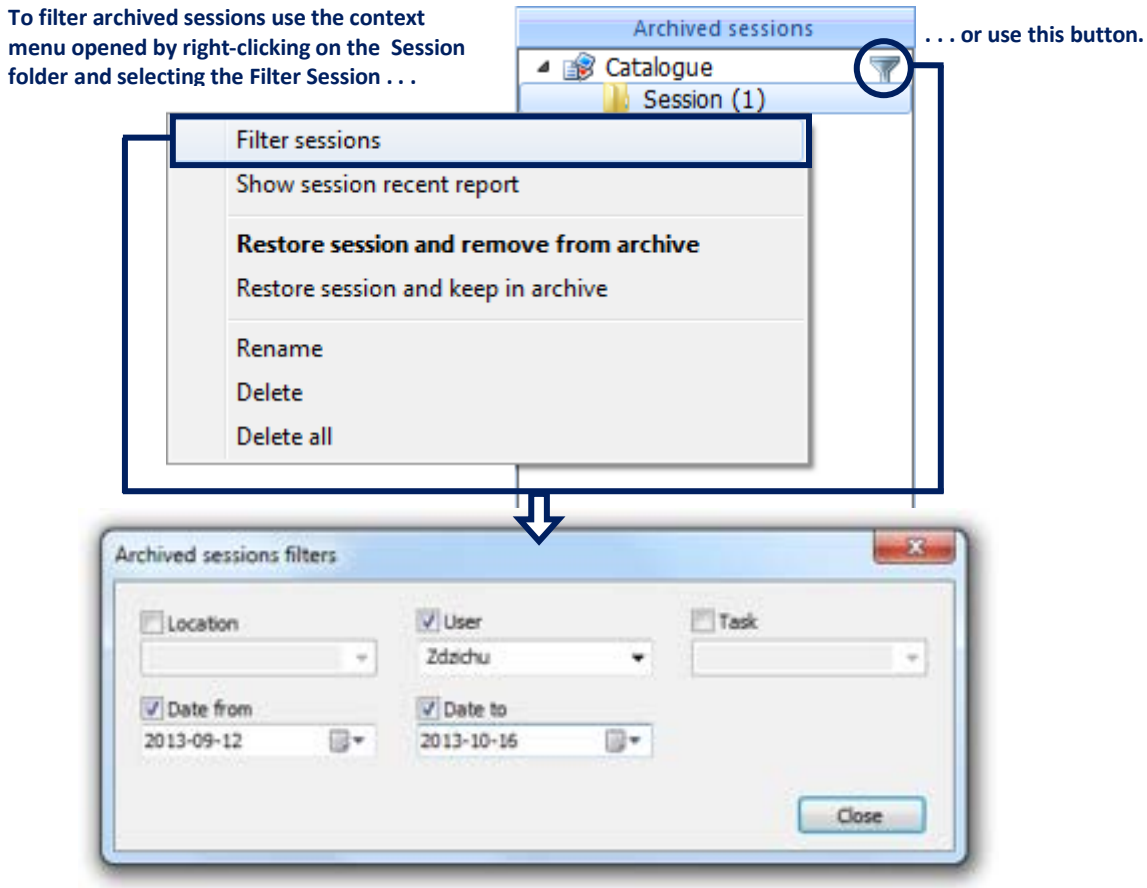


Fig. 3-10. Filtering archived sessions

Summary reports

The *Summary reports* sub-panel contains a list of Summary reports that you have created. The *Summary reports* can be used to gather selected measurement results according to additional information that has been assigned to them. It is described in detail in Chapter 3.3.4.

Locations, Users and Tasks

The last three sub-panels of the File manager contain files listed according to additional information assigned to them. Such assignments are described in detail in Chapter 3.3.

3.2.2. FILE DETAILS

The File details panel contains a table in which files corresponding to the selected item of the File manager are listed. The files corresponding to all sub-items of the selected item are also shown in the Files details panel. Files can be further processed by using them for sessions. In order to create a session, select one or more files and press the *New post-processing session* button. If you want to create a session starting with only one file, you can do it by double-clicking with the left mouse button the row of the table corresponding to that file. Sessions are described in Chapter 4.

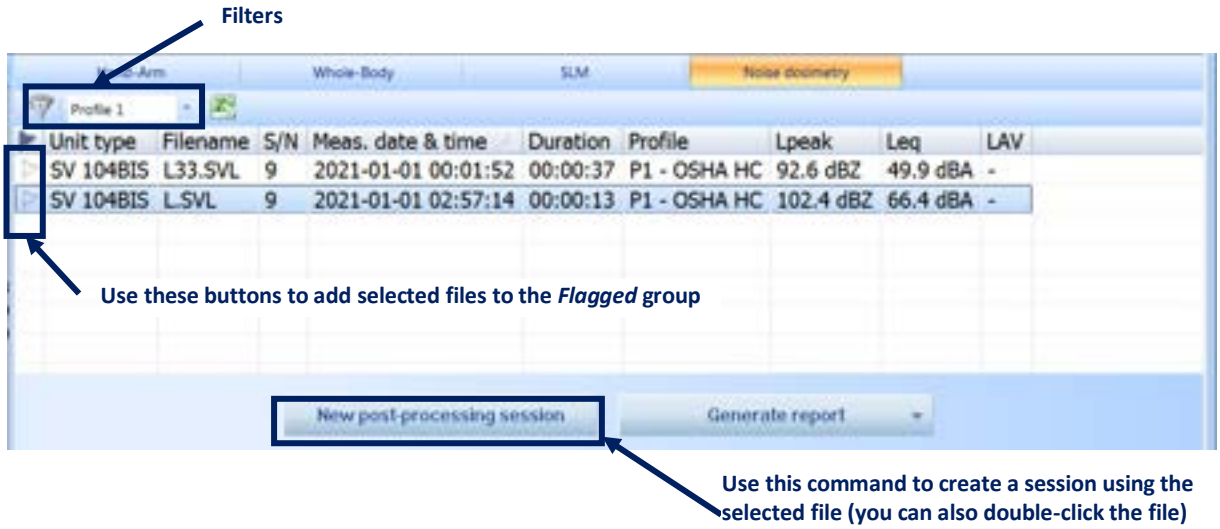


Fig. 3-11. File details panel

Customizing the table

The File details table contains some information about the displayed files. The contents of this table can be customized by selecting columns to be shown. For this, right-click on one of the columns' headers, and use the checkboxes in the context menu to show or hide particular columns (Fig. 3-12).

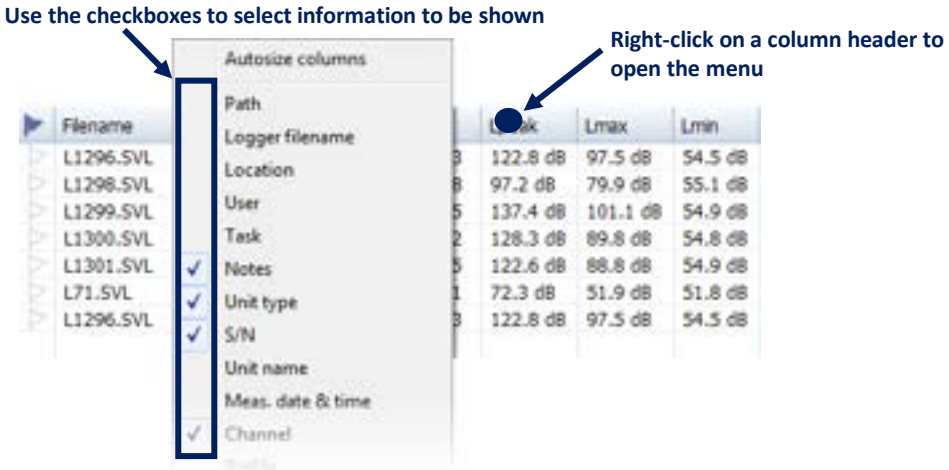


Fig. 3-12. Customizing the File details table

Note: Every column that you add is automatically displayed at the end of the table and it might not be visible until you scroll the panel to the right. Its location can then be changed.

Clicking on the *Autosize columns* command resizes the columns of the File details table so that their width is equal to the width of the contained text. You can also rearrange the order of the columns by clicking on a column's header and dragging it to another place, or manually resize them by dragging their limits. The order and widths of columns are saved by Supervisor (separately for each type of measurement, such as Hand-Arm or Whole-body) and restored after reopening the application.

The *Path* column provides the locations of files relative to the database location (see Chapter 6.1).

Filtering the list of files and results

Buttons at the top of the File details panel serve for filtering the list of files. Buttons in the first row correspond to different types of measurement (such as *Hand-Arm* vibration dosimetry, *Noise dosimetry*, etc.). After clicking one of these buttons, only the files of the selected type or related to the selected type of measurement are displayed on the list.

Two buttons below the types of measurement enables applying a special filter for measured results (Global Mask) and the measurement profile (if used in the instrument).

Using Global Mask for data presentation

The Global Mask is used to define a global filter on the displayed results. You can define the Global Mask in the *Display Results* section of the *Main Options.*

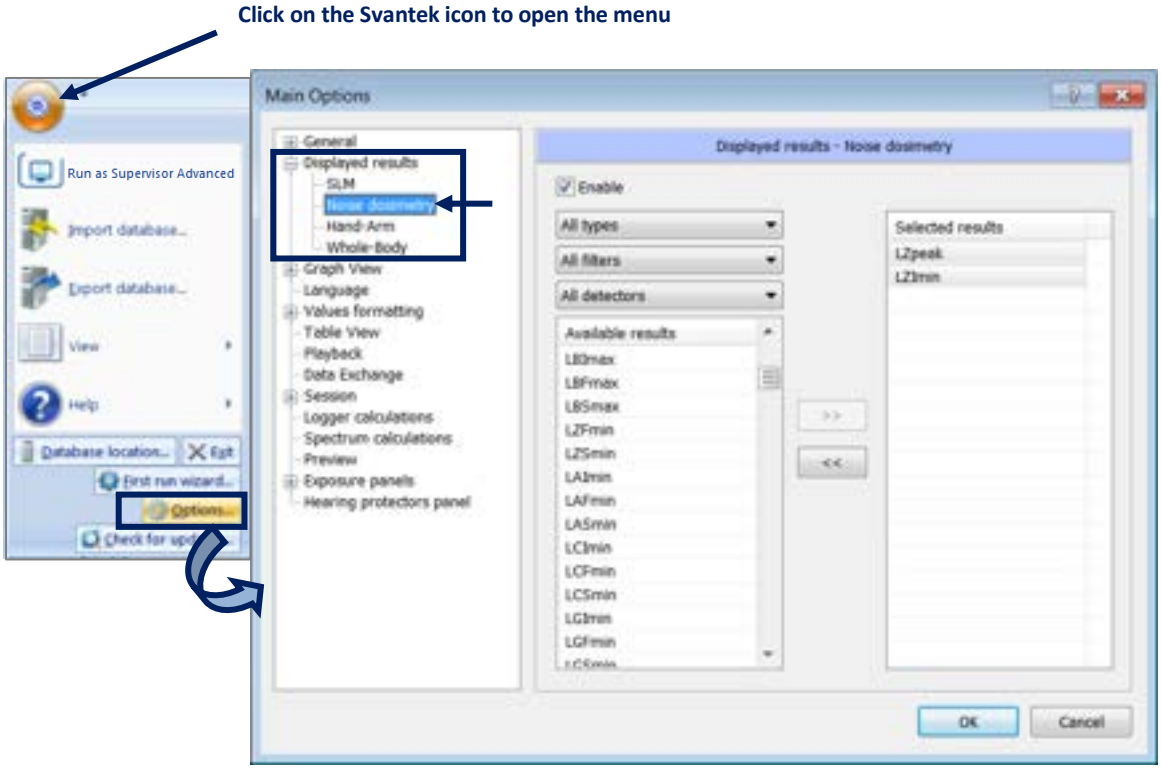


Fig. 3-13. Display results settings in the Main Options dialog box

The *Enable* button switches the mask on/off and the same is done by the Funnel button in the data browser Filter panel. If the mask is switched on for a given type of measurement (e.g. Noise dosimetry) then only the results according to this mask are shown on all views and in the data browser. An example of the Global Mask filter is presented in the figure below.

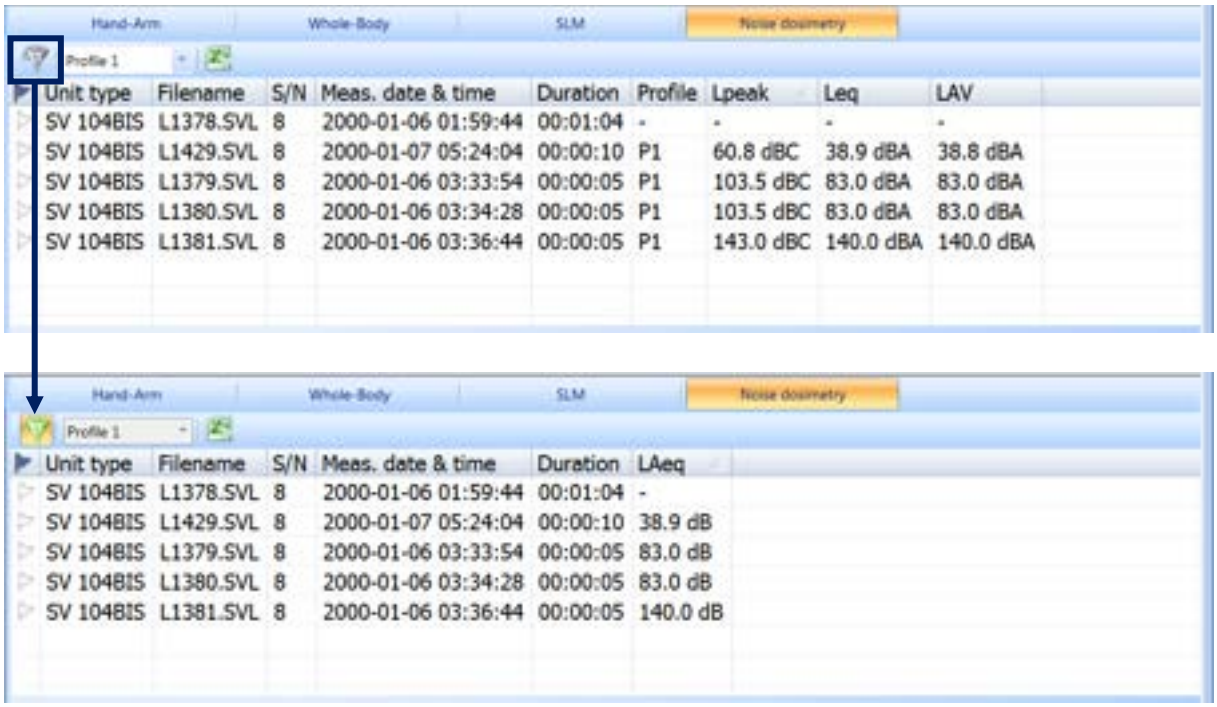


Fig. 3-14. Example of the Funnel button operation

Exporting file details

The contents of the File details table can be used outside Supervisor by means of three different tools, using the Excel icon located in the row below the types of measurement or two commands available in the popup menu (opened by right-clicking):

- *Copy with headers* - copies the selected rows of the table, together with the column headers, to the clipboard.

Example:

Flag	Filename	Unit type	Duration	Lpeak	Lmax	Lmin
0	L1299.SVL	SV 104	00:06:25	137.4 dB	101.1 dB	54.9 dB
0	L1300.SVL	SV 104	00:07:32	128.3 dB	89.8 dB	54.8 dB
0	L1301.SVL	SV 104	00:12:55	122.6 dB	88.8 dB	54.9 dB

- *Export table selection...* - enables one to save the selected rows of the table, together with the column headers, in CSV (comma-separated values) format, in an external file. In this case, the CSV export parameters, as set in the Values formatting tab in the Main Options, are taken into account.

Example:

```
Flag;Filename;Unit type;Duration;Lpeak;Lmax;Lmin
0;L1299.SVL;SV 104;00:06:25;137.4 dB;101.1 dB;54.9 dB
0;L1300.SVL;SV 104;00:07:32;128.3 dB;89.8 dB;54.8 dB
0;L1301.SVL;SV 104;00:12:55;122.6 dB;88.8 dB;54.9 dB
```

Note: Only the columns selected for displaying (as described in the subsection *Customizing the table*, above) are exported.

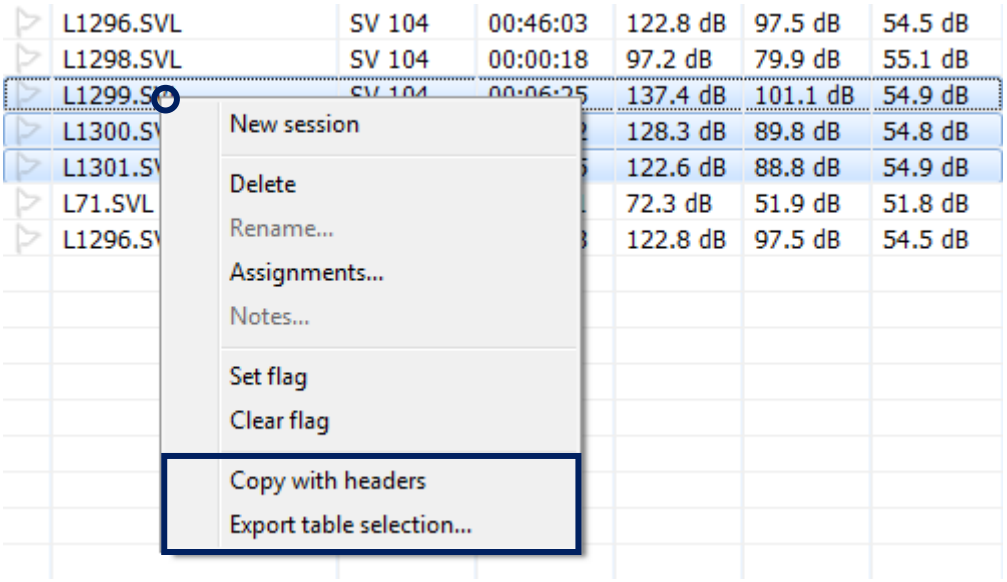


Fig. 3-15. Commands for exporting the contents of the File details table

The *Excel* button enables copying the selected files or whole table to MS Excel.

Setting flags

By pressing the button located in the first column at the left side of the File details table you can set a flag for a selected file. As a result, the file will be accessible in the File manager in the *Recent* → *Flagged* group. You can flag several files in order to get a quick and easy access to them.

Dragging files outside Supervisor

You can easily export files from the Supervisor's database to a selected location on the PC using the drag & drop technique outside of the application window.

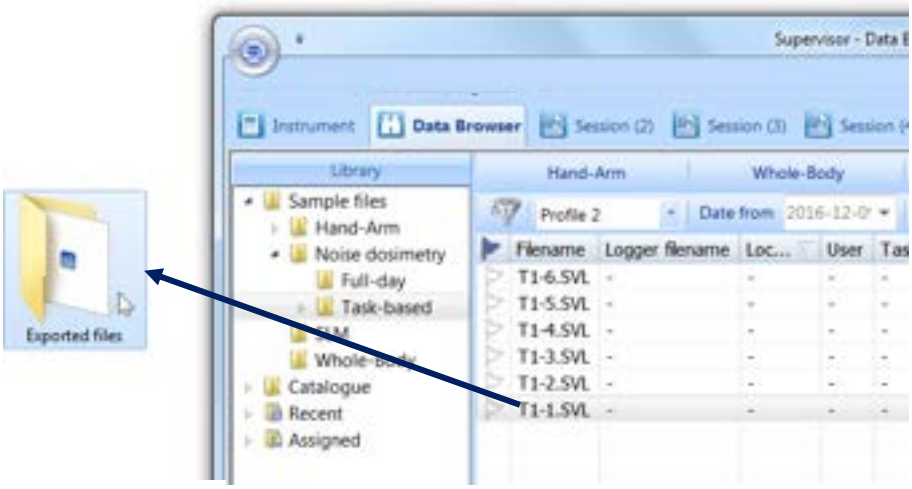


Fig. 3-16. Using the drag & drop technique to export files outside the Supervisor's database

Note: Exporting measurement files with comments (*e.g.* WAVE files) attached to them automatically exports the comment files too. In order to export a single file without the attached comments, use the drag & drop technique with the CTRL button pressed.

Creating reports

You can generate a report of the selected file(s) based on some templates using the *General report* button. After pressing this button, you should select a template for the report.

All reports are saved in the *Summary reports* sub-panel.

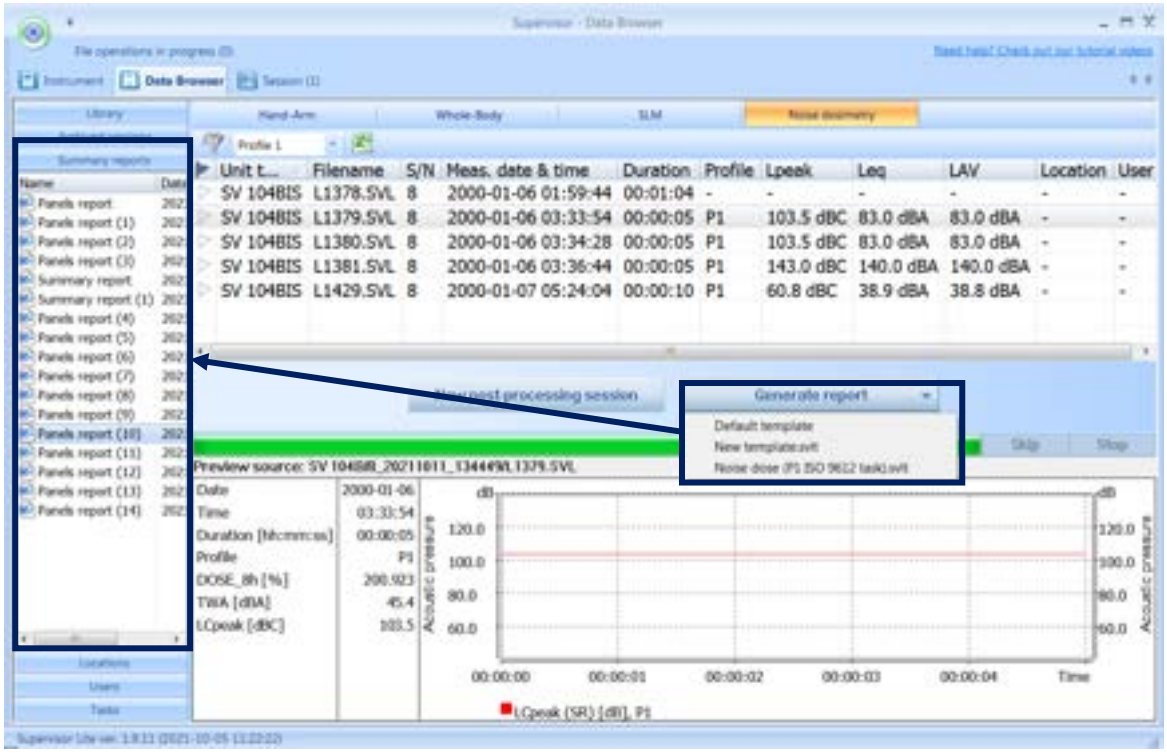


Fig. 3-17. Creating general reports

Templates for the report are created using the Session tool (see Chapter 4.1.6).

3.2.3. PREVIEW

The panel below the File details table provides a short preview of the data stored in the selected file, giving an initial idea of the time history of the measurement results (Fig. 3-18). In case multiple files are selected, the file which is actually used as source of displayed data is specified in the top left corner of the Preview panel.

Fig. 3-18. Preview panel

It is possible to copy the contents of the Preview panel by right-clicking in its area and activating the *Copy* command. It can then be pasted as an image in another application, such as *e.g.* MS Word.

You can specify the kind of data (and the order of their priority) to be displayed in the Preview panel using the Preview settings in the Main Options dialog box. Different kinds of data are available for different applications, such as Hand-Arm vibration dosimetry, Whole-Body vibration dosimetry, SLM and Noise dosimetry. To choose the application, use the list box at the top of the *Preview* settings panel. It is possible to select different kinds of data for the *Parameters & results panel* (on the left hand side of the Preview panel, displaying data in numerical form) and for the Plot panel (on the right hand side of the Preview panel, displaying data in graphical form).

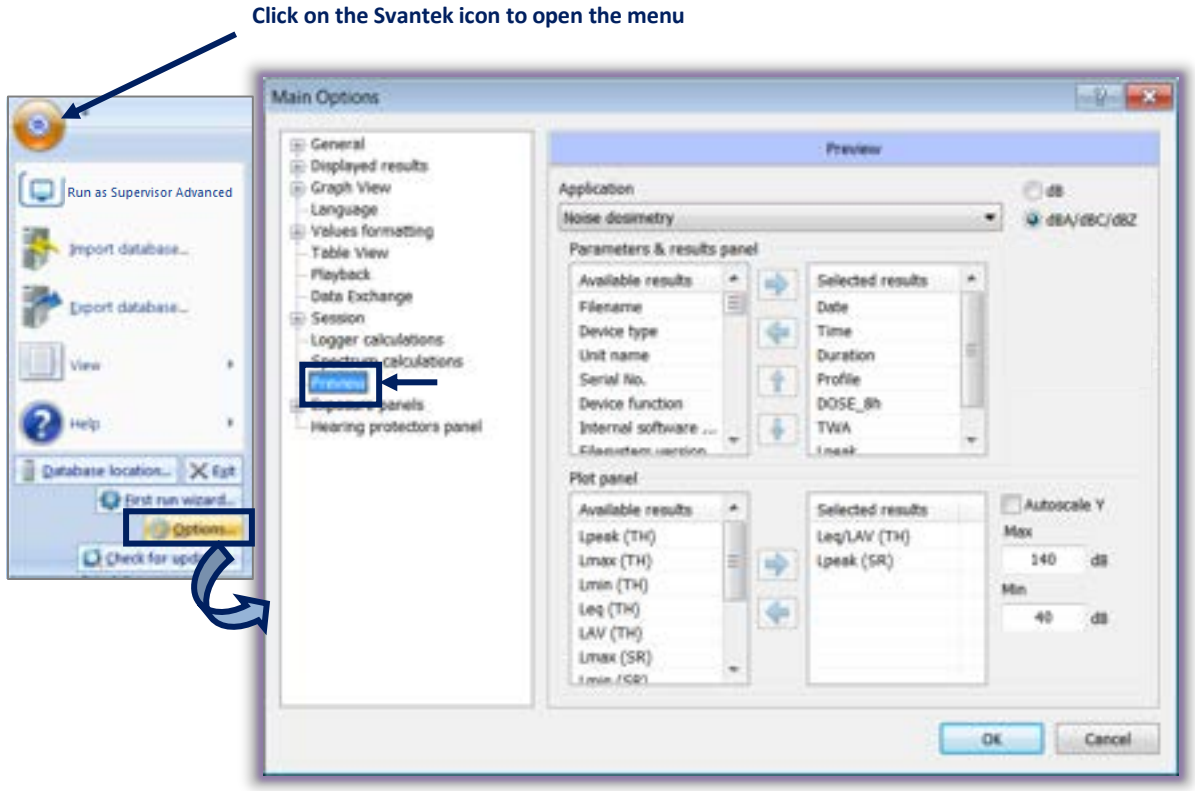


Fig. 3-19. *Preview* settings in the *Main Options* dialog box

3.2.4. CREATING POST-PROCESSING SESSIONS

Sessions can be used to work with data downloaded from Svantek instruments and to create reports containing these data.

To create a session, in the File details table, select files which contain the data you wish to work with, press the *New post-processing session* button or right-click and select the *New post-processing session* command in the opened menu. You can create a session with one or multiple files. To create a session from a single file just double-clicking it (see Chapter 4.1.1).

3.3. USING ASSIGNMENTS

Three types of additional information can be assigned to each file downloaded from a Svantek instrument:

– *Location* (where the measurement was carried out),
– *User* (whom the measurement concerned),
– *Task* (which was being performed by the user during the measurement).

This information can then be used to facilitate searching for particular measurement results and to generate summary reports.

3.3.1. ASSIGNING INFORMATION TO FILES

You can assign this additional information to the files when you download them from the connected instrument. For this, in the *Instrument* → *Download* panel (see Chapter 3.1), select one or more files, select the *Location* / *User* / *Task* in the respective list-box located at the bottom-right corner of the window and press *Apply* (Fig. 3-20). If you want to add a new location, user or task, in the list-box select *[new...]*. If you want to erase information already assigned, select *[none]*. Chosen values will be assigned upon downloading files to the Supervisor's database.

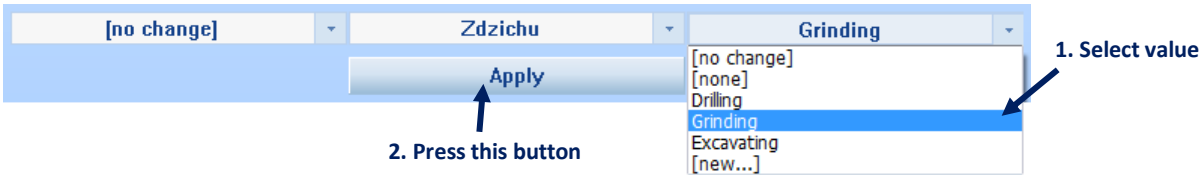


Fig. 3-20. Assigning additional information to downloaded files in the *Instrument* → *Download* panel

You can also assign additional information to files in several ways using the *Data Browser*. In the File details table, left-click on the *Location* / *User* / *Task* field corresponding to a selected file, and select a value from the menu.

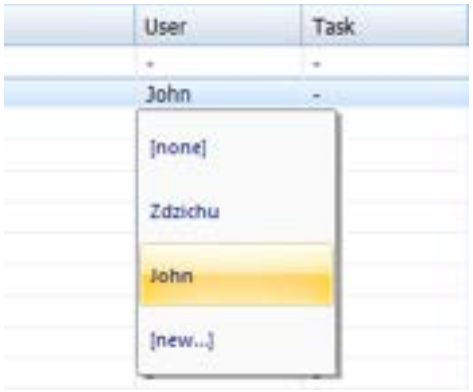


Fig. 3-21. Assigning User information to a file in the File details table

Another method for assigning information to files is to drag & drop a file from the File details table to a particular item in the *Assigned* sub-tree in the Library (Fig. 3-22). Notice that if you,

for example, drop a file to a sub-sub-item corresponding to both a User and a Task, both these values will be assigned to that file.

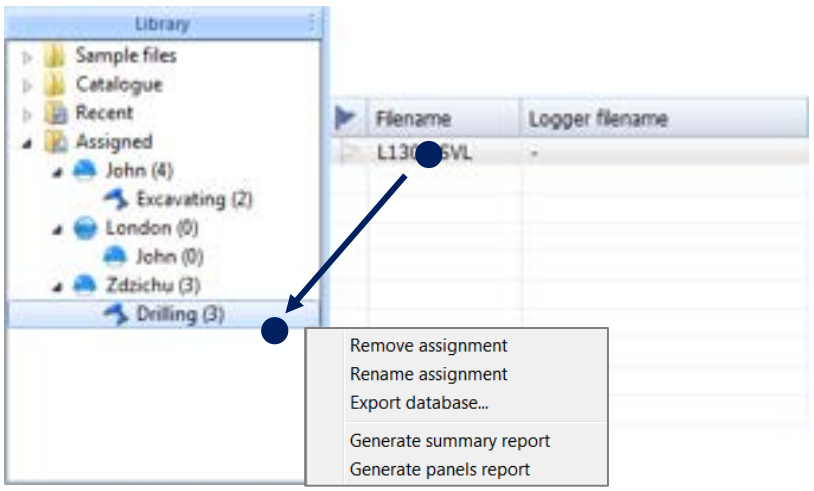


Fig. 3-22. Assigning additional information to files using the drag & drop technique

Right-clicking on the item in the Assigned section, you can remove, and rename assignments.

3.3.2. MANAGING ASSIGNMENTS

You can add a new value of Location, User or Task any time you assign this type of information to a file, by selecting *[new...]* from the list. A dialog box will appear, allowing you to specify the new value. Notes can also be added to each value.

In order to manage the values of assignments, use the *Locations*, *Users* and *Tasks* sub-panels in the File Manager. In each of these panels, all the values of the corresponding type of assignment are listed. Using the context menu, opened by right-clicking, you can add a new value or delete existing ones.

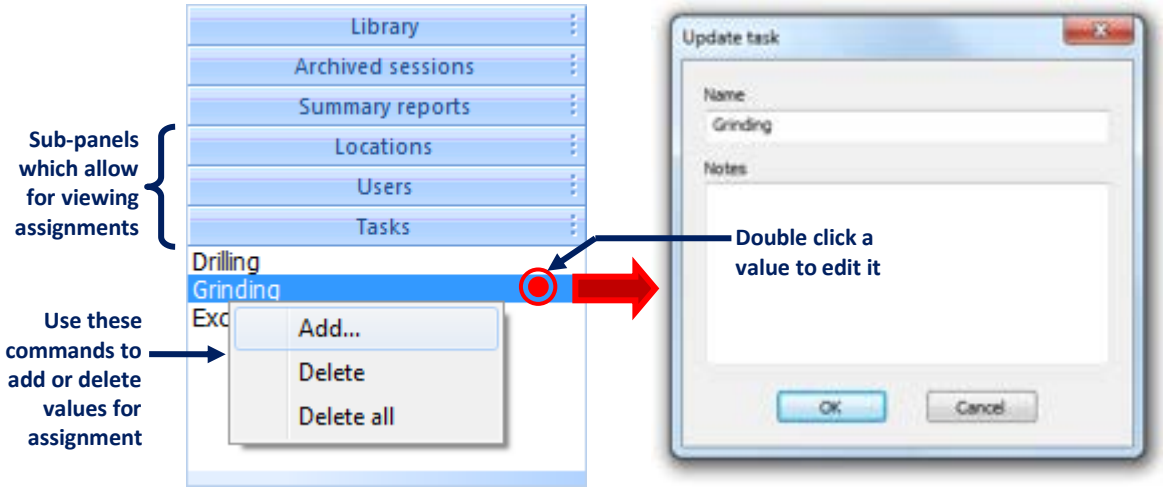


Fig. 3-23. Sub-panels of the File Manager allowing for viewing and editing assignments

You can also edit a location, user or task by double-clicking it and making the changes in the *Update location* / *user* / *task* dialog box.
Note: You can permanently delete a value of Location, User or Task only in the sub-panels of the File Manager. Deleting an item in the *Assigned* sub-tree in the Library sub-panel will only remove the assignment from the files, but the value will remain available.

3.3.3. USING ASSIGNED INFORMATION TO SEARCH FILES

You can use the assigned information to filter the list of files in two ways: using the Library and using the assignment-related sub-panels.

In the Library sub-panel of the File Manager, you can select an item in the *Assigned* sub-tree corresponding to a Location, User or Task in order to display in the File detail panel only the files to which the selected value has been assigned.
Note: Each file appears in exactly one item of the tree, which means that files with multiple types of information assigned will be displayed in lower branches of the tree, while files with only one type of information assigned will be displayed separately.
The numbers in brackets denote the number of files corresponding to the particular items. The hierarchy of the types of information that can be assigned is as follows: Location → User → Task.

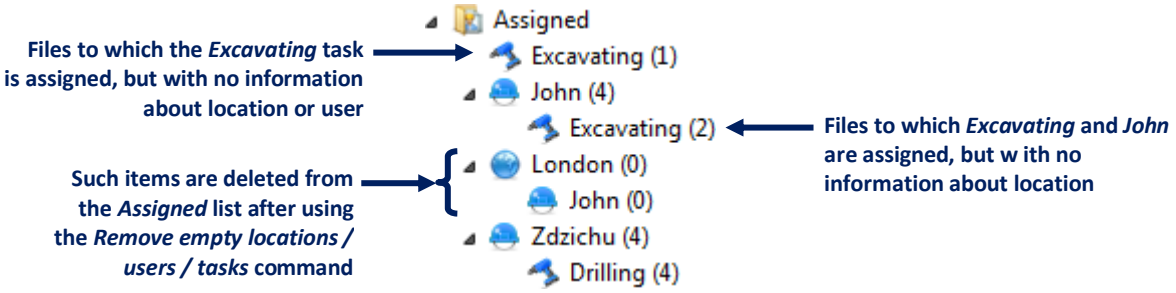


Fig. 3-24. *Assigned* sub-tree in the Library

On the contrary, in the *Locations*, *Users* and *Tasks* sub-panels, the lists of files with the respective types of information assigned are generated independently of the other types of information, *i.e.* when the *Excavating* task is selected in the *Tasks* sub-panel, all the files with this task assigned will be shown, regardless of whether they do or not have an assigned Location or User.

The *Remove empty locations/users/tasks* command deletes all items that do not contain any files from the list. It can be accessed by right-clicking on the 'Assigned' item.

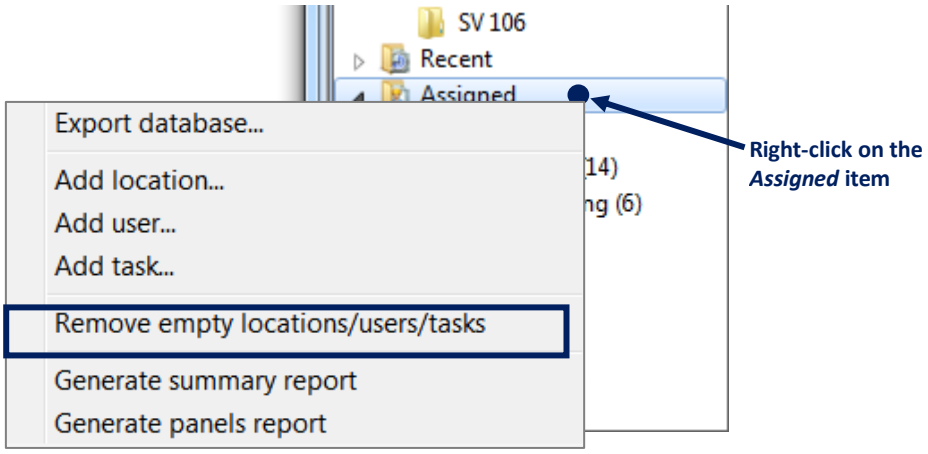


Fig. 3-25. *Remove empty locations/users/tasks* command

3.3.4. SUMMARY REPORTS

The summary reports can be used to gather measurement results related to selected locations, users, or tasks, in the form of MS Word documents. In order to create a summary report, right-click on an item corresponding to an object in the *Assigned* sub-tree in the Library sub-panel of the File Manager and select *Generate summary report* (Fig. 3-26). This command opens the Summary report wizard. You can also use the "Assigned" root item to create a summary report for all the files that have a location, user and/or task value assigned to them.

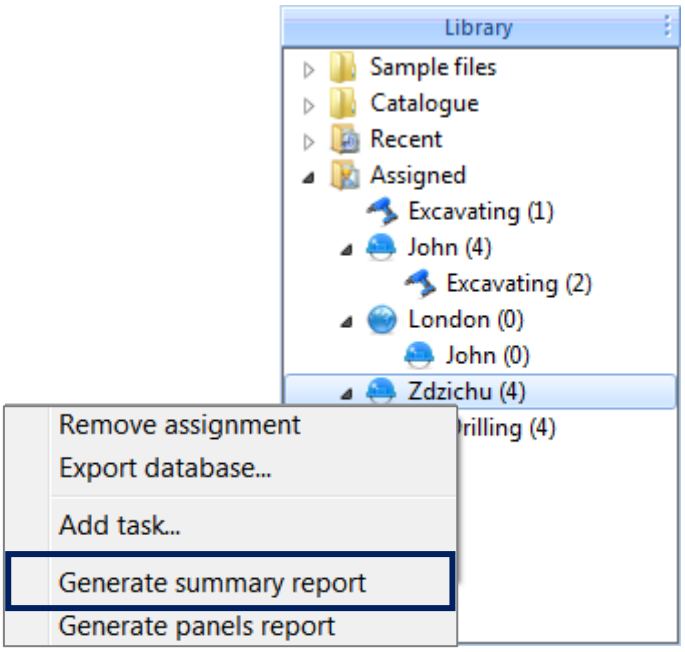


Fig. 3-26. Using the Library to generate a summary report

A summary report must be created according to a template. The first window which appears when the Summary report wizard is opened allows to select a template for the report. When you generate your first summary report, you need to create a new template, but the template will be saved, and you can use it later to generate more reports. In order to create a template, press the *Create new* button. The Summary report template editor window will appear.

Note: You can also create multiple templates; later you will be able to choose one of them each time you generate a summary report.

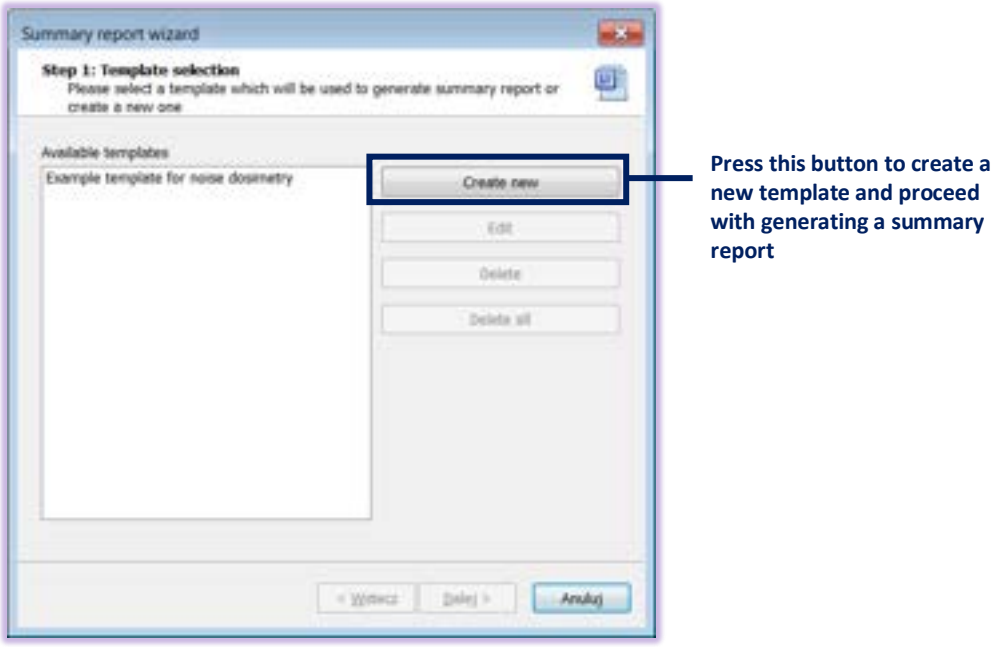


Fig. 3-27. *Summary report wizard* initial window

A template of the summary report consists of a set of parameters (*i.e.* the parameters of the Svantek instrument, parameters of the measurement, and measured quantities) to be displayed in numerical form, and another set of parameters to be displayed on a plot. In order to create a template, first specify the application you intend to use it for, since it determines the availability of particular parameters. The application can be specified using the list box in the top-right corner of the window. Next, select the parameters to be included in the report using the template editor, as presented in Fig. 3-28.

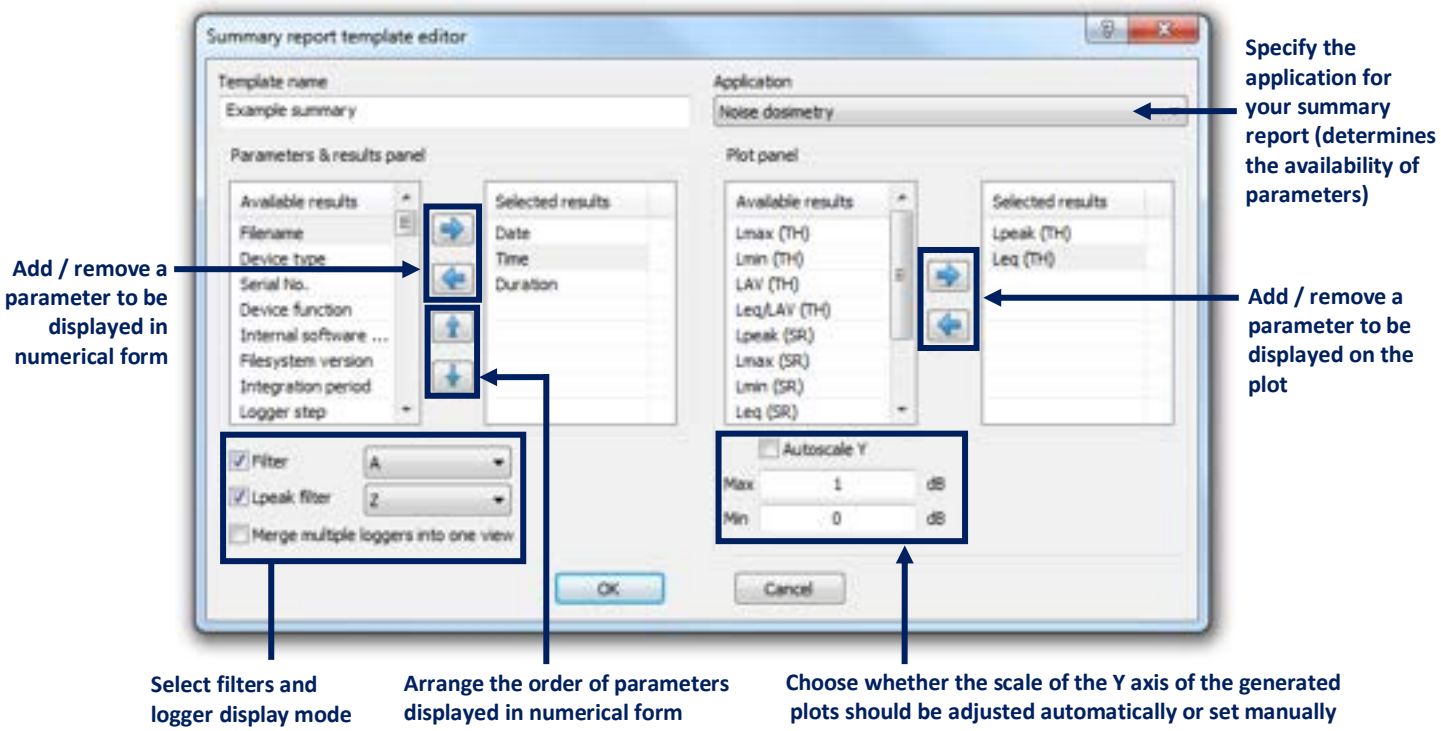


Fig. 3-28. *Summary* report template editor dialog box

After you have created a report template, you can select it on the list of the Summary report wizard and press the *Continue* button to proceed. In the second step of generating the summary report, you can select the time interval from which results will be included. After specifying the minimum and maximum date, press *Finish* to generate the report.

4 SESSIONS AND REPORTING

Sessions can be used to work with data downloaded from Svantek instruments and to create reports containing these data.

4.1. SESSIONS

4.1.1. CREATING AND MANAGING SESSIONS

To create a session, go to the *Data Browser*. In the File Details table, select the files which contain the data you wish to work with, press the *New post-processing session* button or right-click and select the *New post-processing session* command in the opened menu. You can create a session with one or multiple files. To create a session from a single file just double-clicking it.

Note: You cannot create sessions directly from the wave file itself.

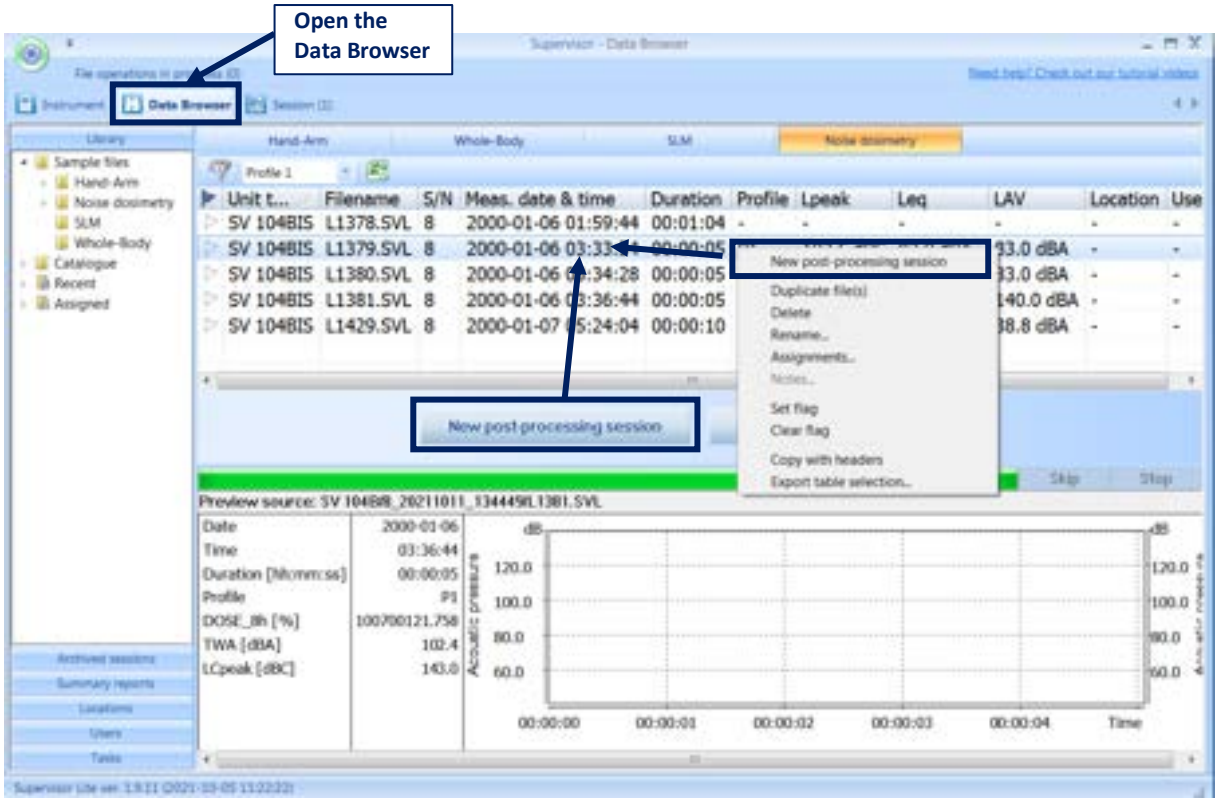


Fig. 4-1. *Creating* a new session using the Data Browser

After using above mention commands, the special window appears in which you should choose the template for the post-processing session.

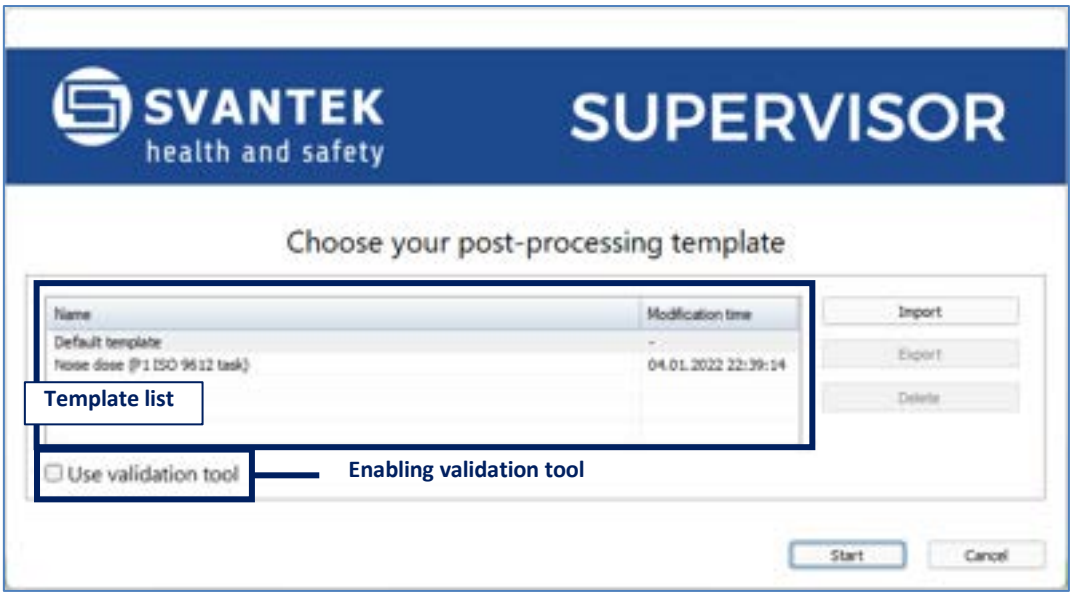


Fig. 4-2. Choosing post-processing template

The template list consists includes predefined templates: *Default template*, templates related to the results type, for example, *Noise dose (P1 ISO 9612 task)*; and templates created by the user, for example, *New template*. You cannot delete predefined templates. User templates and results type related templates can be exported (saved as the .svlt file) to the any catalogue on the PC. You can also import the previously exported template.

For each new session a tab is created on the bar at the top of the application window (Fig. 4-3). To open a session, click on the tab. By right-clicking on a tab you can open a context menu, allowing to specify a custom name for a session or to close it. You can close a session in two ways: by deleting it (permanently), or by moving it to the archive, which will allow you to later work with that session again. Deleting a session does not cause measurement files to be deleted. The archived sessions are available in the Data Browser, in the *Archived sessions* sub-panel of the File Manager (see Chapter 3.2.1). Using the *Delete all sessions* command it is possible to delete all the currently opened sessions at once.

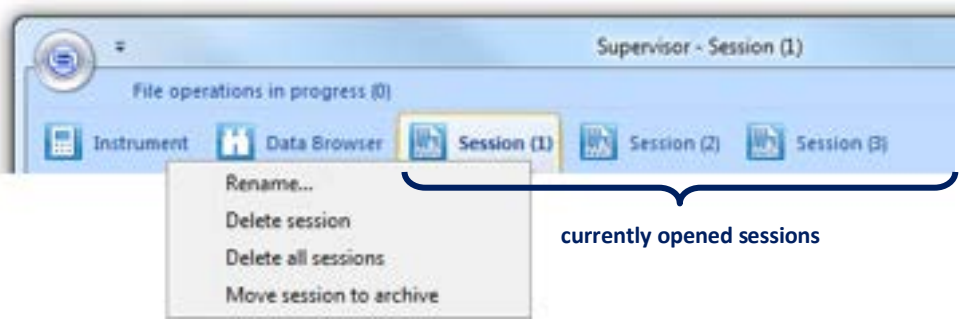


Fig. 4-3. *Tabs* corresponding to the *opened* sessions

You can also close a session using the *Move to archive* and *Delete session* buttons, located at the bottom-left corner of the window.

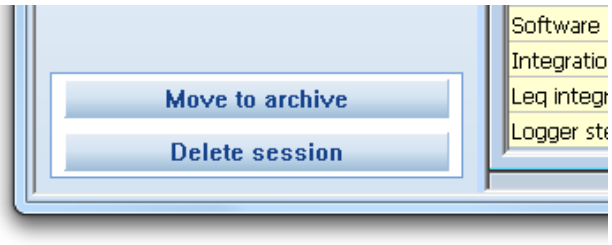


Fig. 4-4. Buttons for closing a session

When there are multiple sessions opened simultaneously, you can use the Windows dialog box to jump to a selected session or to delete some sessions in a quick way.

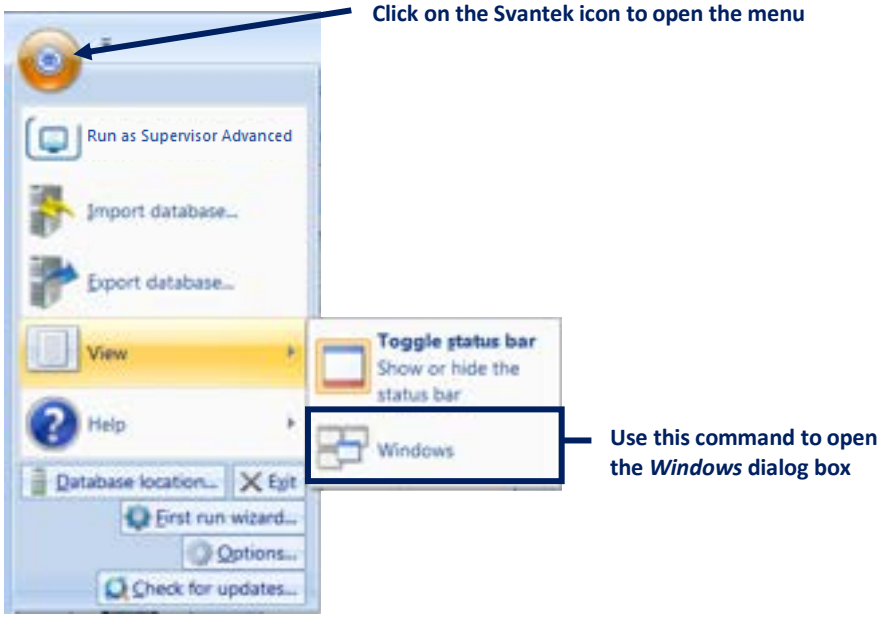


Fig. 4-5. Opening the *Windows* dialog box

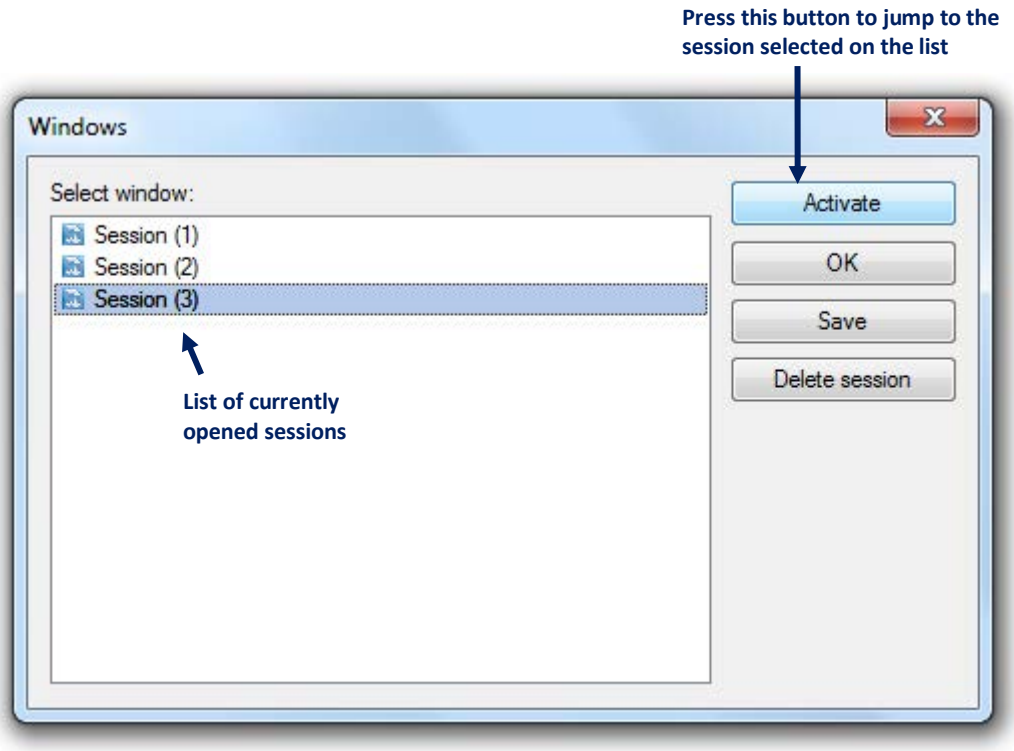


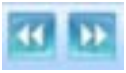
Fig. 4-6. *Windows* dialog box which allows to manage sessions

Validation tool

The Validation tool is used to check the correctness of the measured data and, if necessary, to reject "disturbances".

After creating a session with the *Use validation tool* option, the logger results view will appear with the Validation tool open on the left enabling automatic searching for markers areas:

- NoMotion,
- High vibration level,
- Audio, which serves as a basis to judge by ear whether a given fragment is correct or not.

You can move between the following ranges of these markers with the buttons  , where the selected range is highlighted with a block on the time history.

If there is an audio signal available within a given fragment of the time history, you can listen to it.

The following information is displayed for the following ranges:

- *Type* - the type of disturbance (i.e. the name of the marker)
- *Duration* - the length of the selected fragment
- *DOSE* / *LAeq* / *LAV* - dose / LAeq / LAV calculated for the selected fragment
- *Start* / *End* - start and end that can be manually "corrected" if we find that a larger or smaller fragment of the time history should be excluded from further calculations
- *Consider entire event* - is used to select the whole fragment of a given disturbance (selected by default) or if you want to enter it manually, you should uncheck it.

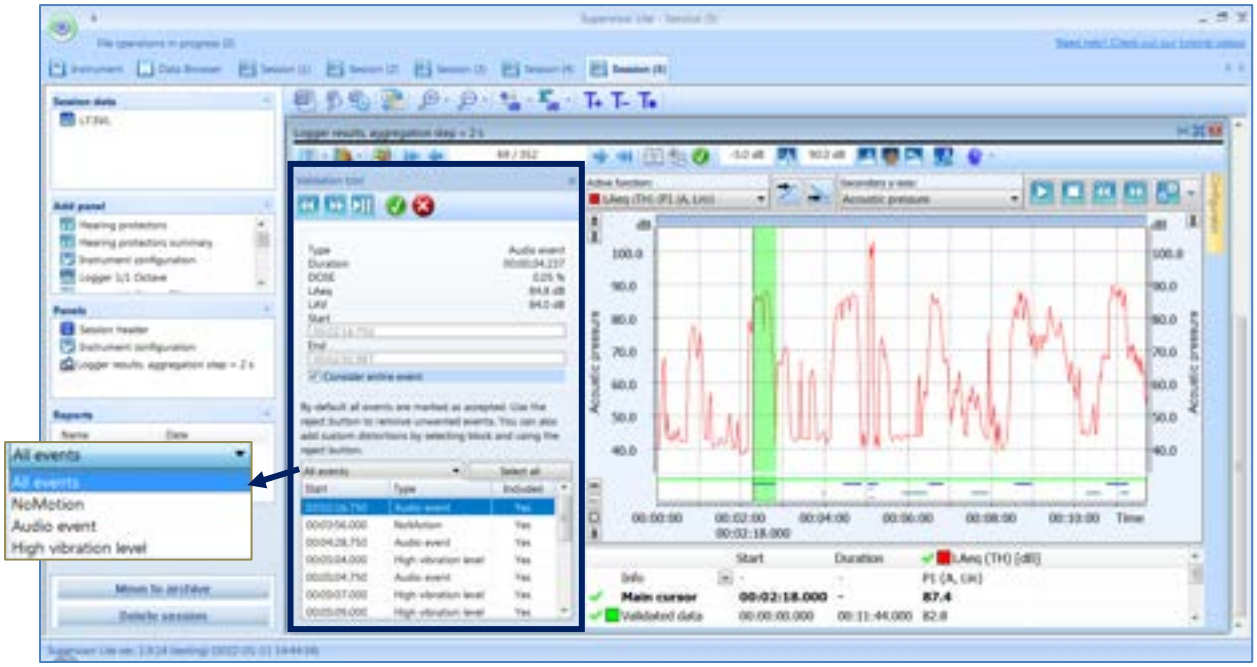


Fig. 4-7. Validation tool panel

The disturbances list is presented on the bottom part of the Validation tool panel. The disturbances list is synchronized with the cursor on the time-history graph, so that if you select the item in the list the cursor will be show this event on the right graph.

Clicking the left selector above the disturbances list header, you can apply the filter, for example, *NoMotion*, *Audio event* or *High vibration level*. Clicking the left button above the disturbances list header, you can select or deselect all items in the list.

Jumping on successive disturbances and selecting them with the button rejects a given fragment from the calculations, while the button causes the acceptation of that fragment. There is a short blink when accept / reject is used.

By default, the entire time history is considered correct, so you do not have to go through all the fragments and click (this is more useful for the situation when something was previously excluded and we want to restore it).

The Validation tool generates the "Valid data" marker that specifies the correct fragments of the time history that are taken into calculations in other calculation panels (see Chapters 5.4 and 5.5).

By default, this marker covers whole time history and only exclusion removes incorrect fragments from it.

If we do not have *NoMotion* or *High vibration level* markers (Chapter 5.7.6) or we want to manually exclude a fragment from the calculations, you can mark the block on the time history and press .

In validation mode for a session created from multiple files, the *Validated data* marker fragments are assigned according to source file tasks on the *Noise Dose/TWA*, *Noise exposure (ISO 9612)*, *Hand-arm and Whole-body vibration exposure* panels. Individual fragments of the *Validated data* marker belonging to subsequent files are assigned to the appropriate tasks resulting from the assignments of these files.

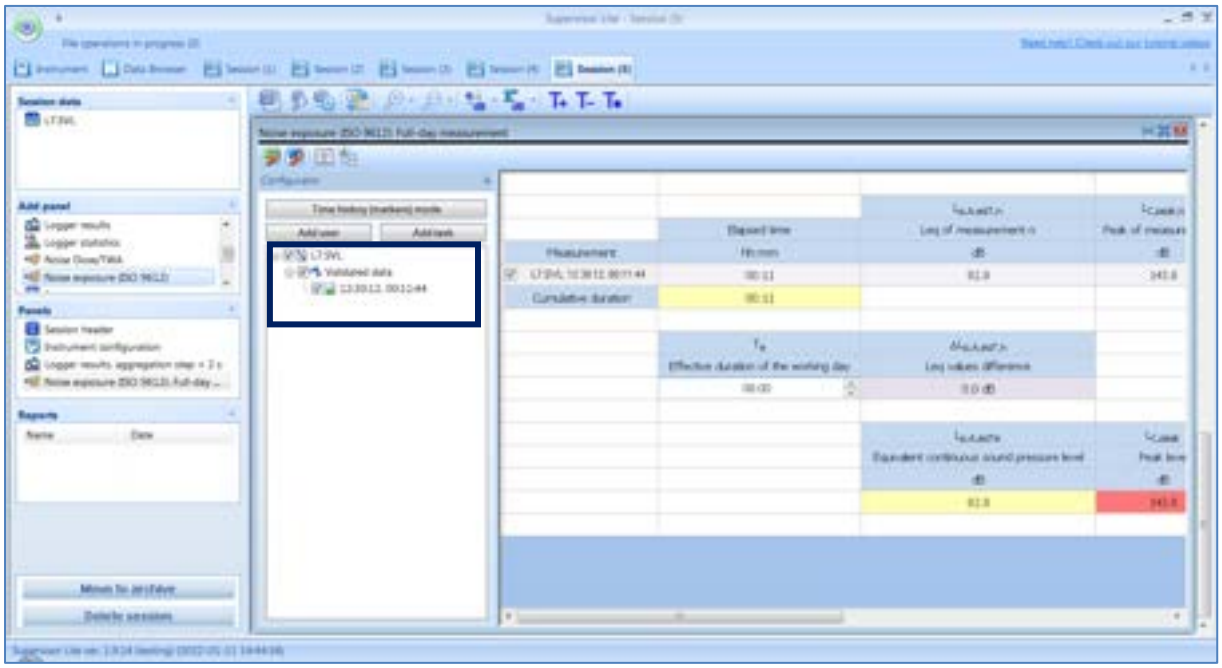


Fig. 4-8. Validated data marker assignments in multi-file session

4.1.2. SESSION DATA

The measurement data used to create sessions are contained in files, stored in the Supervisor's local database (more details about downloading and storing measurement data can be found in Chapter 3). Several files can be used to create a single session. A list of files which have been used to create the currently opened session is displayed in the *Session data* panel at the top-left corner of the window.

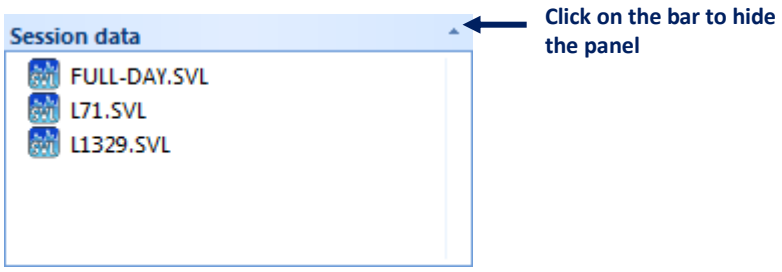


Fig. 4-9. *Session data* panel, containing a list of files which have been used to create the current session

Once a session is created, you cannot modify its data source. If you want to use different files in a session, you must create a new session with these files.

You can configure the way data will be displayed in the report using the so-called panels. Various types of panels are available, each of which serves for displaying different type of data. More details about the panels can be found in Chapter 4.2.

4.1.3. TOOLBAR

The Toolbar consists of a set of useful buttons, located at the top of the panels area. The effect of each of the Toolbar buttons is described in Table 4-1.

Fig. 4-10. Toolbar

Table 4-1 Toolbar buttons

Icon	Effect
	Generates a new report according to the configuration of panels in the current session and opens it in MS Word.
	Generates a report preview.
	Opens the *Report options* dialog box (see Chapter 4.1.4).
	Opens the *Manage templates* dialog box (see Chapter 4.1.6).
	Increases the zoom.
	Decreases the zoom.

	Enables to select the sound units.
	Enables to select the vibration units.
	Increases the font size for panels displayed in the Table mode.
	Decreases the font size for panels displayed in the Table mode.
	Sets the default font size for panels displayed in the Table mode.

4.1.4. GENERATING REPORTS FROM SESSIONS

You can easily generate a report containing measurement data displayed in the same way as in the current session by clicking the button, located on the Toolbar.

The report can be created in one of the following formats:
- DOC (if MS Word 2003 or newer is installed),
- PDF (if MS Word 2007 or newer is installed),
- RTF.

You can select the format, as well as the paper size, using the First run wizard dialog box, opened via the main menu.

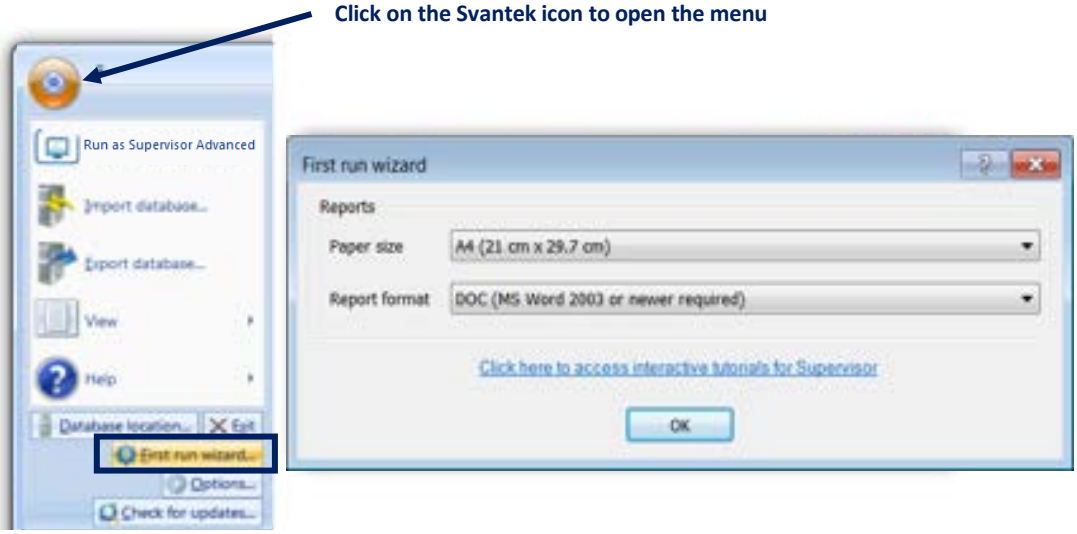


Fig. 4-11. First run wizard dialog box

The generated file will contain a start page and all the contents of the panels (in the same order and with the same graphical settings).

All the reports created in the current session are listed in the *Reports* panel, located at the bottom-left corner of the window. By double-clicking a report's name, you can open it in MS Word.

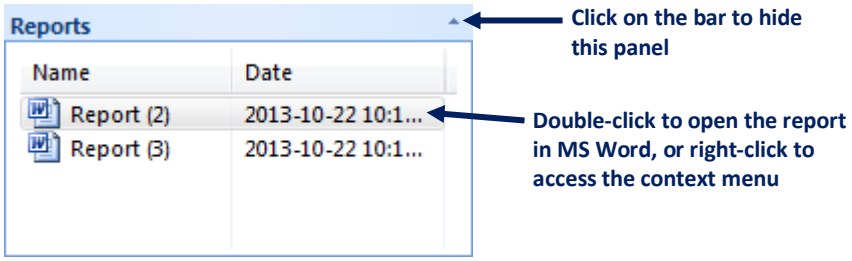


Fig. 4-12. *Reports* panel

By right-clicking you can open a context menu allowing for opening, renaming and deleting reports.

The start page and the style of the report can be customized using the *Report options* dialog box, opened by clicking the button. Instead of customizing the start page, you can also disable adding it to the reports at all.

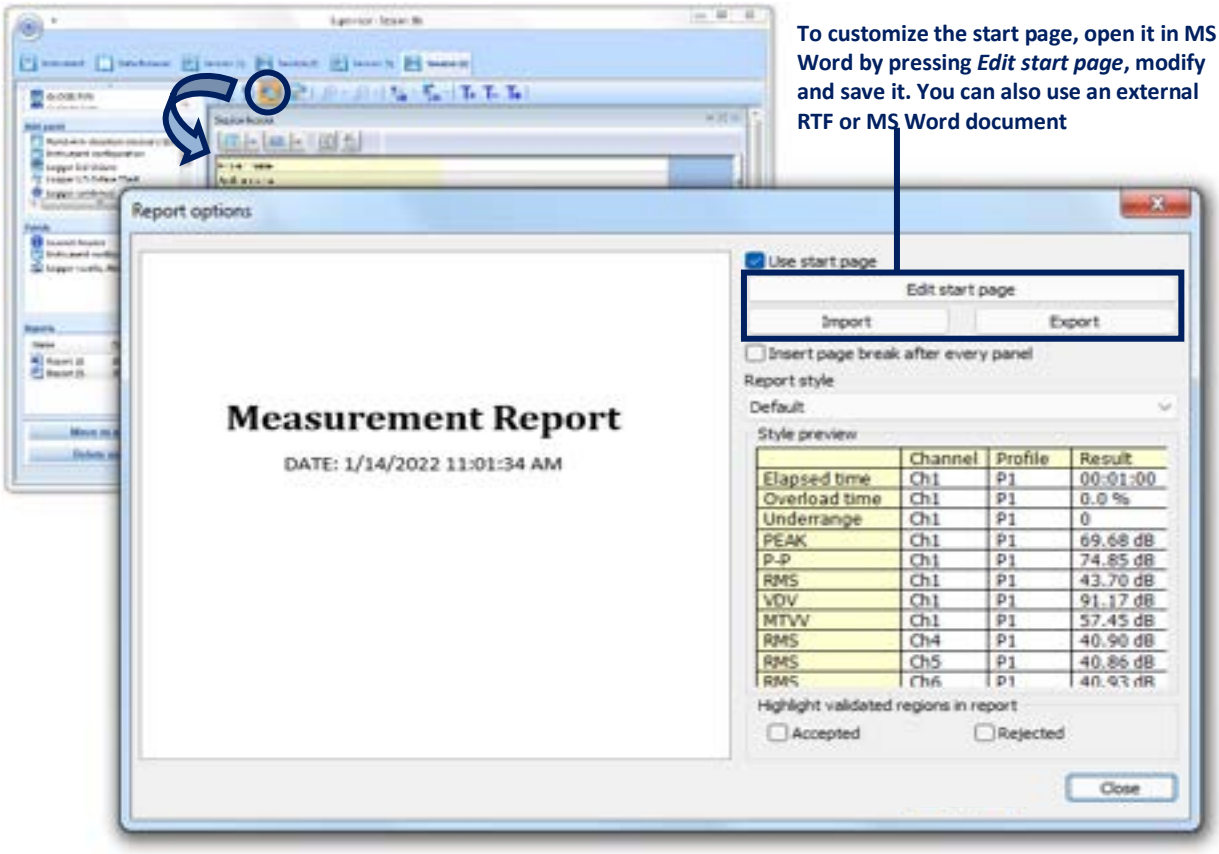


Fig. 4-13. *Report options* dialog box

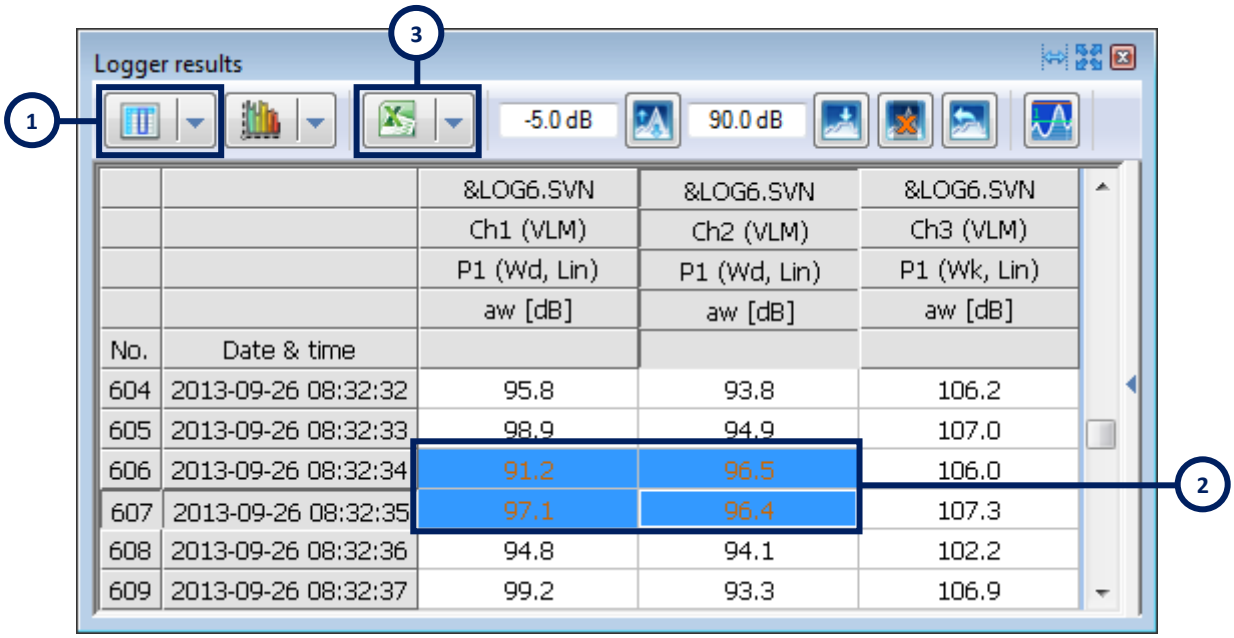
The report will show green highlights and red highlight areas if you check *Accepted* of *Highlight validated regions in report*.

4.1.5. EXPORTING DATA TO MS EXCEL

It is also possible to export the contents of a panel directly to a MS Excel worksheet:

1. Switch to the Table mode using the button.
2. Select the table cells you wish to be exported.
3. Press the *Send current view to MS Excel* (/) button, located on the panel's toolbar.
   Note: If the panel is too narrow, the *Send current view to MS Excel* button may be hidden. In such case you must resize the panel (or the entire application window) by dragging its borders until it is wide enough.

If a single cell is selected, the whole table will be exported (otherwise, only the selected fragment).



		&LOG6.SVN	&LOG6.SVN	&LOG6.SVN
		Ch1 (VLM)	Ch2 (VLM)	Ch3 (VLM)
		P1 (Wd, Lin)	P1 (Wd, Lin)	P1 (Wk, Lin)
		aw [dB]	aw [dB]	aw [dB]
No.	Date & time			
604	2013-09-26 08:32:32	95.8	93.8	106.2
605	2013-09-26 08:32:33	98.9	94.9	107.0
606	2013-09-26 08:32:34	91.2	96.5	106.0
607	2013-09-26 08:32:35	97.1	96.4	107.3
608	2013-09-26 08:32:36	94.8	94.1	102.2
609	2013-09-26 08:32:37	99.2	93.3	106.9

Fig. 4-14. Exporting data from a panel in Table mode to Microsoft Excel

After the export, MS Excel will be automatically opened with selected data pasted to the worksheet. In case the amount of data exceeds MS Excel's rows or columns number limit, it will be split to more than one worksheet.

4.1.6. LAYOUT TEMPLATES

The configuration of a session can be stored in the form of a template. This possibility enables to later easily use all the custom settings, concerning the way measurement results are displayed, with different data. The following information is saved in a template:

- Types of panels and their sequence,
- Most of the panels' specific settings, such as plot colours and data configurator options,
- Contents of the Text panels, including images.

In order to save or use a template, press the button, located on the Toolbar. You can also set a template as the default one, *i.e.* it will be used every time a new session is created.

You can also save the template in a selected location on the PC (rather than in the Supervisor's database), making it possible to later transfer it to another computer. To do so, use the *Export* button in the *Manage templates* dialog box. Similarly, you can import a template from a selected location on the PC if you acquired the template file in a different way than creating it in Supervisor (*e.g.* by e-mail).

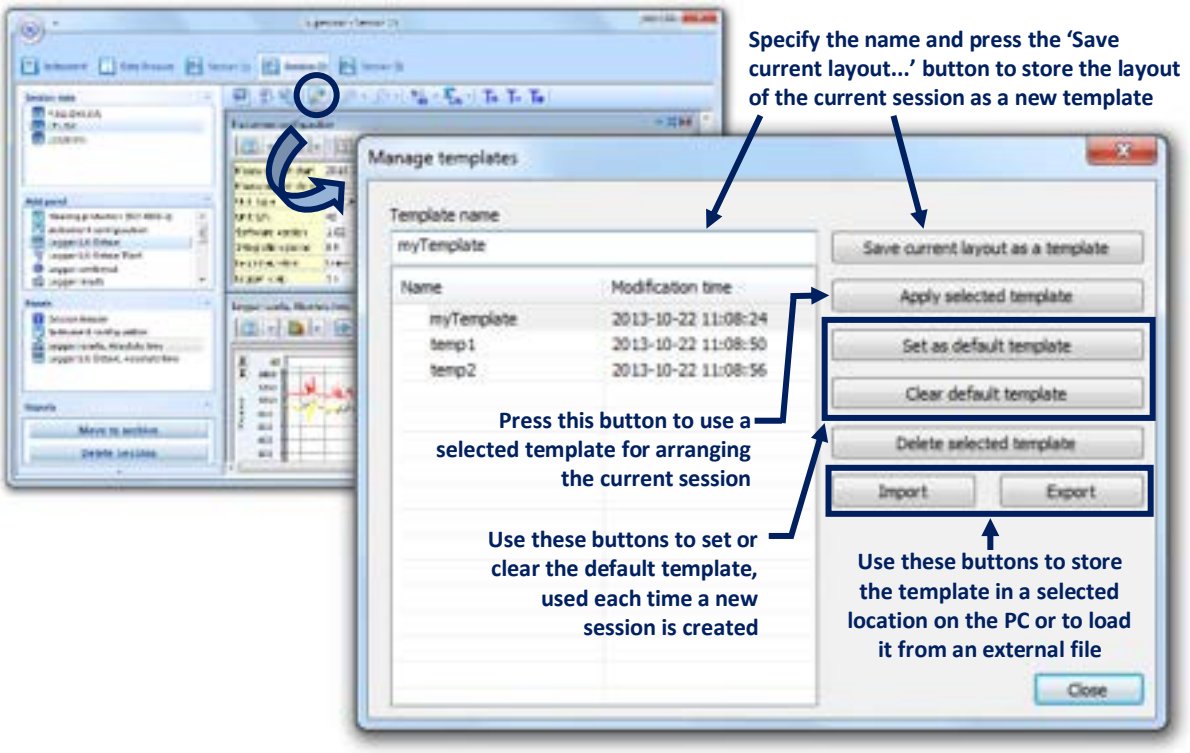


Fig. 4-15. *Manage templates* dialog box

The *default layout template* is used always when a new session is created. You can select one of the already saved templates and set it as the default template using the *Set as default template* button. When you clear the default template, sessions will be created using a basic layout, containing only the header, instrument configuration and a panel for the presentation of raw measurement results.

4.2. BASIC PANELS

Panels are the basic building blocks of the reports created using Supervisor's sessions. They can be used to configure the way data will be displayed in the report.

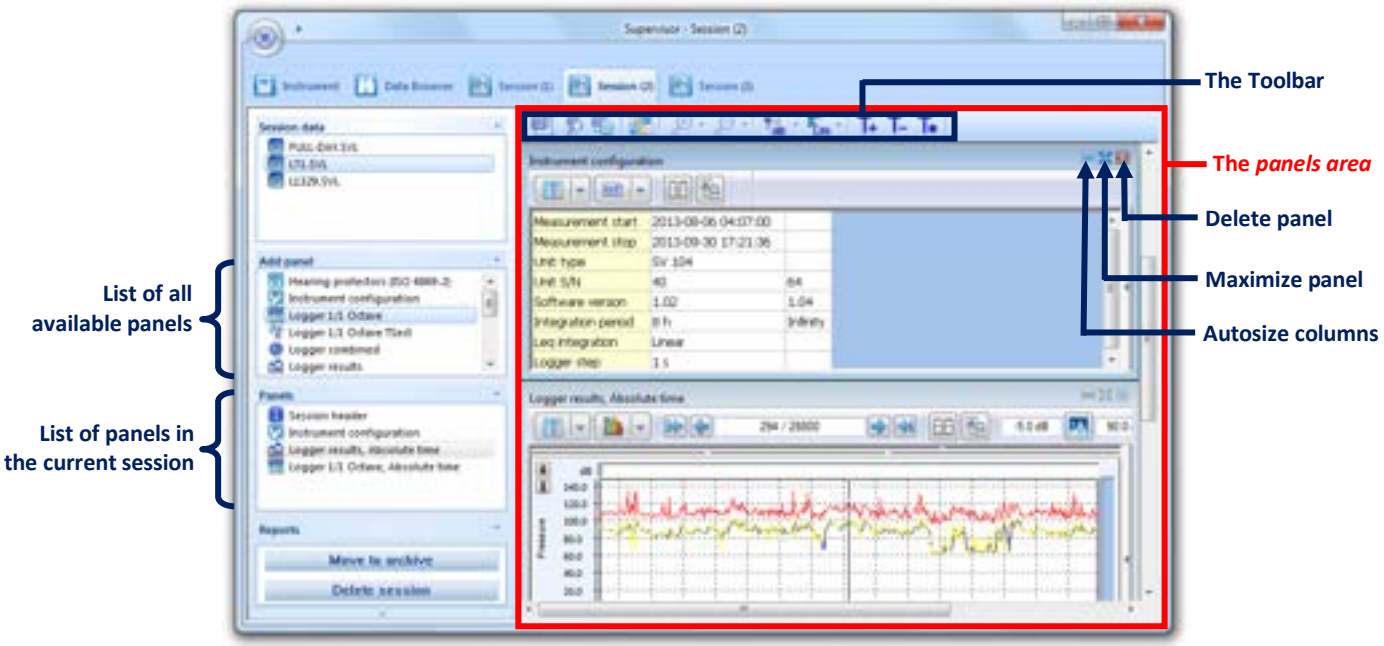


Fig. 4-16. Panels in the Session window

The *Add panel* list (at the left side of the window) shows all types of panels available for the current data. You can add a panel to the current session by double-clicking on its name in this list.

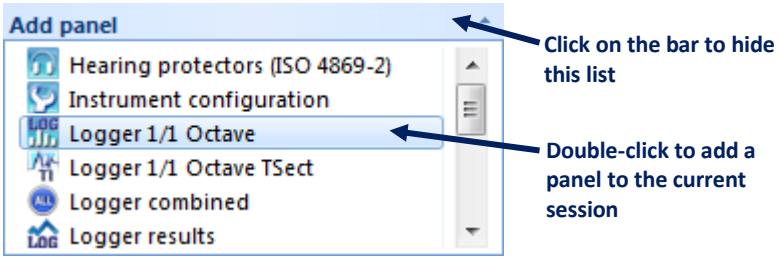


Fig. 4-17. *Add panel* list of all panels available for the current data

You can add any number of panels you want, including multiple panels of the same types. All panels added to the current session are listed in the *Panels* list, located at the left side of the window. You can use this list to jump to a selected panel by double-clicking it. You can also rename a panel by selecting it and clicking its name, or by pressing the F2 key when a panel is selected.

To delete a panel, use the button located at its top-right corner. To make it fill the whole panels area, use the button. By clicking the button once again you can shrink the panel to its previous size.

Panels are automatically scaled to fit the size of the panels area in horizontal direction. Their order in the vertical direction specifies the order in which data will be contained in the report. You can change the position of a panel using the drag & drop technique.

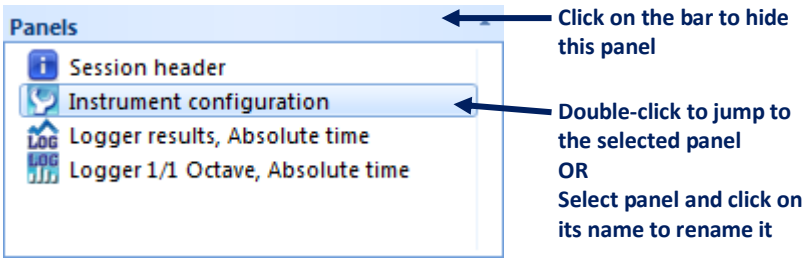


Fig. 4-18. *Panels* panel, containing a list of panels added to the current session

Each panel is equipped with the *Configurator* tool that allows you to select the information to be displayed on the panel.

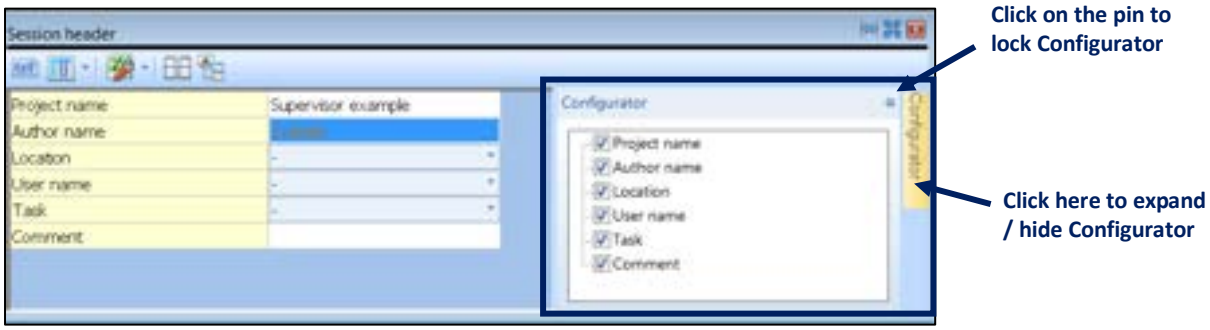


Fig. 4-19. *Configurator* tool

Note: *Configurator* is described in detail in Chapter 4.4.

The available types of panels are listed in Table 4-2. The following subsections are devoted to the description of several basic types of panels. Chapters 5.5 and 5.4 are devoted to some special panels that constitute useful tools for the analysis of dosimetry data. The Wave panel is described in Chapter 4.2.9.

Table 4-2 Types of panels available in the Supervisor's sessions

Icon	Name
	Session header
	Instrument configuration
	Logger results
	Total results
	Logger statistics
	Statistical results
	Logger spectrum results

- Time Intersection
- Spectrum results
- Text
- Hearing protectors / summary
- Noise exposure
- Hand-arm vibration exposure
- Whole-body vibration exposure
- 'What if'
- Map
- Wave

4.2.1. SESSION HEADER

This type of panel contains general information about the report, such as project's and author's name. It can be viewed in the Table and Text modes.
Note: The *Session header* panel is editable only in the Table mode.

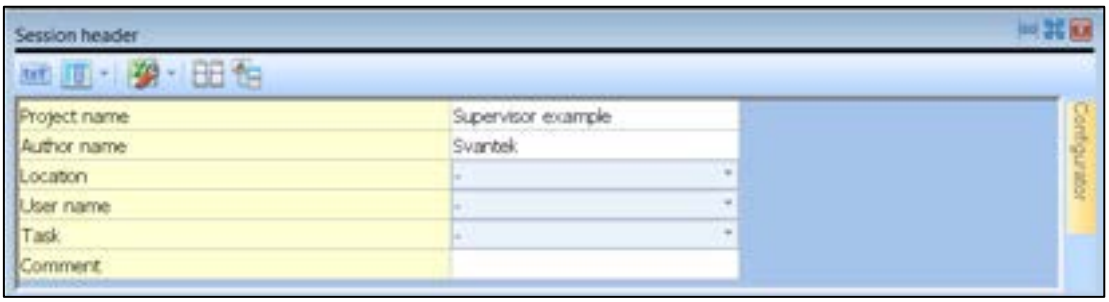


Fig. 4-20. *Session header* panel

4.2.2. INSTRUMENT CONFIGURATION

This type of panel contains basic information about the measurement data used for creating the session, such as the device used for measurement, the instrument settings, measurement date and time. It can be viewed in the Table or Text mode.
Note: In case more than one file was used to create the session and the instrument configuration differs from file to file, the information is shown in several columns, one for each file; identical information in files is displayed only in the first column.

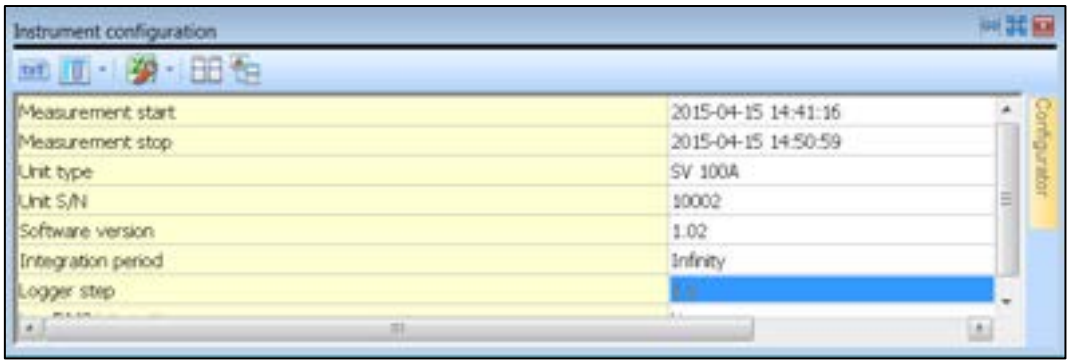


Fig. 4-21. *Instrument configuration* panel

4.2.3. LOGGER RESULTS

This type of panel serves for displaying measurement results as a function of time. It can be displayed in the Plot or Table mode.

Functions that cannot be plotted may also be added to a Logger results panel; however, such data will only be presented in the Table mode.

In the Logger results panel, it is possible to modify the measurement data in three ways: deleting, clipping and shifting. Modifications apply to all data if no block selection has been made. If there is a block selection, modifications only apply to the selected data. The Delete tool affects all data for the selected time range, while the Clip and Shift tools only affect the visible data (the ones selected in the View Configurator).

- To delete data, select a range of time and press the button, or right-click and select the *Delete data* command. There are two methods of deleting data: compressing the time domain to keep the signal continuous, or leaving an empty region, marked with the so-called *Deleted data marker*.
- *Clipping* means truncating all data above a specified threshold; the truncated values are replaced with the threshold value. To clip data, enter the threshold in the field to the left of the button and press this button. You can also right-click the data curve, select the *Clip data…* command and enter the threshold value in the dialog box which will appear.
- *Shifting* means adding a constant positive or negative value to a range of data. To do so, first select a point or a range of data to be shifted using the main cursor or blocks of selection. You can then enter the value to be added in the field to the left of the button and press this button, or you can right-click the data curve, select the *Shift data…* command and enter the value to be added in the dialog box which will appear.

A marker, called *Changed data*, is generated for all ranges where data has been clipped or shifted.

All modifications can be undone by pressing the button or selecting the *Restore data to original* command in the context menu.

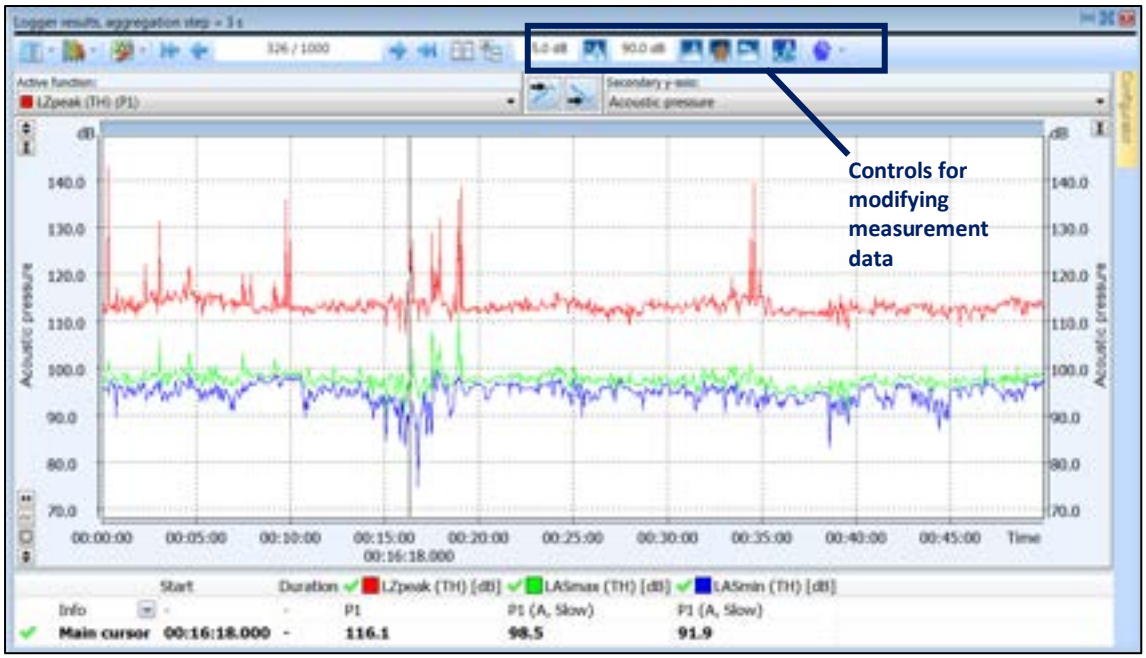


Fig. 4-22. *Logger results* panel displayed in the Plot mode

Note: The button serves for opening the *Limit lines* window; for details, see Chapter 4.3.2.

4.2.4. TOTAL RESULTS

This type of panel contains summary results of the measurement. It can be displayed in the Table or Text mode. In case when many results are to be displayed simultaneously, it is advisable to display the Total results panel in the transposed view; in the Table mode, the transposition can be easily done by clicking on the button. For details, see Chapter 4.3.1.

Summary results, corresponding to each separate integration period, are displayed together with the Total results, corresponding to the whole measurement period. To hide Summary results, press the *Skip SR* button.

Note: The *Total results* panel allows for sorting the displayed periods by start time or by name. To do so, right-click and in the pulldown menu, choose the *Sort by start time* or *Sort by name* command.

You can hide the column representative of the data source, as well as the column representative of the measurement channel, in case all rows contain the same value, by using the options available in *Main Options* » *Table view* » *Total results*.

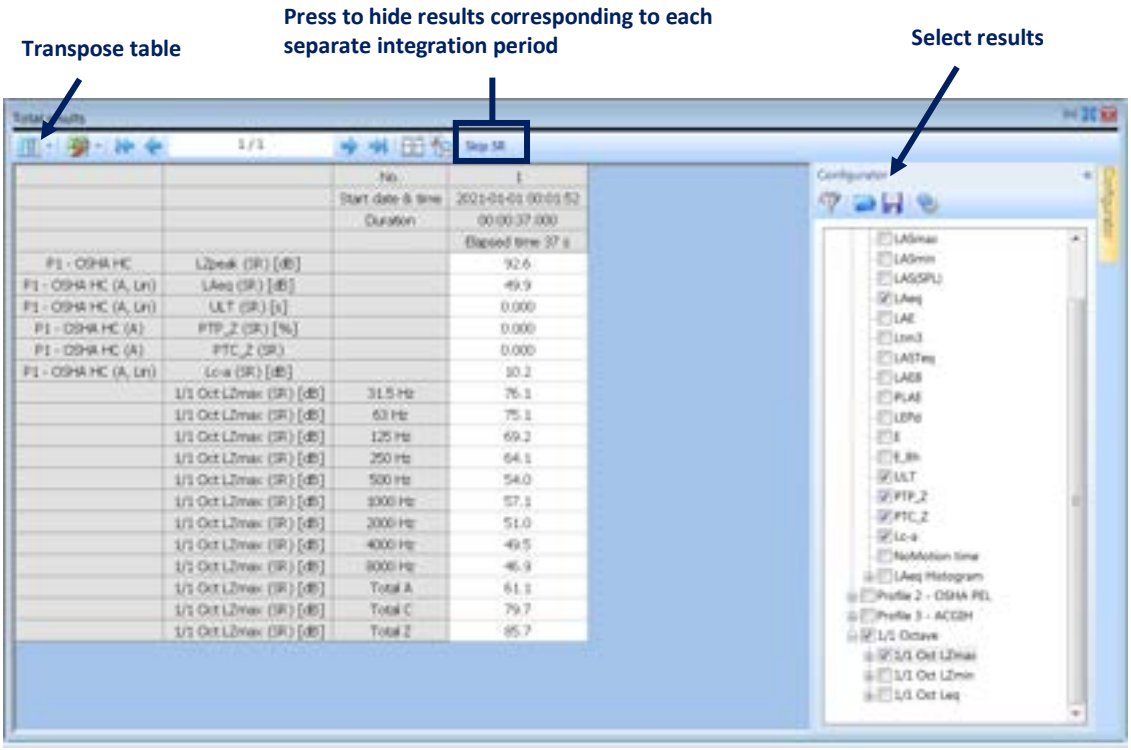


Fig. 4-23. *Total results* panel

4.2.5. LOGGER STATISTICS

The statistical data can be presented in two different modes: *Histogram* or *Ln*. By default, *Histogram* is initially presented. To switch the presentation mode, use the selector located on the panel's toolbar (Fig. 4-24).

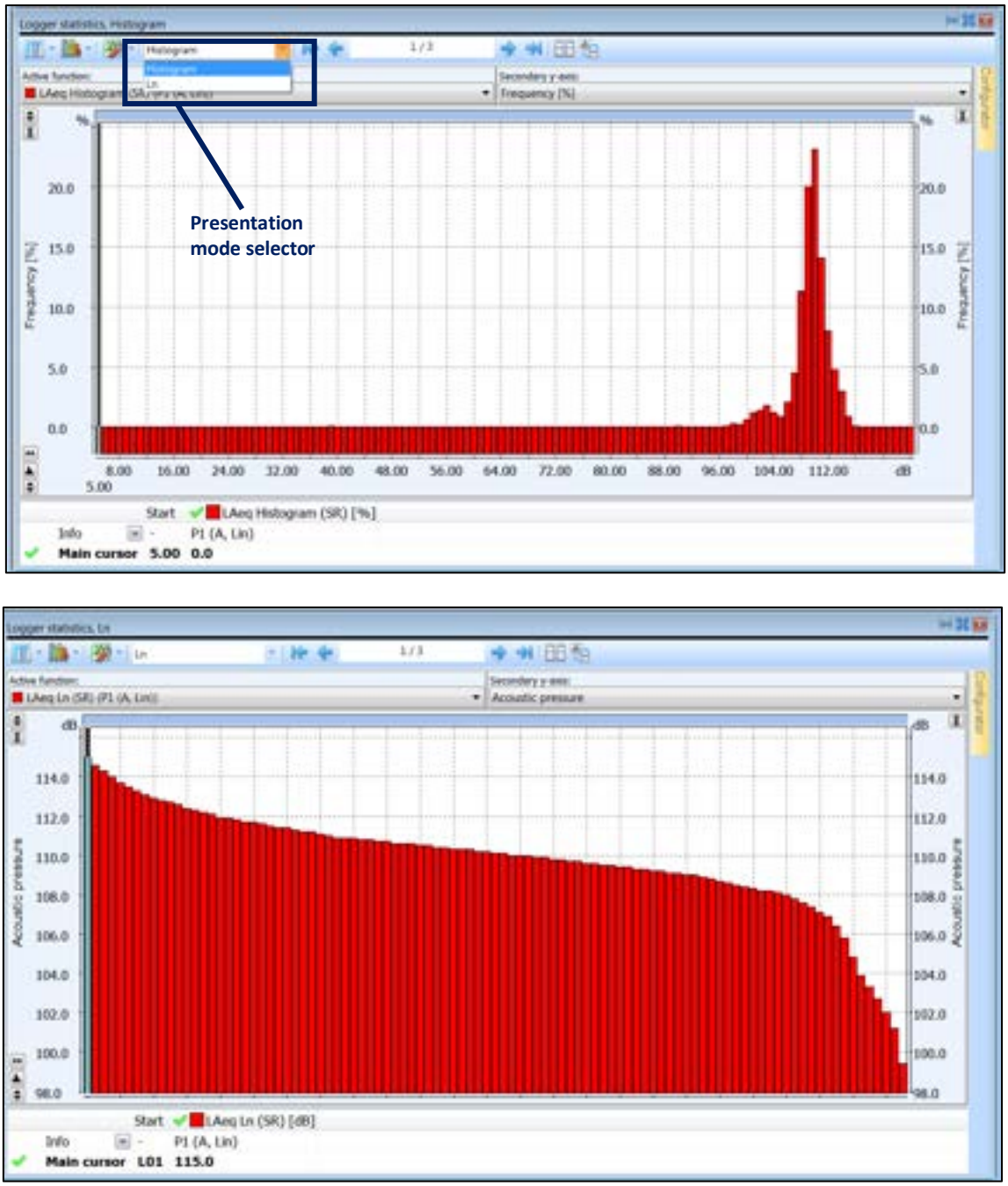


Fig. 4-24. *Logger statistics* panel – *Histogram* and *Ln* modes

4.2.6. LN SPECTRA

This type of panel allows for displaying the results of measurement in the form of the Ln spectra. It can be displayed in the Table or Text mode.

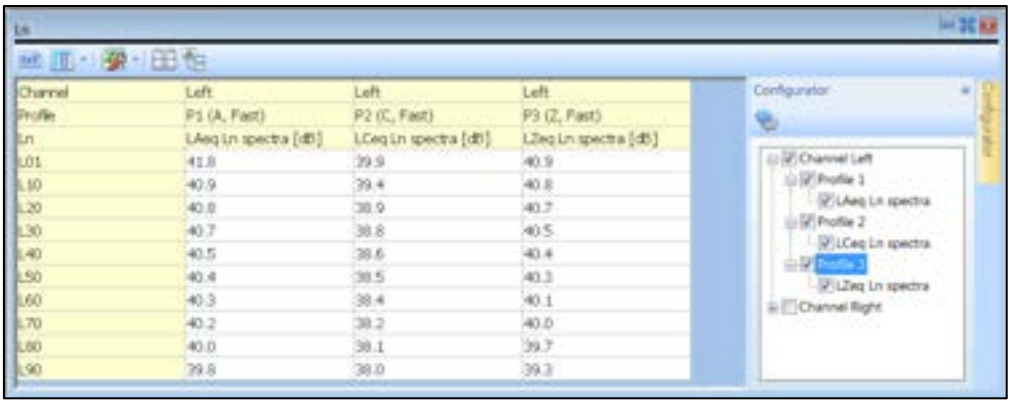


Fig. 4-25. *LN spectra* panel

4.2.7. SPECTRUM RESULTS

This type of panel allows for displaying the results of measurement in the frequency domain, such as *1/1 Octave*, *1/3 Octave* and *FFT* spectra. The name of each spectrum results panel contains the type of spectrum (*1/1 Octave*, *1/3 Octave* or *FFT*), *e.g. Logger 1/1 Octave* panel. This panel can be displayed in the Table mode, Plot mode, and Spectrogram mode.

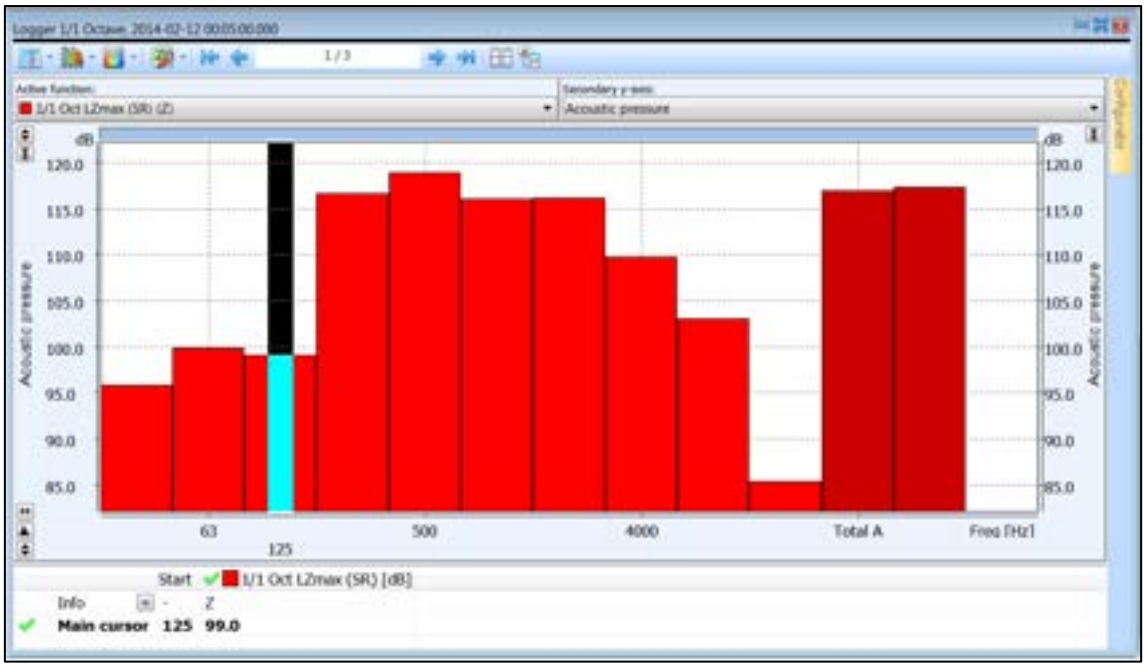


Fig. 4-26. *Logger 1/1 Octave* panel

While displaying spectral data in the Plot mode, the spectrum is displayed for a selected interval of time. The time history of the spectrum can be browsed using the buttons located on the panel's toolbar.

Next sample

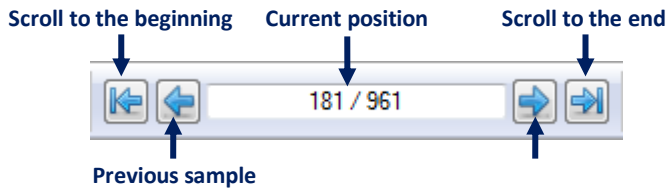


Fig. 4-27. Buttons for browsing the time history of measured spectrum

4.2.8. TIME INTERSECTION

By default, the Time Intersection (*TSect*) panels are not displayed in the *Add panel* list. They can be enabled in Main Options » Data Exchange.

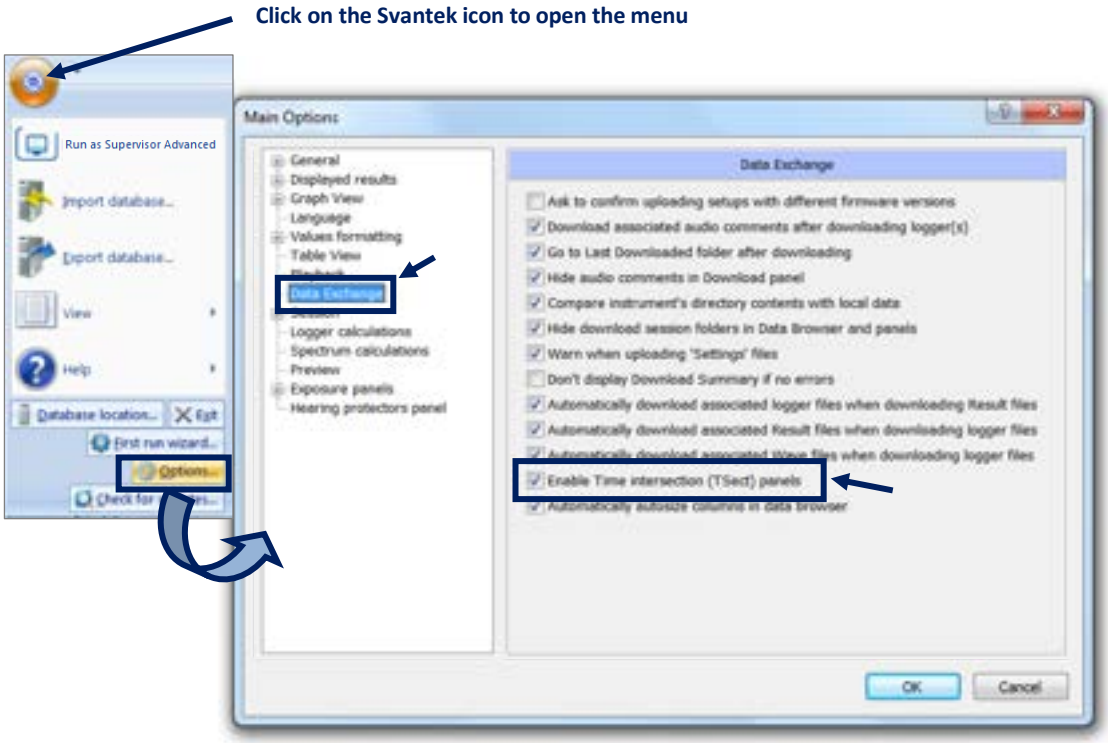


Fig. 4-28. Enabling the Time Intersection panels

The TSect panels allow for viewing logger / merged spectral data at a selected value of frequency as a function of time. They can be displayed in the Table or Plot mode.

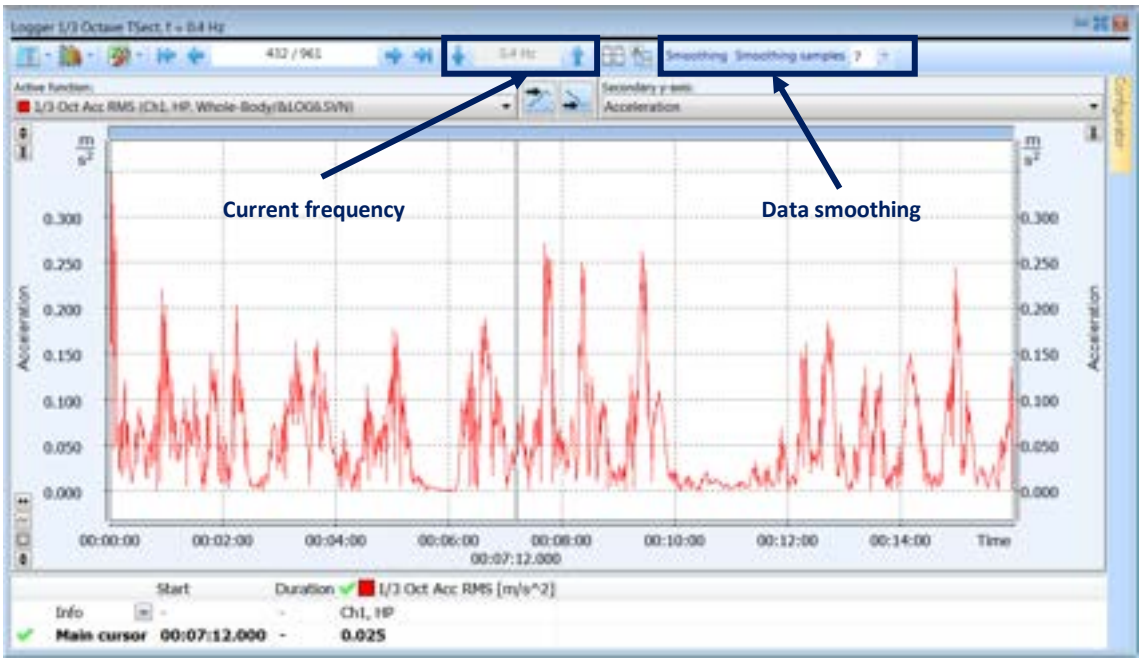
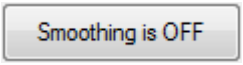
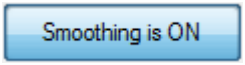


Fig. 4-29. Table mode of the Intersection panel

- The frequency can be selected using the and buttons, located on the Panel Toolbar.
- The  /  button can be used to enable / disable the smoothing od data. The number of samples used for smoothing can be set using the selector located to the right of this button (using more samples for smoothing results in a higher amount of smoothing).
- Selecting a point in time when working with a Tsect panel automatically changes the time viewed in the corresponding spectral panel.

4.2.9. WAVE

The *Wave* panel can be used to look at the waveform of an Audio event or a separate .WAV file.

Note: The WAVE panel can be opened for an .svl file that either contains an audio event or has some associated wave files which are created during the time history recording to an .svl file.

You can work with a *Wave* panel just in the same way as with typical time-history data. The Audio Navigator, located at the top-right corner of the panel, allows for playing the displayed audio signal.

Fig. 4-30. Wave panel

4.2.10. TEXT

The Text panel makes it possible to include text in the report. It provides some simple text-processing options, such as font style or size selection. You can also include pictures from the PC memory in a Text panel using the button.

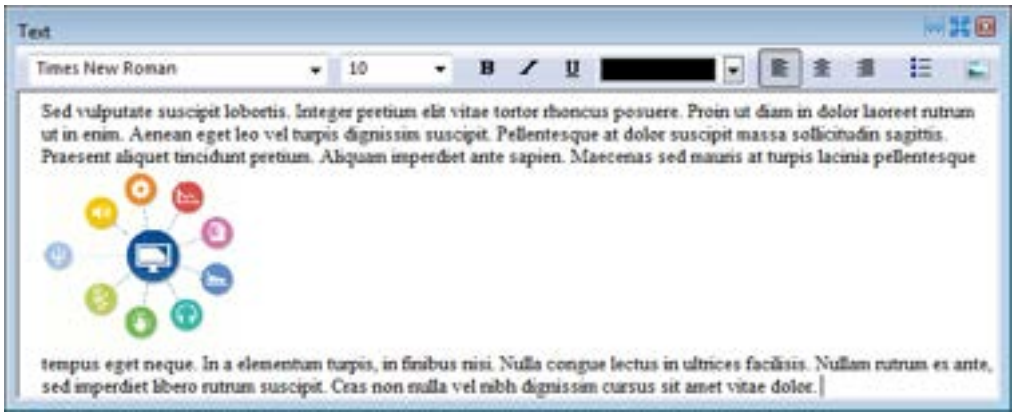


Fig. 4-31. *Text* panel

4.2.11. MAP

The Map panel, available in case of logger files downloaded from SVAN instruments capable of acquiring GPS data, allows for displaying the location of measurements.

- The selected result, measured in different locations, is plotted on a map - Google or Open Layers (see Chapter 1.6).
- The colours of the plotted points represent the measured values, according to the colour scale, displayed at the right-hand side of the Map view sub-window.

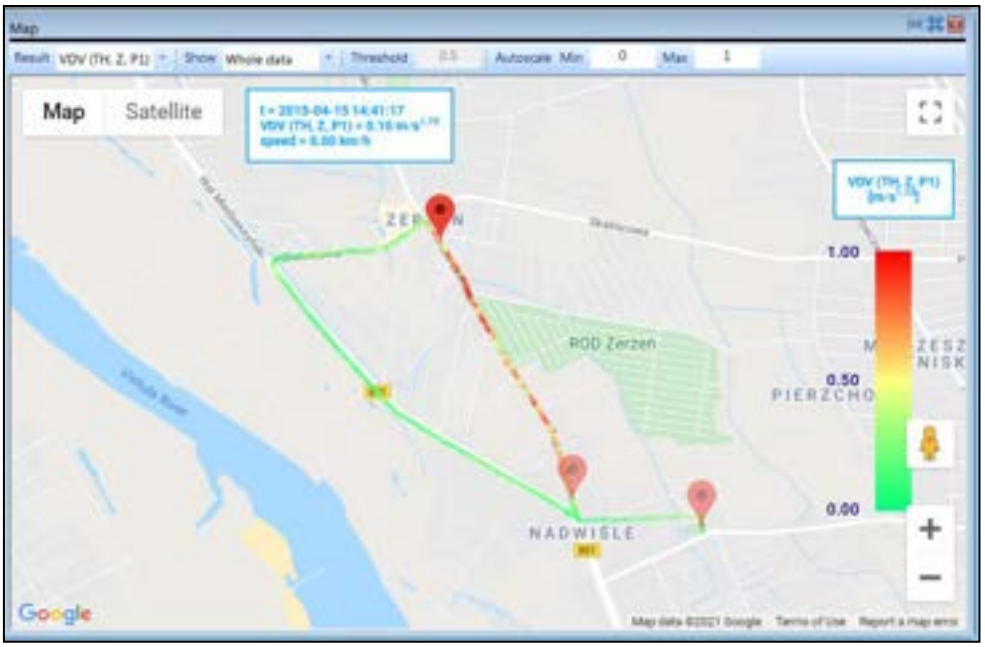


Fig. 4-32. *Map* panel

The *Result* selector allows for selecting the displayed result.

The *Show* selector allows for selecting the displayed time range (Whole data / Block selection).

The Threshold tool allows for displaying only results which excess a selected value. To use it, press the *Threshold* button and specify the threshold value in the field to the right of it.

The Autoscale tool automatically adjusts the colour scale so that the whole range of measured values is displayed. If you disable it by pressing the *Autoscale* button, you should manually set the colour scale by entering the minimum and maximum values in the fields located to the right of that button.

4.3. DISPLAY MODES

A panel can be displayed in one of four available modes:
- Table,
- Plot,
- Spectrogram,
- Text.

Each of these modes has its own particular features; for each type of panel, only some of the display modes are available (*e.g.* a *Session Header* panel can only be displayed in the Table or Text mode). To choose the display mode, use the buttons located at the top-left corner of the panel.

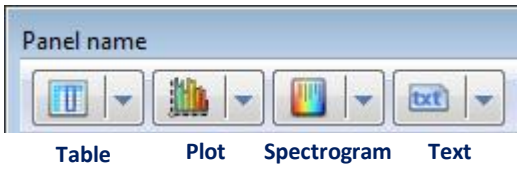
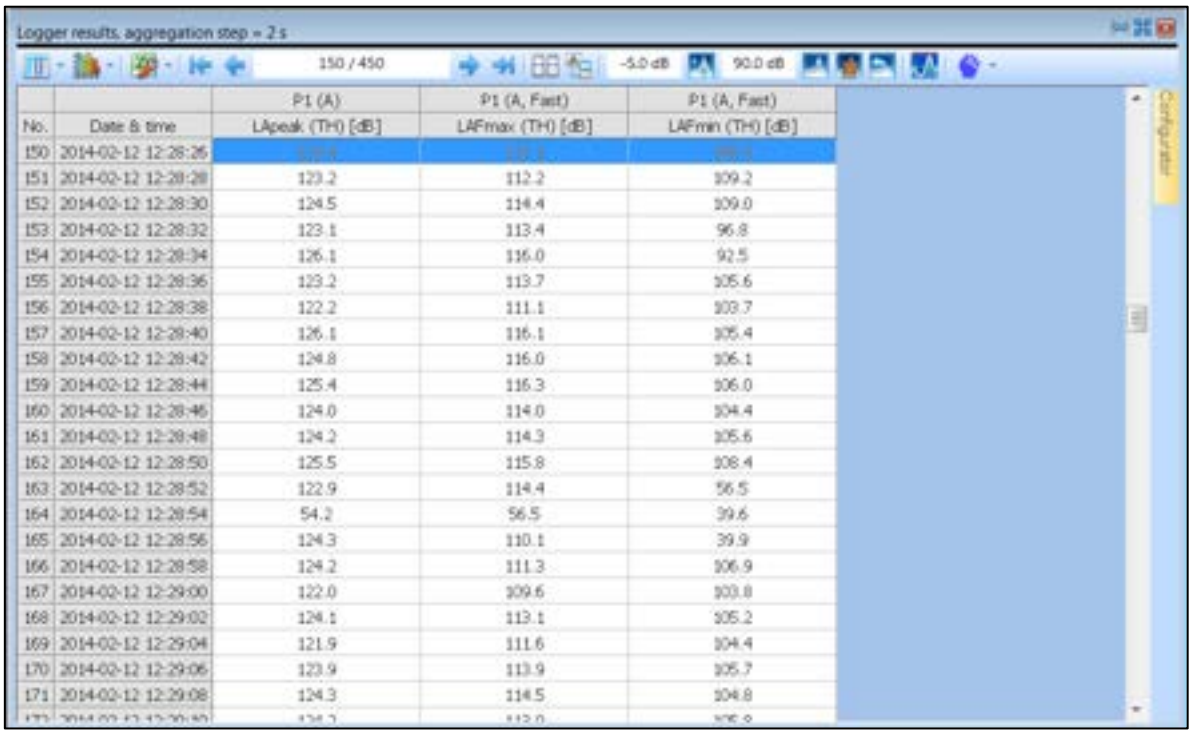


Fig. 4-33. Buttons for choosing the display mode

4.3.1. TABLE MODE

In the Table mode, numeric and text data are displayed in the form of a table. This mode is used for displaying the Session header or Instrument configuration, as well as for displaying measurement results such as *Logger results* in numeric form.



No.	Date & time	P1 (A) LApeak (TH) [dB]	P1 (A, Fast) LAFmax (TH) [dB]	P1 (A, Fast) LAFmin (TH) [dB]
150	2014-02-12 12:28:26			
151	2014-02-12 12:28:28	123.2	112.2	109.2
152	2014-02-12 12:28:30	124.5	114.4	109.0
153	2014-02-12 12:28:32	123.1	113.4	96.8
154	2014-02-12 12:28:34	126.1	116.0	92.5
155	2014-02-12 12:28:36	123.2	113.7	105.6
156	2014-02-12 12:28:38	122.2	111.1	103.7
157	2014-02-12 12:28:40	126.1	116.1	105.4
158	2014-02-12 12:28:42	124.8	116.0	106.1
159	2014-02-12 12:28:44	125.4	116.3	106.0
160	2014-02-12 12:28:46	124.0	114.0	104.4
161	2014-02-12 12:28:48	124.2	114.3	105.6
162	2014-02-12 12:28:50	125.5	115.8	108.4
163	2014-02-12 12:28:52	122.9	114.4	56.5
164	2014-02-12 12:28:54	54.2	56.5	39.6
165	2014-02-12 12:28:56	124.3	110.1	39.9
166	2014-02-12 12:28:58	124.2	111.3	106.9
167	2014-02-12 12:29:00	122.0	109.6	103.8
168	2014-02-12 12:29:02	124.1	113.1	105.2
169	2014-02-12 12:29:04	121.9	111.6	104.4
170	2014-02-12 12:29:06	123.9	113.9	105.7
171	2014-02-12 12:29:08	124.3	114.5	104.8

Fig. 4-34. Example of panel displayed in the Table mode

Normal / Transposed view

In general, when the *Normal view* is set, the table rows contain different time samples while columns contain results of different measurements or calculations. Switching to the *Transposed view* sets the inverse configuration. The *Transposed view* is particularly useful if you need to view many variables in few points of time.

To enable the Transposed view, you can do one of the following:

- Click on the button – the view will switch to the other than currently set.
- Use the Table mode menu to choose one of the views.

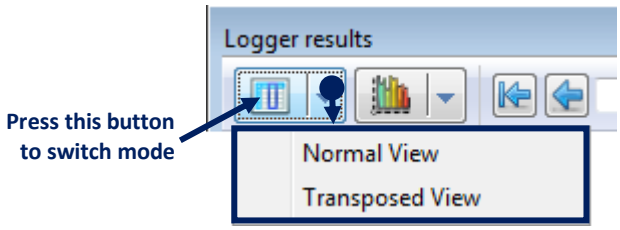


Fig. 4-35. Selecting the view in the Table mode

Copying with headers

The *Copy with headers* tool is available in the context menu opened by right-clicking. It copies the selected data to the clipboard together with headers describing it, located above and to the left of the selection.

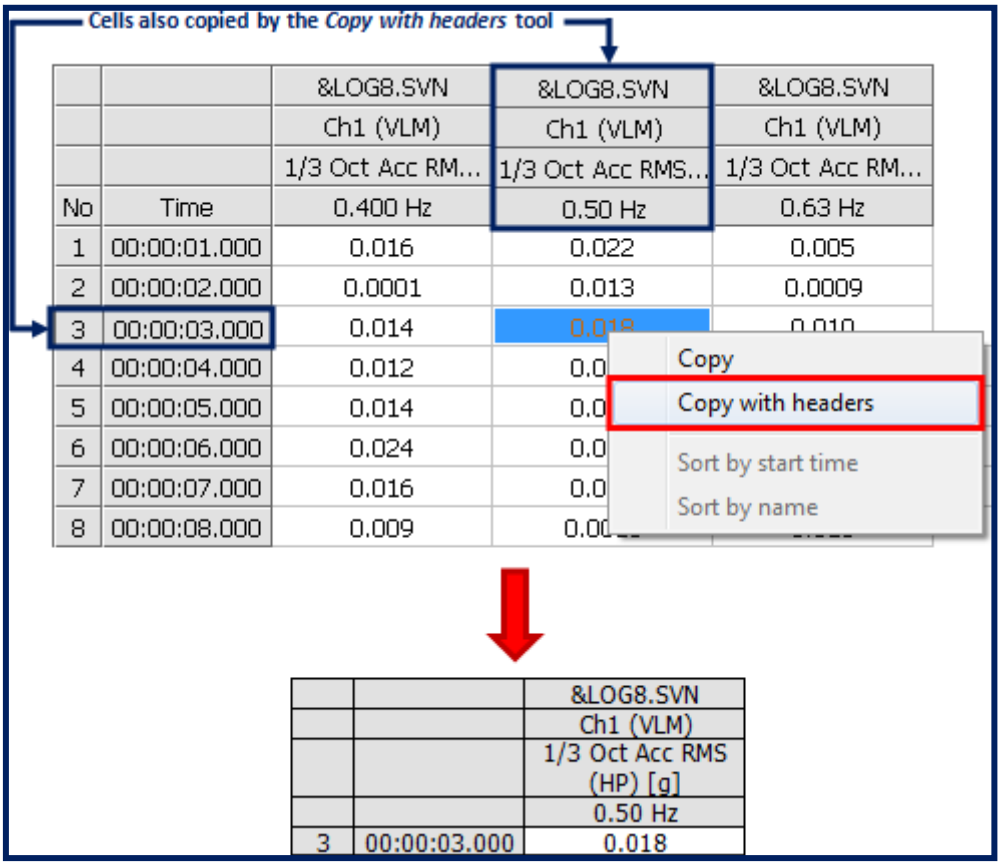


Fig. 4-36. *Copy with headers* tool

Cell types

There are three different types of cells in Supervisor's tables:

- Cells with grey background contain headers, describing the current data, which will be copied when you use the *Copy with headers* tool.
- Cells with yellow background also contain descriptions for the data values, but they are not copied by the *Copy with headers* tool.
- Cells with white background contain the data values.

Adjusting the view

To configure the size of the fonts displayed in the panels in the Table mode, you can use the following buttons, available on the Toolbar:

- – increases the font size,
- – reduces the font size,
- – sets the default font size.

The *AutoSize Columns* tool enables setting the width of the columns equal to the longest text string in each column. It can be activated using one of the following buttons:

- – located on the panel's toolbar,
- – located at the top-right corner of the panel.

You can easily convert the unit of displayed results in terms of the power prefix using the menu opened by right-clicking on the header of a column in the normal view or of a row in the transposed view.

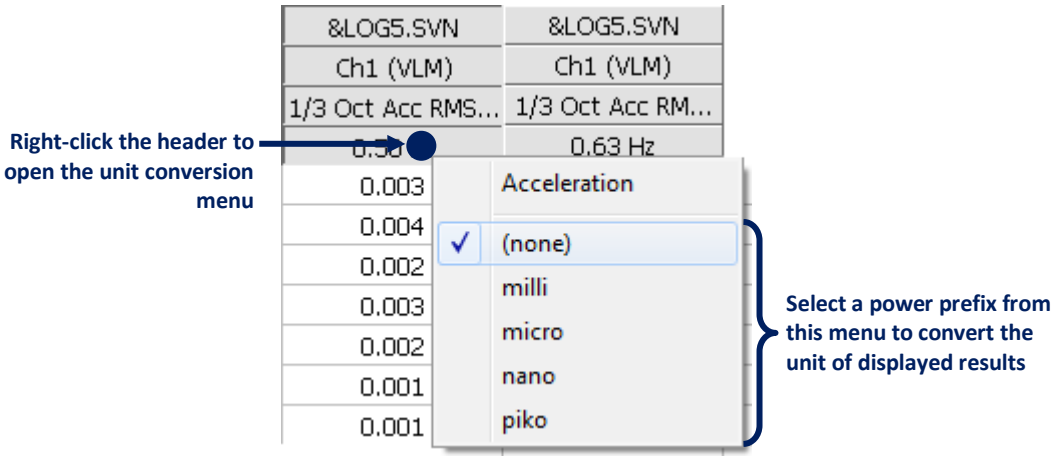


Fig. 4-37. Converting units in a table in terms of the power prefix using the context menu

Table view options

Configuration of the Table mode settings is also available in the *Table View* tab of the *Main Options* dialog box.

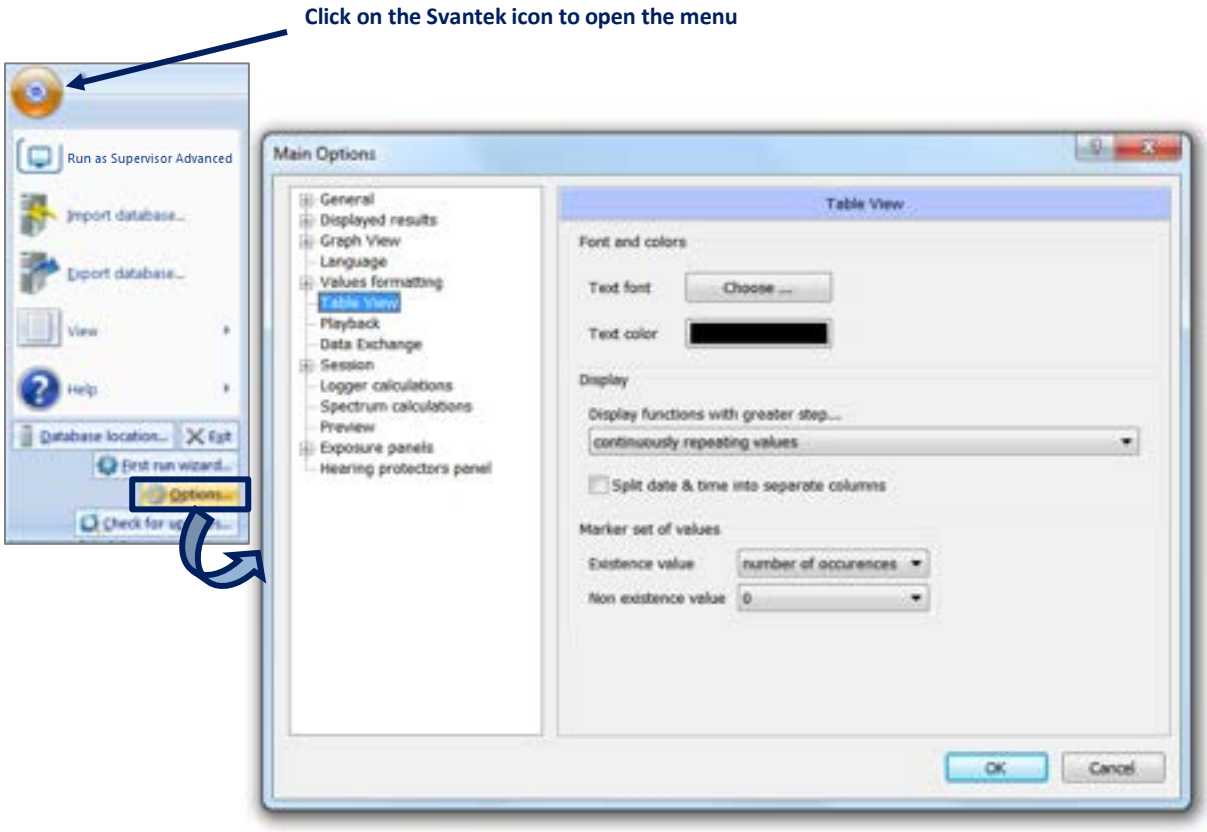


Fig. 4-38. *Table View* settings in the *Main Options* dialog box

The Table view options are divided into 3 panels:

The *Font and colors* panel enables configuring the way text is displayed in the *Table view*. To select the text font, press the *Choose* button. A font selection window will appear, allowing to set the preferred font. To select the text colour, press the colour button. A colour choice window will appear allowing to select the preferred colour.

The *Display* panel enables configuring the way results (functions) are displayed in the *Table view* when viewing multiple functions of different steps. The *continuously repeating values* option causes the fields where the values are not defined (because a function has a greater step than other displayed functions) to be filled with the last available value. The *show single value at start time of greater step* option causes to display values only at the beginning of a greater step, leaving the other fields empty.

The *Marker set of values* panel enables configuring the way markers are displayed in the *Table view*. Markers contain ranges of the time domain specified by the user or created automatically. They can be displayed in the *Table view* as a function. You can select the value displayed in the table corresponding to data contained / not contained in the marker (*Existence value* / *Not existence value*).

Limiting the time domain

The *Limit time domain* tool enables to display only a limited range of the time domain, specified by a selected function or marker. In order to enable this option, you have to open the View

Configurator, select the desired function / marker and click the *Limit time domain to* command in the Options menu. In order to remove the limit, use the *Clear time domain limit* command.

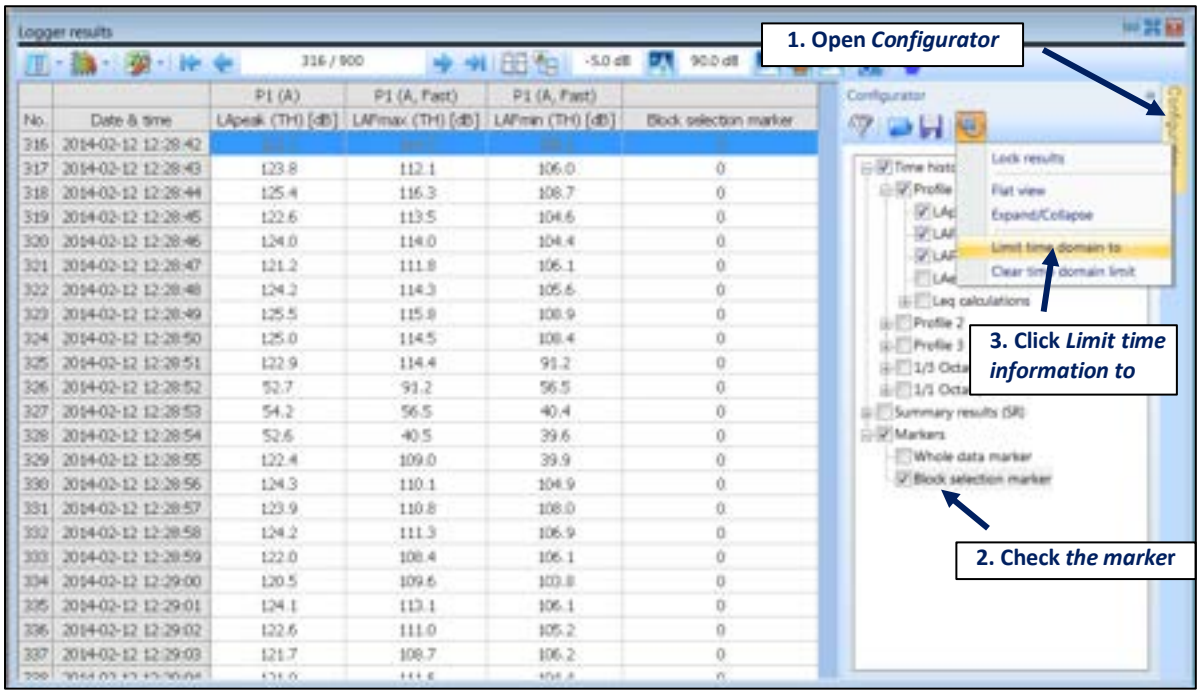


Fig. 4-39. *Limiting* the time domain in the Table mode

Note: *Configurator* is described in detail in Chapter 4.4.

4.3.2. PLOT MODE

In the Plot mode, results (functions) measured in the time or frequency domain, such as *e.g. Logger results* or *Logger 1/3 Octave*, are presented in the form of a 2D plot.

Window configuration

Each panel in Plot mode is composed of 3 parts (Fig. 4-40):

- Central part – the plot together with the axes and additional controls,
- Upper table – containing some additional information, such as the titles,
- Lower table – containing the positions of cursors and selections as well as numerical results of measurements and calculations.

You can show or hide the tables using the buttons, located at the left-hand side of the panel. You can also use the button to switch between 3 available modes:

- *Normal* – all parts visible;
- *Data And Results* – upper table hidden;
- *Only Data* – both tables hidden.

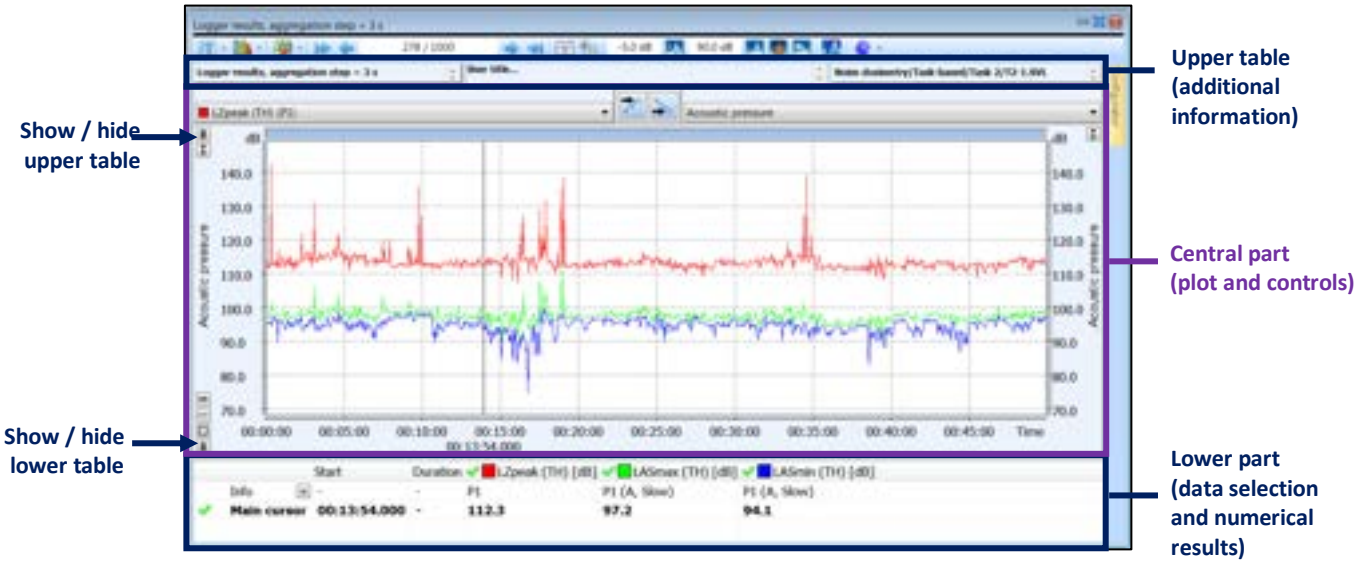


Fig. 4-40. Parts of panels in Plot mode

Viewing the plot

In the Plot mode, the horizontal (x) and vertical (y) axes can easily be scrolled and scaled. To scroll an axis, you can:

- use the blue slider at the top of the plot area,
- left-click on the axis and move the mouse without releasing.

To scale an axis, click on it with the right mouse button and move the mouse without releasing.

Axis auto scaling

The *Y-axis auto scaling* tool serves to automatically scale the y-axis to make the result function values fill the plot area. To enable the *Y-axis auto scaling*, use the / buttons, located on the top left side of the panel in the Plot mode.

Analogously, the *X-axis auto scaling* tool serves to automatically increase or decrease the number of pixels per sample (and aggregation degree for time history plots) to make all samples visible in the whole plot area. To enable the x-axis auto scaling, use the / buttons, located on the bottom left side of the panel in the Plot mode. You can also automatically scale the x-axis so that only the selected time period is displayed using the *Auto scale x settings* dialog box, accessed by selecting the *Auto scale x settings...* command in the context menu opened by right-clicking anywhere in the plot area. It also allows you to extend the range of measurement results so that the x axis starts at a selected time.

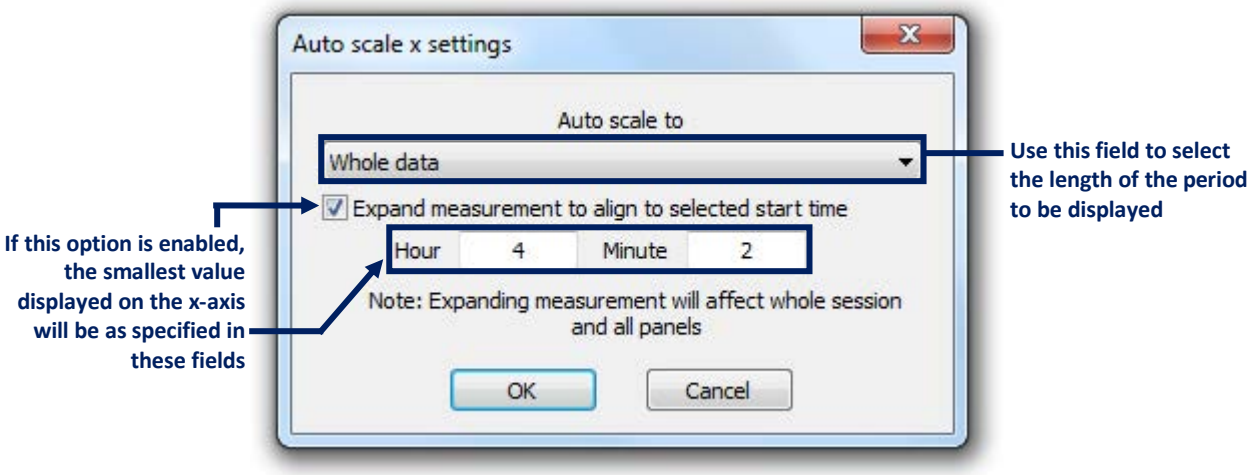


Fig. 4-41. *Auto scale x settings* dialog box

Right-clicking in the plot area and selecting the *Auto scale x to selection* command scales the x-axis according to the current block selection.
Note: The displayed range of the time history may contain unselected fragments if the block selection is non-continuous.

Note: If you manually scroll or scale an axis when the corresponding auto-scaling tool is enabled, it will be automatically disabled.

The commands related to the X-axis auto-scaling are also accessible from the Zoom menu on the Toolbar.

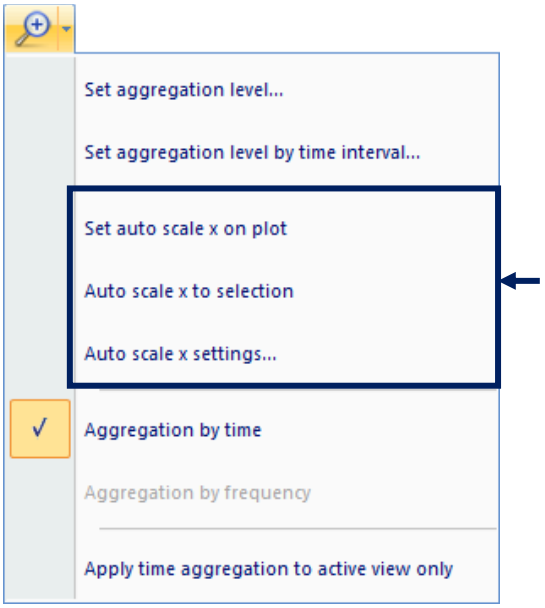


Fig. 4-42. Commands related to X-axis auto-scaling in the Zoom menu

Adjusting the view

All functions displayed on the plot are listed in the table in the lower part of the Plot view window.

Fig. 4-43. Controls for adjusting the view in the Plot mode

When you click on a function's name on the list, that function's representation in the plot area becomes highlighted so you can easily recognize it when many functions are plotted simultaneously. The ✔ / ✖ buttons serve for showing / hiding the functions. Colour used for plotting each function can be selected by clicking on the square located next to that function's name.

The contents of the table below the plot can be customized using the context menu, opened by right-clicking anywhere in the table area (Fig. 4-44). The menu contains the following commands:

– *Set font...* – enables you to select the font used in the table below the plot,
– *Copy with headers* – you can use this command to copy the contents of the table to the clipboard (the column and row headers are also copied),
– *Autosize columns (off / fit in window / fit in column)* – enables you to automatically adjust the table columns' width: the *fit in window* option causes the columns to fill the whole width of the panel, while *fit in column* resizes the columns to fit exactly the width of the contained text. Anytime you manually resize a column, the *Autosize off* option becomes automatically selected.
– *Show start / stop / duration* – enables you to show or hide the columns of the table representative of the information about periods specified by block and cursor selections and markers.
– *Show whole data / inside blocks / outside blocks / individual blocks* – enables you to show or hide the rows of the table representative of various ranges of the time domain: *whole*

data corresponds to all available time history, *inside blocks* correspond to the accumulated ranges of all block selections, *outside blocks* correspond to the ranges of all fragments of the time domain which are not included in block selections, and *individual blocks* correspond to separate block selections, displayed individually (as Block 1, Block 2 etc.).

– *Show units in header* – enables you to show or hide the units in headers.
– *Delete selected marker* – removes the marker created by you. Markers created by the device cannot be deleted, therefore, this command will be inactive.

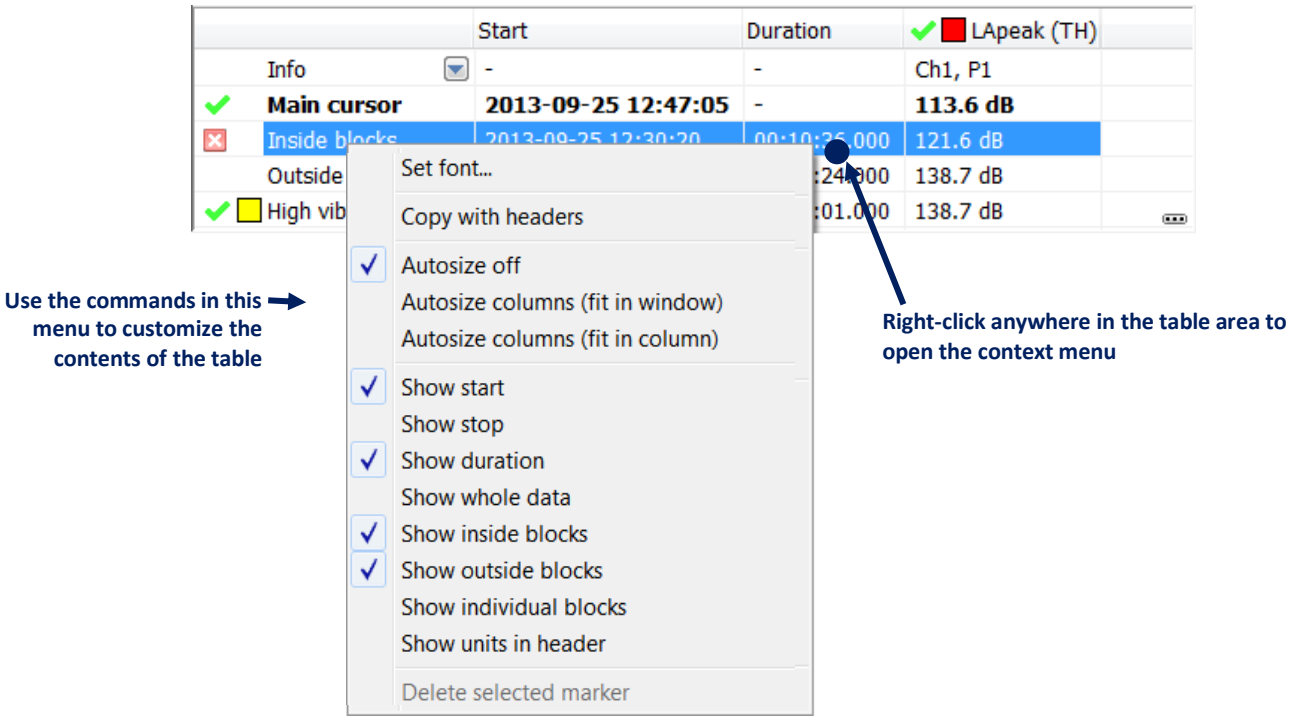


Fig. 4-44. Context menu for customizing the contents of the table below the plot

You can specify the way functions are drawn on the plot using the *Drawing mode* buttons / / located on the left side of the window.

You can choose the currently active function, used to define the primary y-axis and the main cursor domain, as well as the quantity to be represented on the secondary y-axis, using the *Active function selector* and the *Secondary y-axis selector*, located in the upper part of the Plot window.

Note: By default, the secondary y-axis is displayed in each Plot windows. To enable hiding it, use the "*Allow none secondary axis*" option in Main Options » Graph View » Data Visualization (Fig. 4-45).

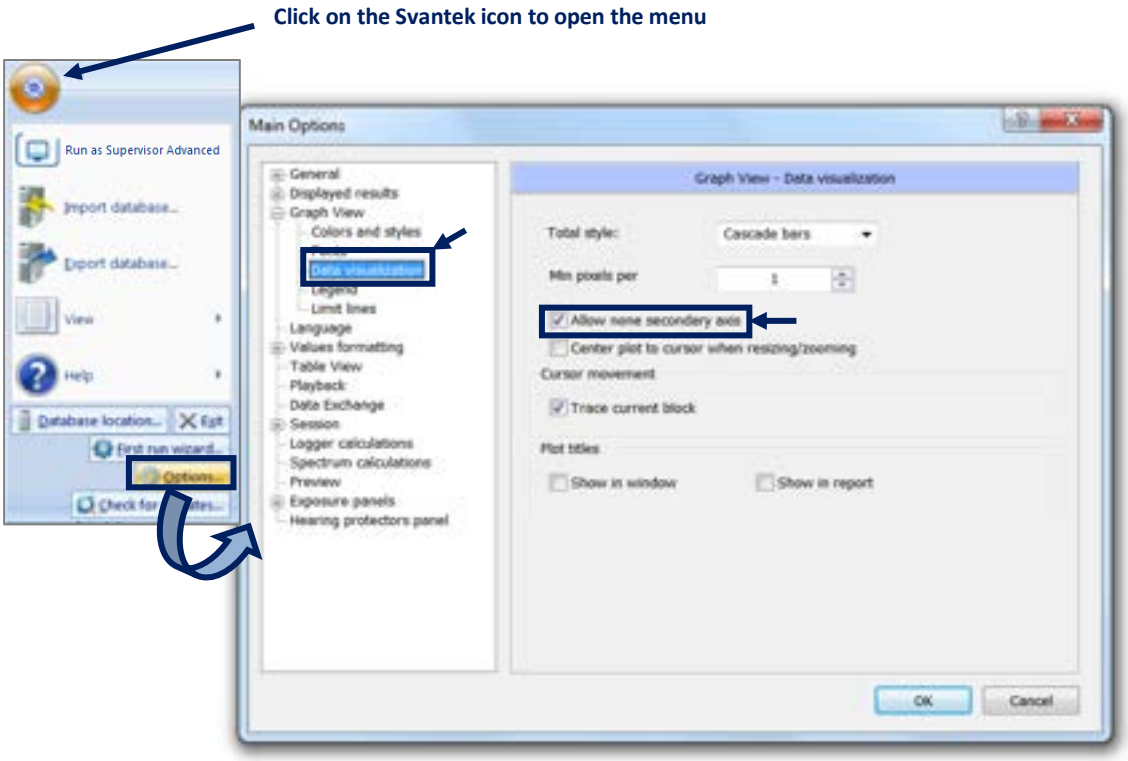


Fig. 4-45. Option which allows for hiding the secondary y-axis

Export modes

You can export the plotted results in two modes:

– the 'single' mode, represented by the ☐ icon, consists in exporting a single figure, containing only the range of the time history displayed in the panel.
– the 'multi (screen-by-screen)' mode, represented by the ⧉ icon, consists in exporting entire time history in several figures.

The two modes are illustrated in Fig. 4-46. In order to change the mode, use the ☐ / ⧉ buttons, located at the bottom-left corner of the panel.

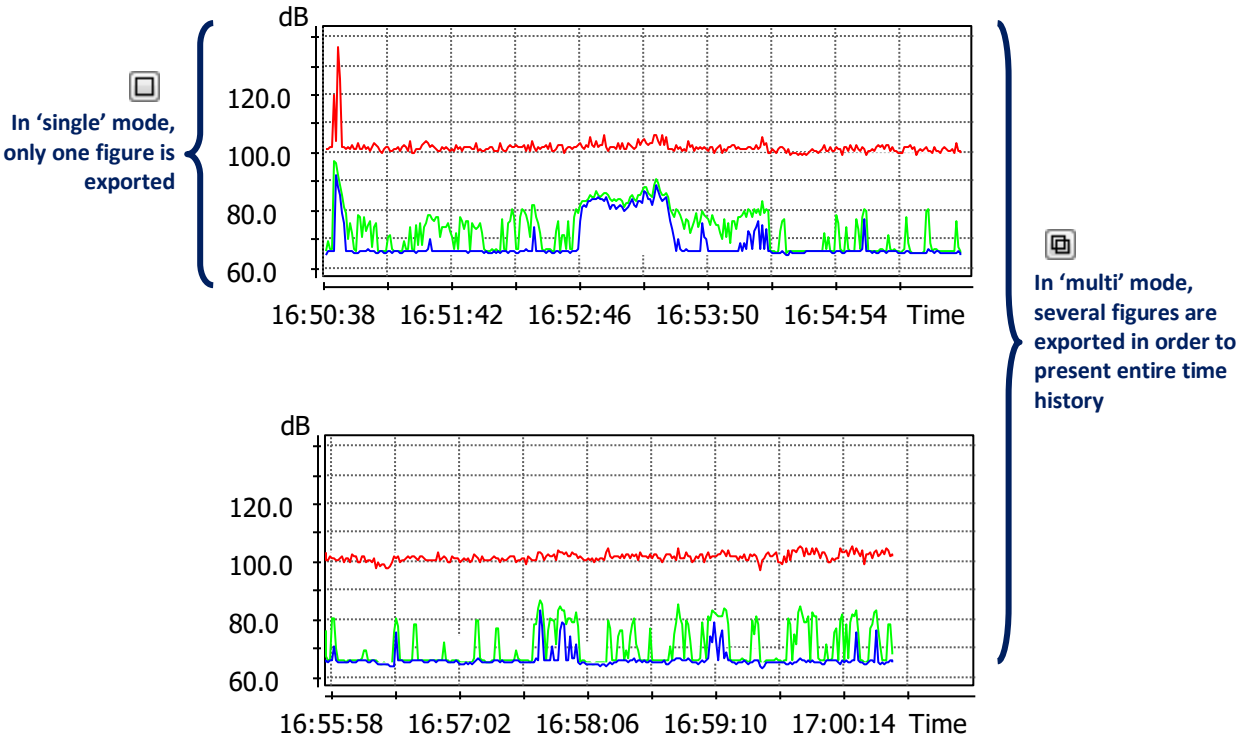


Fig. 4-46. Modes of exporting panels in the Plot mode

Local plot settings

The graphic options of the Plot view can be configured in the *Local Plot Settings* dialog box, opened with the *Local plot settings…* command, available in the context menu opened by right-clicking in the plot area.

Settings specified in this dialog box only apply to the particular panel for which it was opened. When you save the layout of the session (*see* Chapter 4.1.6), these settings are also saved.
Note: Global settings of the same type can be configured in the *Graph view* tab of the Main Options dialog box.

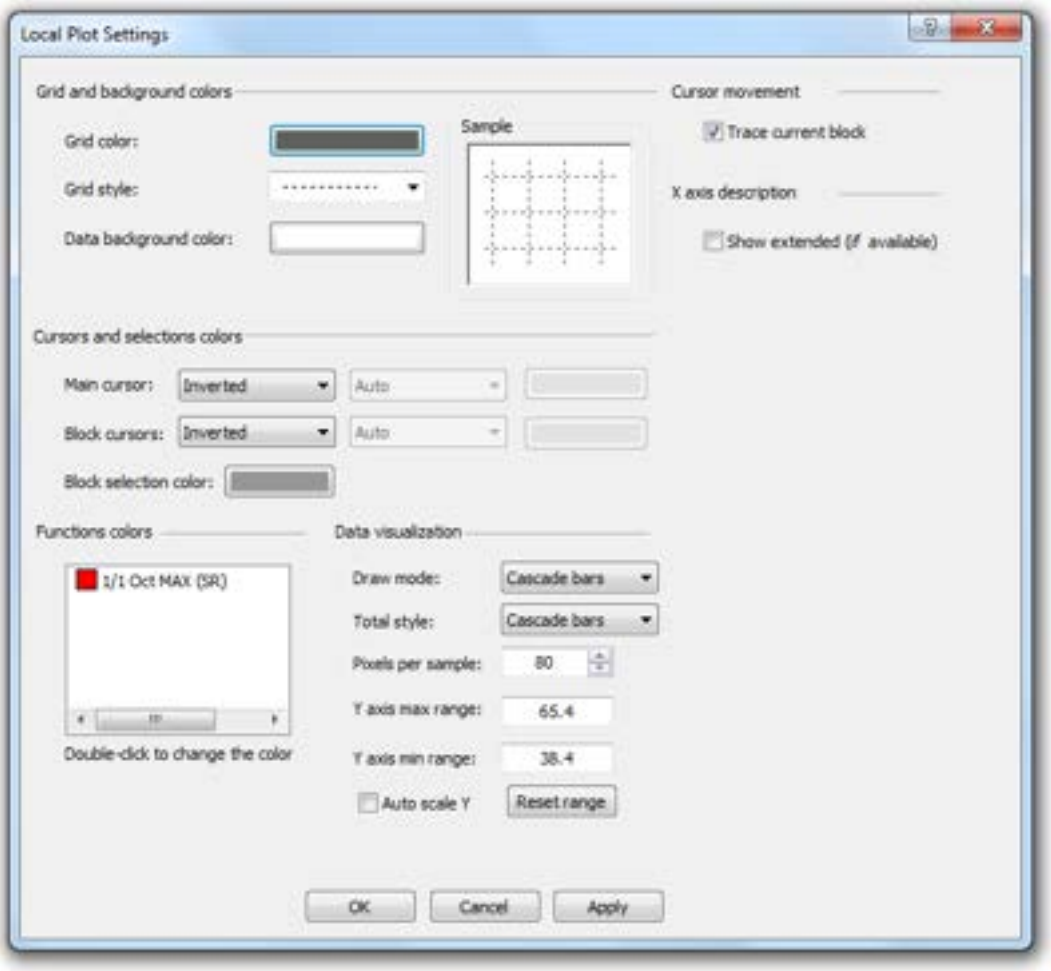


Fig. 4-47. *Local Plot Settings* dialog box

In the *Cursors and selections colors* panel, you can choose one of three modes of drawing the vertical lines representative of the positions of cursors and blocks marking selected data:

- *Inverted* – a line of inverted background color,
- *Solid* – a line of a chosen color, drawn over the plotted functions,
- *Transparent* – a line of a chosen color, not hiding the plotted functions below it.

The selection of the *Draw mode* is equivalent to what can be achieved using the / / buttons. The *Total style* concerns the way of displaying the Total results, drawn at the end of the x-axis in case of frequency domain functions.

Trace current block – with this box option enabled, clicking with the main cursor on a block selection will automatically jump to the field containing the range of the selected block in the table below the plot area.

Show extended – enabling / disabling this option will show / hide the extended x-axis description.

Selection of data

To select data, you can use the cursors or block selections. Each cursor allows to select one element of the data at once, while blocks enable the selection of multiple elements at once.

Main cursor

When you open a window with the plot view, only the Main cursor is present. You can set its position by clicking in the plot area, by using the left and right arrow keys or by using the buttons located in the upper part of the Plot panel. You can also switch the Main cursor off, unchecking it in the table below the plot. By default, the position of the Main cursor is marked on the plot with a vertical line in inverted background colour; you can change the way the Main cursor is displayed using *Local Plot Settings* or *Graph View* settings in the Main Options. The Main cursor may be placed where the samples of the active function exist. If the Main cursor is switched off, clicking in the plot area you can switch it on and make it visible again.

#1 and #2 (Block) cursors

There are two additional cursors available, named Block cursor #1 and #2. You can set their positions by clicking somewhere in the plot area with the right mouse button and choosing the *Put #1* or *Put #2* command in the pulldown menu, or by pressing CTRL+1 or CTRL+2 keys. The selected cursor position is then set at the current position of the Main cursor. In default settings, the positions of the additional cursors are marked on the plot with vertical lines in inverted background colour with numbers written next to them. You can clear the selections of additional cursors by clicking on the icons next to their names in the table below the plot.

Block selections

To set a block selection you have to click in the plot area and drag the mouse without releasing until all the elements you need are selected. When you select two different blocks, the selections will be added (previous selections are not removed). The selected area is represented with a grey background. To deselect blocks, click on the icons next to their names in the table below the plot, or click in the plot area with the right mouse button and choose the *Deselect block(s)* option. You can deselect the current (last selected) block or all blocks at once. You can also invert the block selection. Choosing this option removes the current selection and selects all the remaining data in the file.

Additional features

- The #1 and #2 cursors can be used for precise selection of blocks. When both Block cursors are located on the plot:
  - Pressing ENTER will create a new block selection between the two block cursors;
  - Pressing ESC will deselect the part of a block selection from between the cursors (if the area between the cursors contains a fragment of a block).
- When you click inside a block with the main cursor, the row in the table below the plot containing the range of the selected block will be active .
  Note: This feature can be disabled in the *Local plot settings* dialog box – *Trace current block*.
- Pressing ESC if the *#1* and *#2* cursors are not placed will remove a block selection containing the Main cursor. If the Main cursor is not located within any blocks, pressing ESC will remove all the selections (you will be asked for confirmation).

The selected data is listed in the table in the lower left corner of the Plot panel (it is not visible if you select the *Only data* mode). In case of the cursors, the point of their position is given in the *Start* column. In case of block selections, the points of begin and end of all separate blocks are given in the *Start* and *Stop* columns. For each cursor and block selection, these points can be edited by entering the time values manually after double-clicking corresponding fields of the above-mentioned columns.

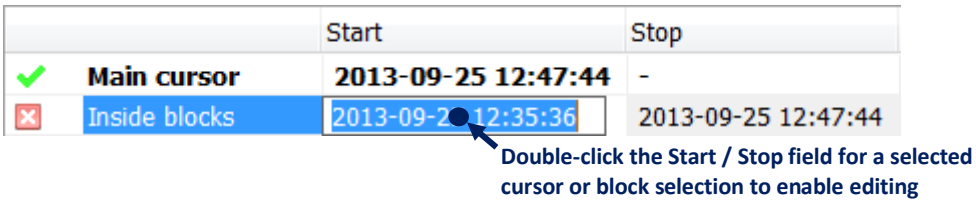


Fig. 4-48. Editing the position of cursors and block selections by entering time values manually

Note: To show the *Start* and *Stop* columns, corresponding options should be enabled in the table's context menu; for details, see the *Adjusting the view* paragraph in this chapter.

The Main cursor's position is also marked below the X-axis of the plot.

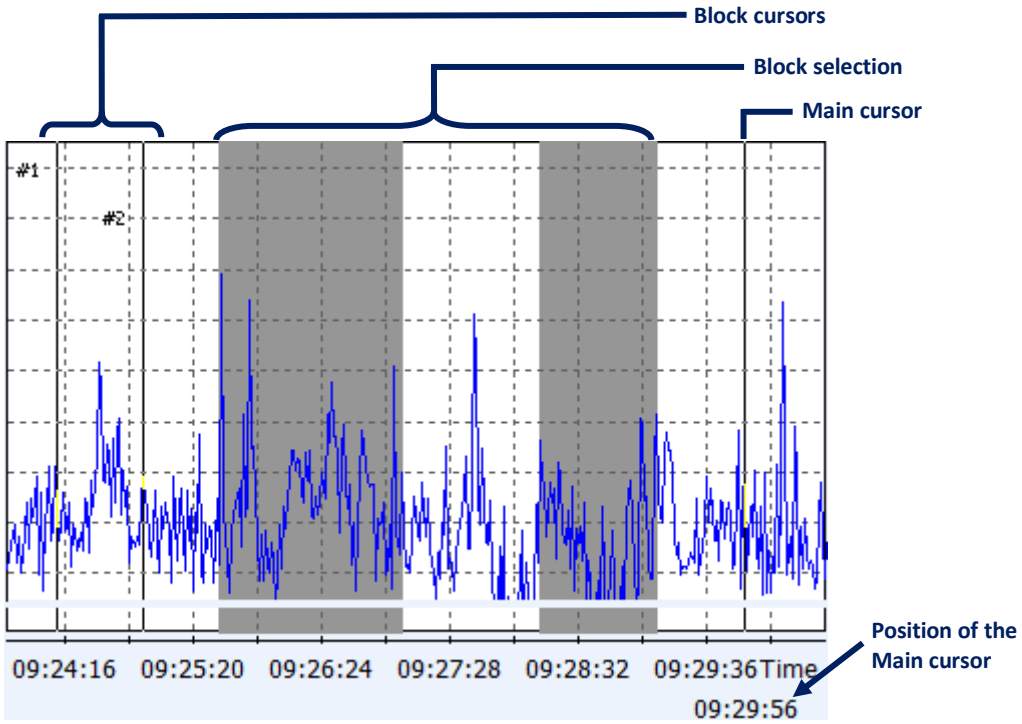


Fig. 4-49. Data selection in the Plot mode

Labels

You can add labels to the plot, consisting of a short text and an optional arrow pointing to a selected point in the plot area. To add a label, right-click anywhere in the plot area and select the *Add label* command.

- To edit the label's text, click somewhere close to the middle of the label, or click the label with the right mouse button and select the *Edit text* command.
- To delete the label, click it with the right mouse button and select the *Delete label* command.
- To move a label, place the mouse close to an edge of the label, and when the cursor face turns to , left-click and drag it.
- To resize a label, place the mouse close to a corner of the label, and when the cursor face turns to , left-click and move the mouse without releasing it.
- To add an arrow, click the label with the right mouse button and select the *Add arrow* command. The arrow can be moved by dragging its end with the left mouse button pressed (when the mouse is in a place allowing for moving the arrow, the cursor face turns to). To remove the arrow, use the *Remove arrow* command in the context menu.

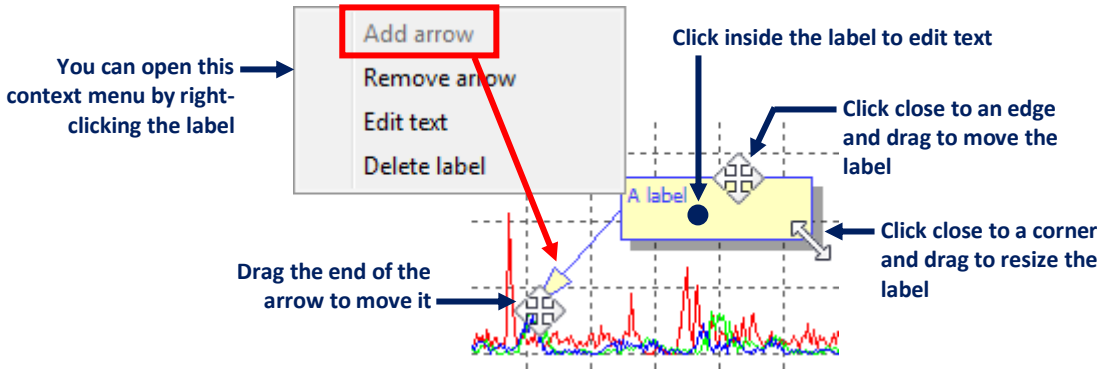


Fig. 4-50. Editing labels in a plot mode panel

Limit lines

The *Limit lines* are coloured horizontal lines with custom labels which you can draw in the Plot views at selected levels of the Y axis.

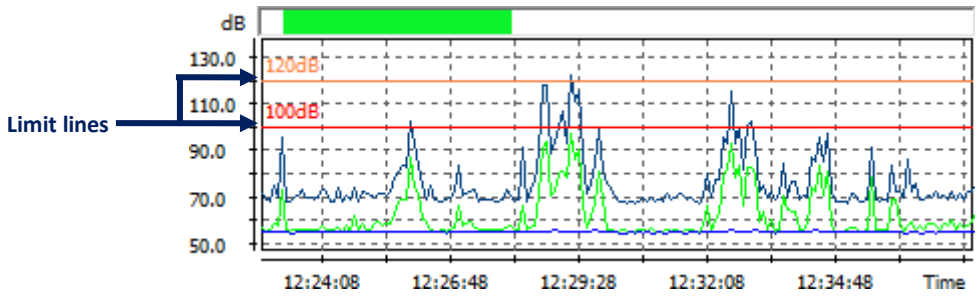


Fig. 4-51. Exemplary plot with two limit lines

If you want to display limit lines in the Plot view, first you need to configure them in the *Graph view » Limit lines* settings tab in the Main Options dialog box. Separate sets of limit lines values and labels can be specified for sound and vibration data. A separate value, label and colour can be specified for each limit line.

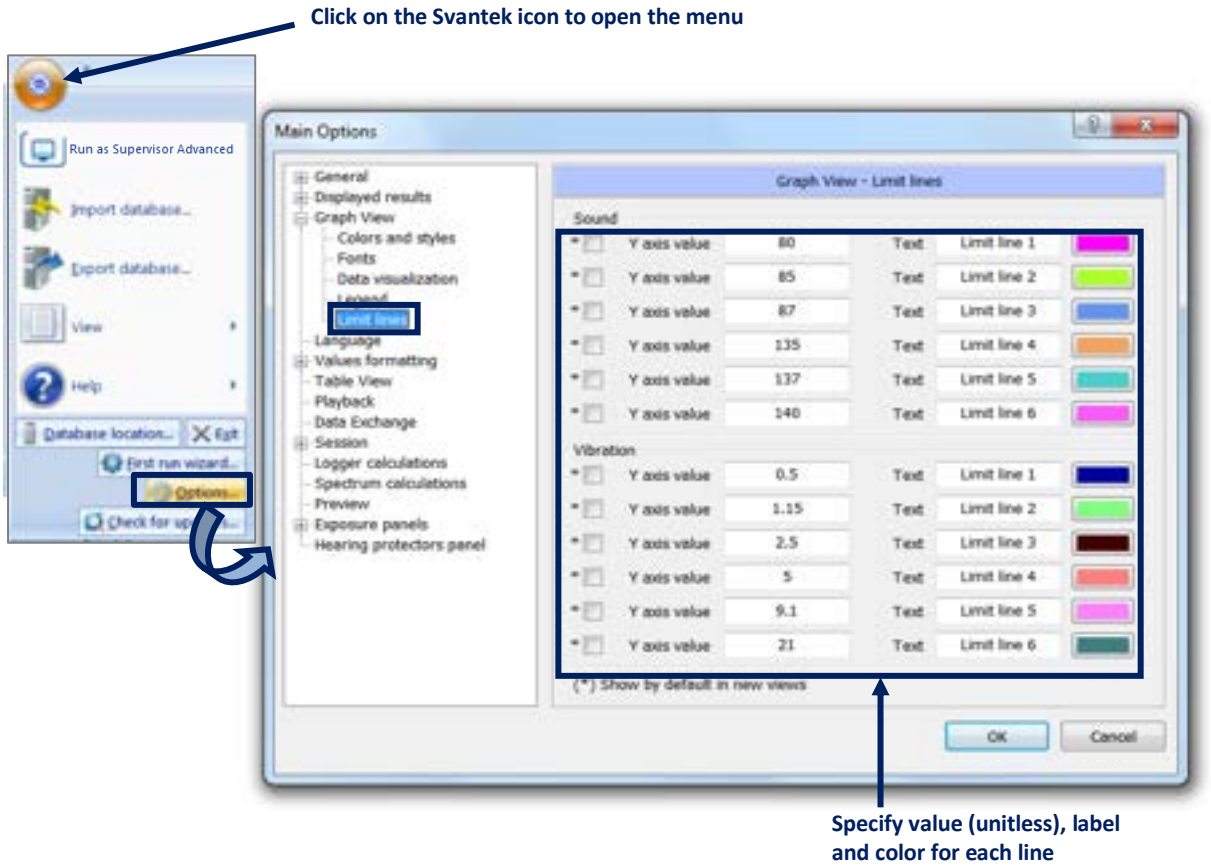


Fig. 4-52. The *Limit lines* settings in the Main Options dialog box

Note: The value specified in the *Limit lines* settings is unitless – the line will always be drawn at the same value on the Y axis regardless of the currently displayed units (so the lines will intersect with the measurement results in different places when linear and logarithmic values are displayed).

Once the limit lines are configured in the way described above, they can be drawn on the plot by doing the following (Fig. 4-53):

1. Select the *Limit lines settings...* command from the context menu available after right-clicking in the plot area,
2. Set the visibility of selected lines in the *Limit lines* dialog box.

To access the limit lines settings, you can also use the button, located on the Panel Toolbar.

Note: This button may be hidden if the view sub-window is too narrow.

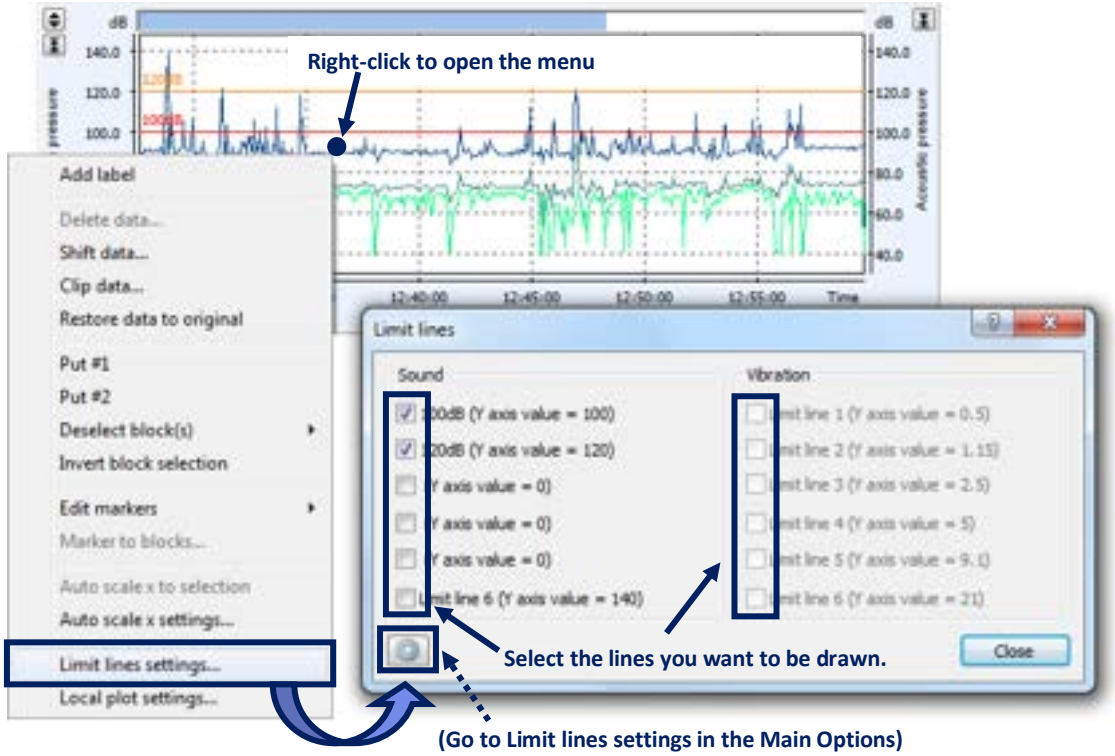


Fig. 4-53. Setting the visibility of limit lines on a plot

You can also access the Limit lines settings in the Main options directly from the Limit lines dialog box by pressing the button.

It is also possible to specify a set of limit lines that will be displayed by default in each newly created panel in the Plot mode. For this, use the checkboxes located at the left side of the Limit lines settings tab in the Main Options (Fig. 4-53). Having specified the default set of limit lines, a different set of limit lines can be later selected for each particular Plot panel in the manner described above.

Go to min/max

Buttons above the plot area allow for placing the Main cursor at the sample corresponding to the minimum or maximum value of the active function.

Note: These buttons may be hidden if the panel is too narrow.

Fig. 4-54. Buttons for automatically locating maxima and minima of the active function

4.3.3. SPECTROGRAM MODE

The Spectrogram mode can be used to show the 3D variation of time, frequency and amplitude. The x-axis represents the time domain, the y-axis represents the frequency domain and the colours correspond to the values of the currently selected function. The time scale is linear while the frequency scale is logarithmic. The range of the colour scale is shown down the right side of the plot area.

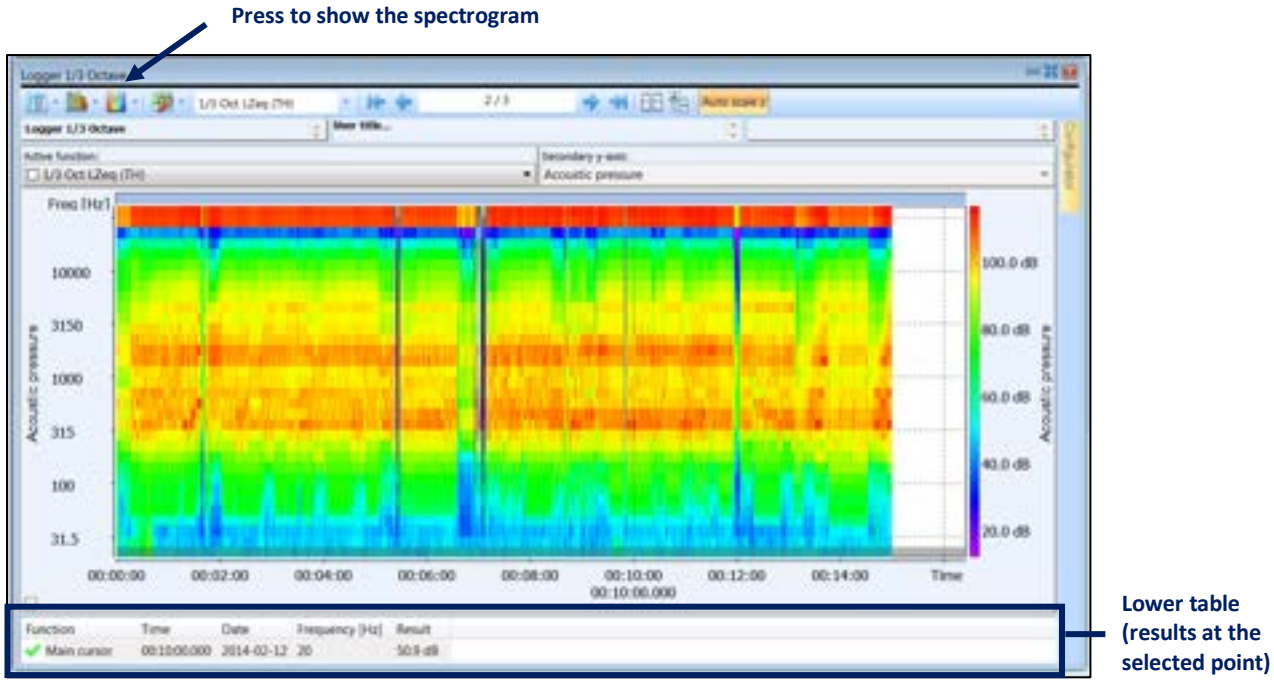


Fig. 4-55. An example of panel displayed in Spectrogram mode

The table at the top of the panel, containing the titles, and the one at the bottom, containing the position of the Main cursor together with corresponding measurement results, can be shown or hidden by pressing the button. You can choose one of three modes:

- *Normal* – both tables visible,

- *Data And Results* – upper table hidden,
- *Only Data* – both tables hidden.

To scroll the time axis, you can use the blue slider at the top of the spectrogram area or click on the axis below the spectrogram area with the left mouse button and move the mouse without releasing. Scaling the x- and y-axis is not available in the Spectrogram mode.

Adjusting the view

You can choose the parameter displayed on the spectrogram by using the *Active function* selector in the upper part of the panel in the Spectrogram mode. The selected function defines the values on the z-axis.

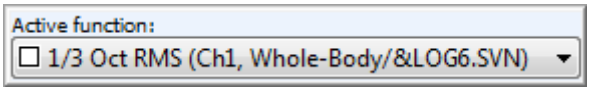


Fig. 4-56. *Active function* selector

The *Auto-scale z* tool serves to scale the z-axis to fit the range of currently displayed data. When browsing the time domain, the scale will be modified automatically. When you disable the *Auto-scale z* option, the scale will remain constant.

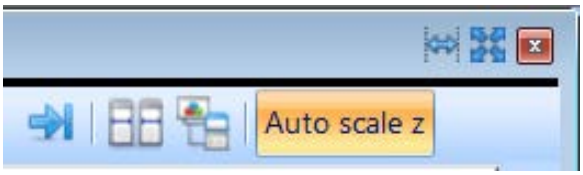


Fig. 4-57. *Auto-scale z* button in the panel's toolbar

You can modify the colour profile to set the optimal dynamics for the range of data that you need. To do so, click on the colour bar representing the z-axis, on the right side of the panel in the Spectrogram mode. Then click on one of the displayed squares to move the range in which the chosen colour will be displayed. You can set 4 points of the profile to adjust the colour dynamics as needed. Modifying the colour profile does not change the scale of the z-axis.

Fig. 4-58. Examples of colour profiles in the *Spectrogram view*

Selection of data

A point of the spectrogram can be selected using the Main cursor. To select a point, simply click somewhere in the spectrogram area. You can also modify the position of the cursor using the arrow keys and the buttons above the *Spectrogram* window.

The current position of the Main cursor is presented as the crossing point of grey lines. The table below the spectrogram area describes the position of the Main cursor in the time and frequency domains, as well as the value of the displayed function in the selected point.

You can hide / show the Main cursor clicking on the ✔ / ✖ icon next to its name in the table below the spectrogram area.

4.3.4. TEXT MODE

The Text mode can be used for displaying measurement results and other information in the text form. Data is presented as simple text with additional descriptions (if available). The text can be copied with the use of the pulldown menu, opened by right-clicking in the Text panel.

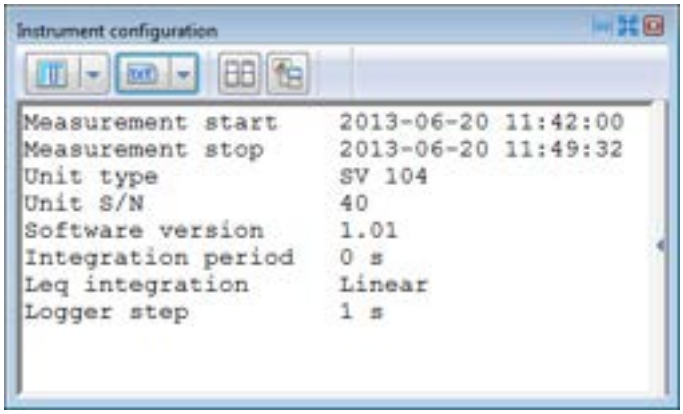


Fig. 4-59. Example of panel displayed in the Text mode

4.4. CONFIGURATOR

The *Configurator* is located at the right side of each panel. It can be used to select the set of results to be displayed in the panel.

Fig. 4-60. *Configurator* panel

4.4.1. USING THE CONFIGURATOR

To show / hide the Configurator, use the button, located on the panel's toolbar. The Configurator may be shown by placing the cursor on the *Configurator* button located in the upper-right corner of the panel or hidden by placing the cursor outside the *Configurator* sub-panel.

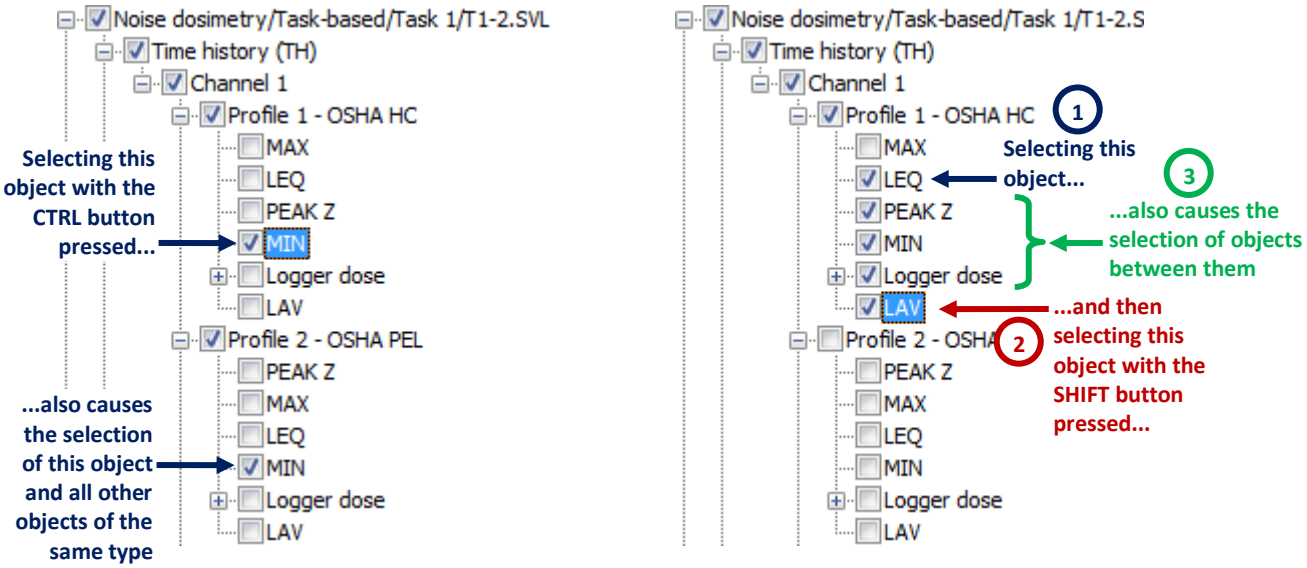
To have the Configurator always shown click the Lock icon in the upper left corner of the *Configurator* sub-panel. To go back to the auto-hide mode click the icon.

The results and functions displayed in the Plot or Table modes are selected in the Configurator. Checking the name of a result / function adds it to the view. If you check a branch containing more than one result / function, all the data inside the selected branch will be displayed. If you select in this way more than 30 objects at once, you will be asked for confirmation.

There are two ways of selecting multiple results simultaneously:

– Selecting a result with the CTRL button pressed will cause the selection of all available results of the same type, *e.g.* selecting the Time history MIN results in Profile 1 will also cause the selection of Time history MIN results in other profiles, as well as Summary MIN results in all profiles.
– Selecting one result, and then selecting another one in the same subtree with the SHIFT button pressed will cause the selection of all objects in the subtree that are displayed between these two objects.

These two methods are illustrated in Fig. 4-61.



a) Using the CTRL button

b) Using the SHIFT button

Fig. 4-61. Methods for the selection of multiple results simultaneously in the Configurator

Note: The same effect as using the CTRL button can also be obtained by turning on the *Lock results* option in the *Options* menu.

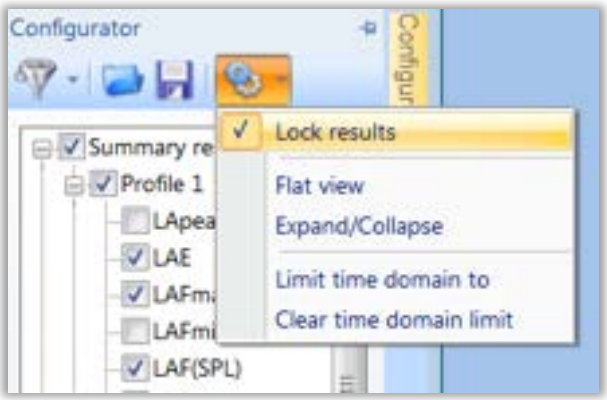


Fig. 4-62. *Options* menu

By default, the Configurator is presented in the Tree view (the hierarchy is: *Channel* » *Profile* » *Function*). By activating the *Options* » *Flat view* command, you can view the configurator as a plain list, not representing the structure of data. This also enables to select all the available data at once by checking the *Flat results* checkbox.

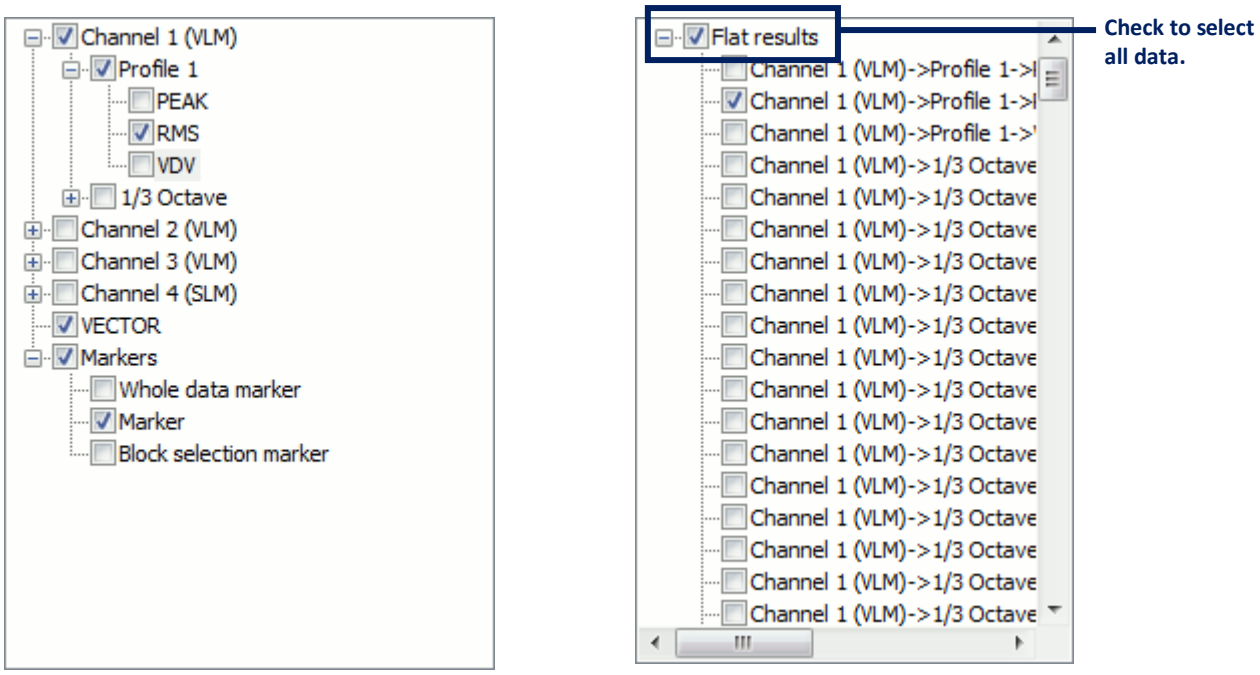


Fig. 4-63. Configurator in the Tree and Flat view modes

Use *Expand/Collapse* command to expand or to collapse the tree.

The Configurator of most panels contains a Funnel icon which switches the Global Mask for the selected measurements (see Chapter 3.2.2). For example, if you select *Noise dosimetry* in the pop-down menu, the configurator tree will display only results of the Global Mask.

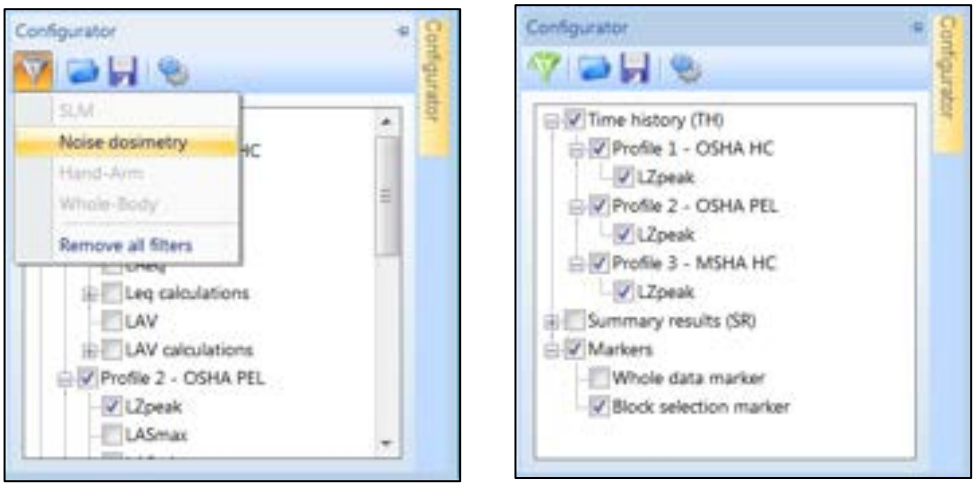


Fig. 4-64. Example of the Funnel icon operation

4.4.2. LIMITING THE TIME DOMAIN

The *Limit time domain* tool enables showing only a selected range of data. Selecting a marker on the list and pressing the *Options » Limit time domain to* command will hide in the table all samples not contained within the selected marker's range. Pressing the *Options » Clear time domain limit* command resets the time domain, showing all the data once again. The time domain limit only affects the Table display mode. For details, see also Chapter 4.3.1.

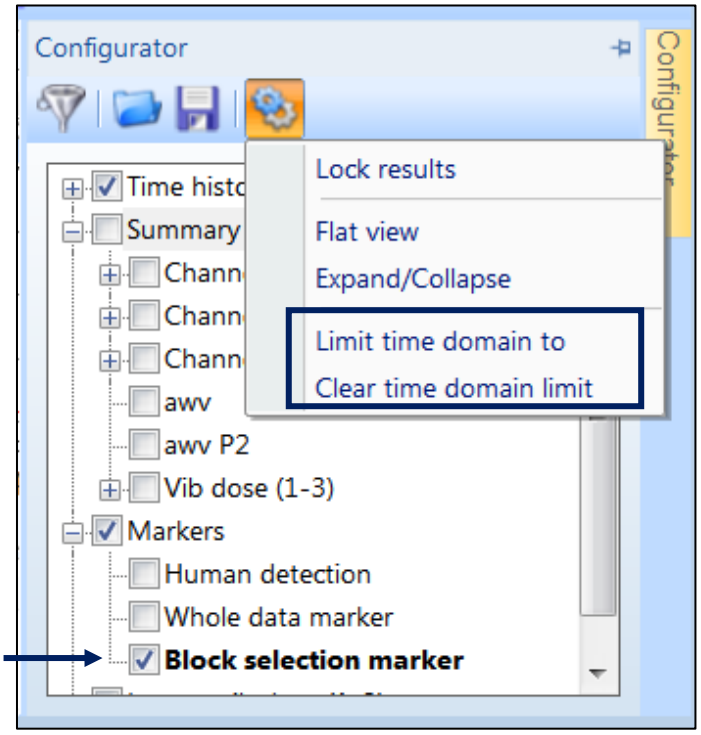


Fig. 4-65. Limiting the time domain of a panel in the Table mode

4.4.3. SAVING SETTINGS

It is possible to save the Configurator's settings for later use by pressing the button. The settings are saved in a package including selection of data to be displayed and colours of plots.

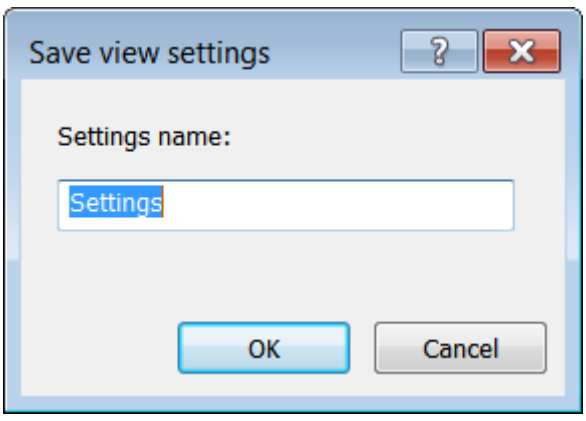


Fig. 4-66. Saving Configurator settings

To load saved Configurator's settings, press the button, select the settings from the list and click one of the commands from the right side.

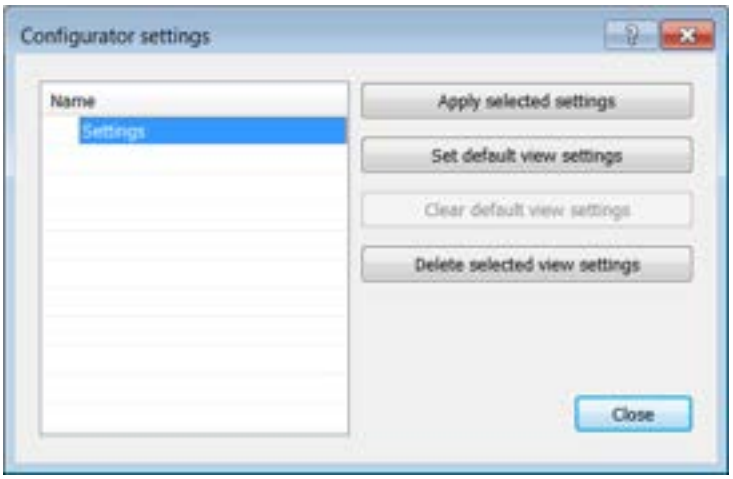


Fig. 4-67. *Configurator settings* dialog-box

You can select a saved package of settings to become default:
1. select saved settings from the *Configurator settings* list,
2. click *Set default view settings*.

Newly created panels will be automatically configured according to the default settings (as far as it is possible with regard to the available data). The default settings are indicated with a green tick mark . You can clear the default settings using the *Clear default view settings* button.

4.4.4. SPECIAL CASES

The Configurator works as described above in case of panels representing the measurement results, such as the *Logger results* panel. For some types of panels, such as Noise Exposure or Text, it is not available at all. For some other types of panels, such as:
– Session header,
– Instrument configuration,
– 'What if'
it also enables to select information to be included, but it has a simpler form.

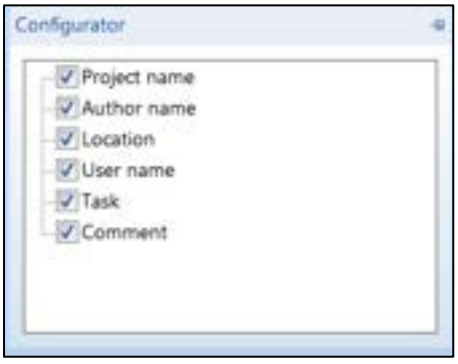


Fig. 4-68. Configurator for the *Session header* panel

5 DATA ANALYSIS

5.1. CONVERSION OF UNITS

In Supervisor it is possible to easily recalculate logarithmic to linear and linear to logarithmic units. In case of VLM results, it is also possible to display the values in linear non-metric units.

The available units are shown in Table 5.1.

Table 5-1. Units for displaying SLM and VLM results available in Supervisor.

	SLM results	*VLM results*		
		Acceleration	*Velocity*	*Displacement*
Logarithmic	[dB]	[dB]	[dB]	[dB]
Linear	[Pa]	[m/s^2]	[m/s]	[m]
Linear non-metric	-	[g]	[ips]	[mil]

To select the units for sound level values you can use the button located on the Toolbar (available in the Session mode), and the menu attached to this button. Analogously, to select the units for vibration level values, use the button.

5.2. ZOOM AND AGGREGATION

The Zoom serves to adjust the amount of displayed data. In case of the Plot mode, this is achieved by selecting the number of pixels per sample. In case of the Table mode, increasing the zoom from the original level cannot affect the way data is displayed. However, in each display mode, the zoom can be reduced in reference to the original level, meaning that multiple samples are represented by one pixel or cell. This requires the application of *data aggregation* algorithms. The so-called *aggregation degree* denotes the number of data represented by one element (sample in a plot / cell in a table).
Note: It is possible to display more than one pixel per sample with aggregation degree higher than one at the same time.

To reduce / increase the zoom, use the / buttons on the Toolbar. In case the Plot mode is currently active and aggregation is not applied, using these buttons you can increase / decrease the number of pixels per sample.

You can also set the aggregation degree manually using the *Set aggregation level* command from the pulldown menu, opened by cliking on the ▾ button next to the *Zoom Plus* / *Minus* buttons. The aggregation degree can be then entered in the *Set aggregation level…* dialog box. The maximum value of the aggregation degree equals the number of samples in the current data.

Another possibility is to set the aggregation degree by time interval. The degree will automatically be set to a value for which a single element (a pixel or a cell) will correspond to a selected time interval. For example, for measurement results in which each datum corresponds to measurement time of 1 second, selecting the aggregation time interval as 1 minute will set the aggregation degree to 60.

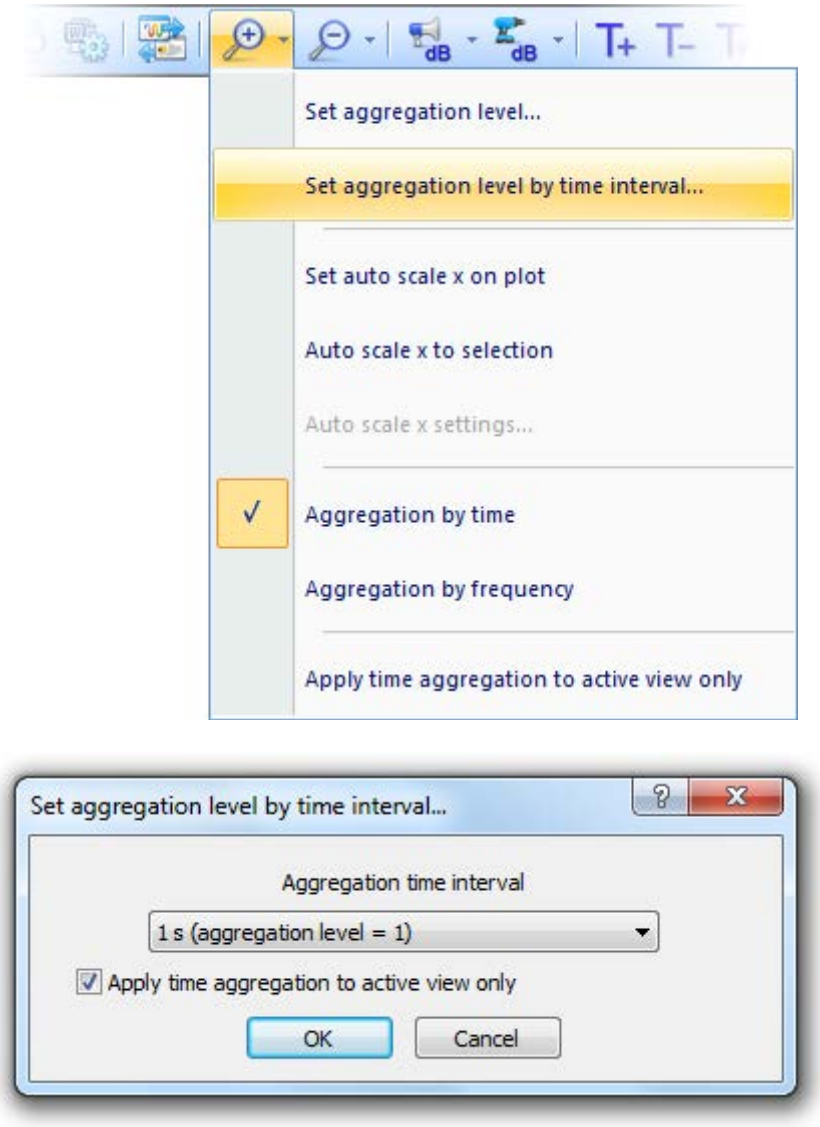


Fig. 5-1. Setting the aggregation level by time interval

Using the same pulldown menu, you can also decide whether aggregation should be applied to the time or frequency domain, if it is available in the currently viewed data. Aggregation can be applied to the currently viewed panel only (if '*Apply time aggregation to active view only*' is checked), or to each panel generated using the same data as the currently viewed one (otherwise).

5.3. ACCELERATION, VELOCITY AND DISPLACEMENT

In case of VLM spectrometric data Supervisor allows for the recalculation of three quantities:

- *Acceleration,*
- *Velocity,*
- *Displacement.*

To select the quantity you wish to display, use the pulldown menu opened next to the button for VLM units selection, located on the Toolbar (which is **available** in the Session mode).

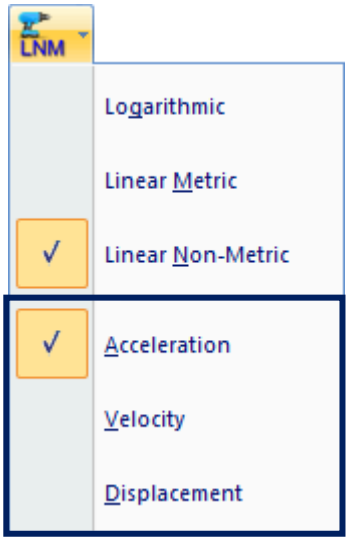


Fig. 5-2. Selection of VLM quantities

Acceleration, velocity and displacement can all be displayed simultaneously. In the Plot mode the particular quantities can be recognized in the functions list below the plot by 'Acc', 'Vel' and 'Dil' (for acceleration, velocity and displacement, respectively) added to the name of the function.

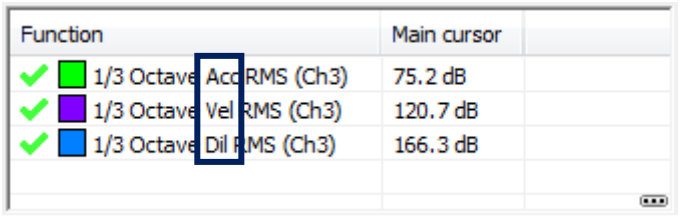


Fig. 5-3. Function list containing functions for various VLM quantities

5.4. EXPOSURE LEVEL CALCULATOR

Supervisor provides three types of panels which serve for the calculation of exposure and dose levels for noise and vibration: *Noise exposure*, *Noise dose/TWA*, *Hand-arm vibration exposure* and *Whole-body vibration exposure*.

5.4.1. DATA CONFIGURATOR

In the *Hand-Arm/Whole-Body vibration exposure* or *Noise Dose/exposure* panels, the *Configurator* is located at the left-hand side of the panel and contains data grouped by "user" and "task" information assigned to data. Data files are presented in the form of a tree with "users" and "tasks" as branches that combines data files. Using the checkboxes located next to the branch you can select data that will be used for estimation.

Note: You can also modify the assignments in the Noise exposure panel - the changes will be applied in the Supervisor's database. More details about assigning additional information to data are described in Chapter 3.3.

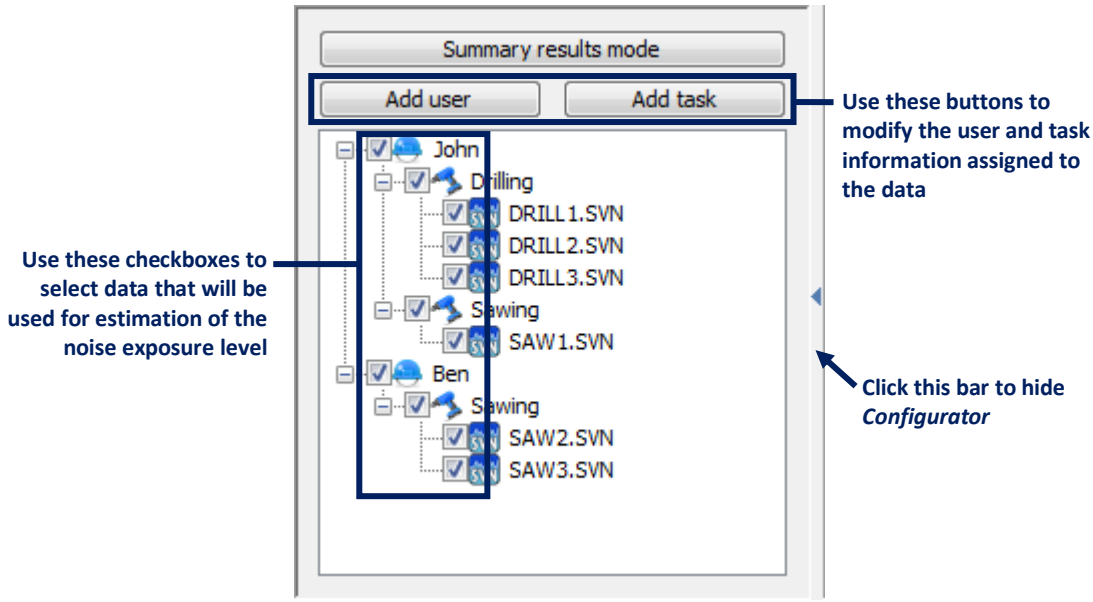


Fig. 5-4. *Configurator* in the Dose/exposure panels

If you created the session using files with no user / task information assigned, the Configurator panel contains a list of files and no additional information. You can then add the users and tasks using the buttons located at the top of the configurator panel, and assign files to them (Fig. 5-5).

One way to assign the files is right-clicking on a user or task, pressing the *Add files...* button and selecting the files in the *Add files...* dialog box (Fig. 5-6); you can also use the drag & drop technique (Fig. 5-7).

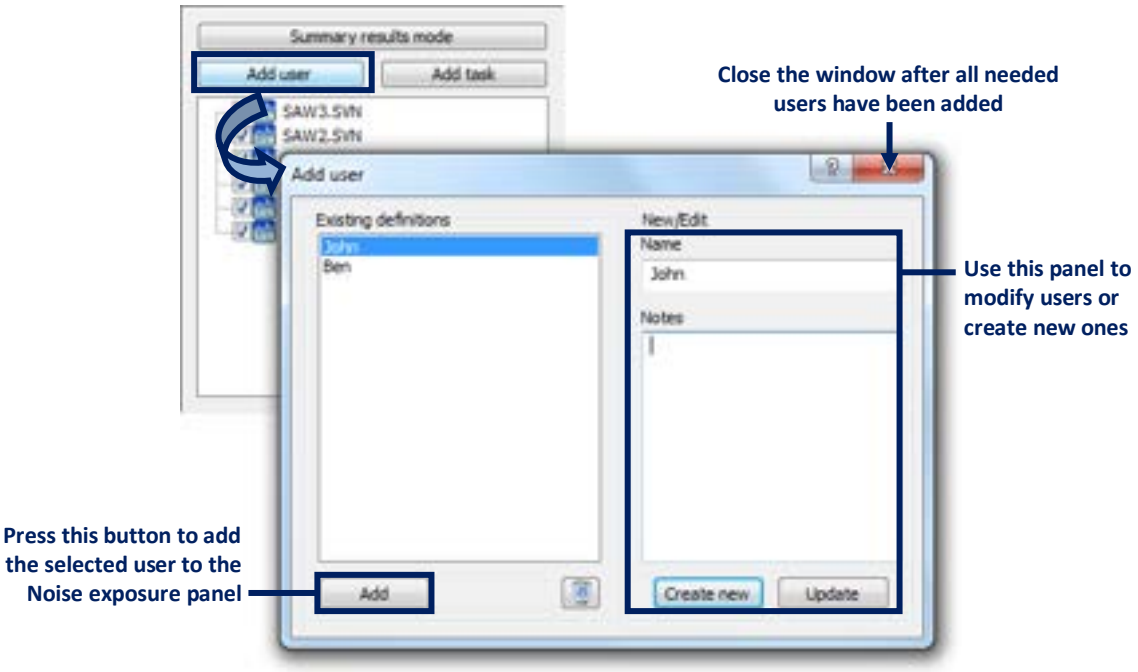


Fig. 5-5. Adding users / tasks to the Noise exposure panel using the buttons located at the top of the configurator

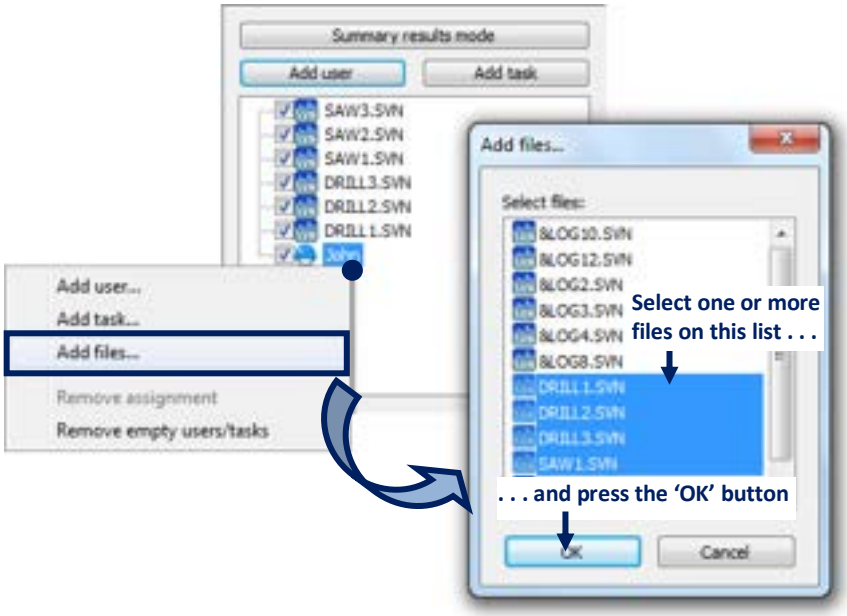


Fig. 5-6. Assigning files to users / tasks from the Session data panel using the *Add files...* dialog box

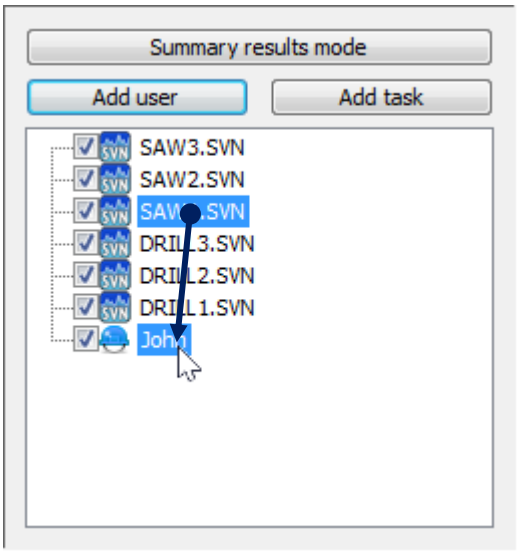


Fig. 5-7. Assigning files to users / tasks from the Session data panel using the drag & drop technique

5.4.2. SUMMARY RESULTS / TIME HISTORY MODE

The Dose/exposure panels can be used in two different modes: *Summary Results* and *Time History*. By default, the *Summary Results* mode is used; it uses summary results (in case of logger files) or the overall measurement result (in case of a single measurement files) for the calculation dose/exposure results. The *Time History* mode can be used if you wish to use the ranges of a selected marker (defined in the logger file) for calculation dose/exposure results.

In order to use the *Time History* mode, at least one user-defined marker or Force marker must exist. To create a marker, open a Logger results panel and follow the instructions provided in Chapter 5.7.1.

You can switch to the *Time History* mode by clicking the button located at the top of the Configurator. The text on this button indicates the current mode.

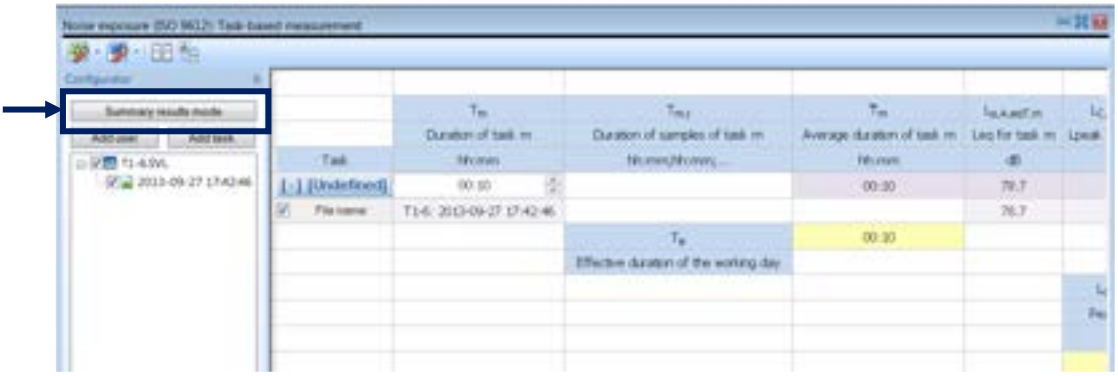


Fig. 5-8. Switching between *Summary results* and *Time history* modes in the Dose/exposure panels

In the *Time history* mode, the Task assignments are replaced with marker ranges. Each marker represents a single task; you can specify the duration of these tasks in the same way as in the *Summary results* mode.

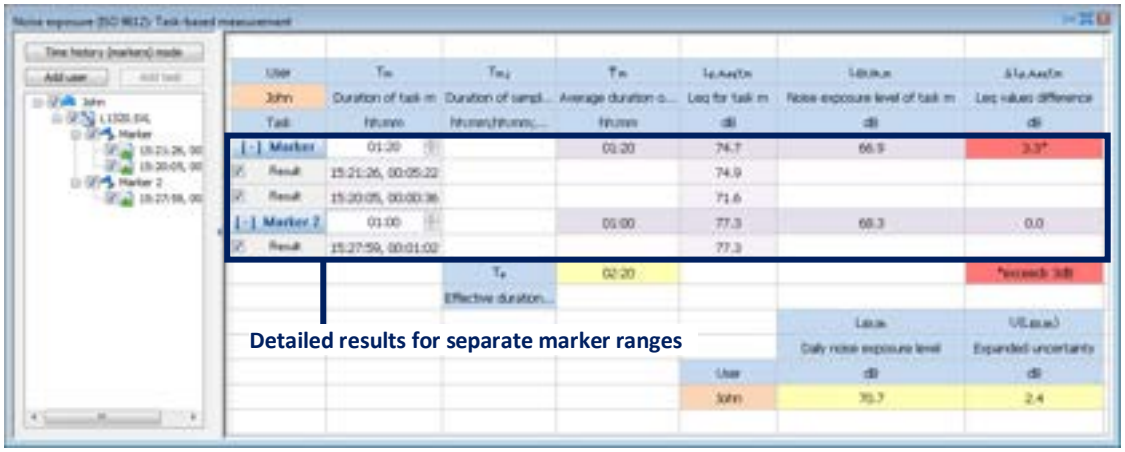


Fig. 5-9. *Noise exposure* panel in the *Time history* mode

When you click on a marker range in the Configurator, the Main cursor is automatically placed at the corresponding sample in the Logger results panels generated using the same data.

5.4.3. NOISE EXPOSURE

The *Noise exposure* panel serves for estimating the daily noise exposure level according to the ISO 9612 standard, using data representative of Leq summary results.

The data are ordered according to the user and task information assigned to data; for details, see Chapter 5.4.1.

The daily noise exposure level can be estimated using three different measurement strategies:
- Task-based strategy,
- Job-based strategy,
- Full-day measurement-based strategy.

You will be asked to choose a measurement strategy each time you add a Noise Exposure panel to a session.

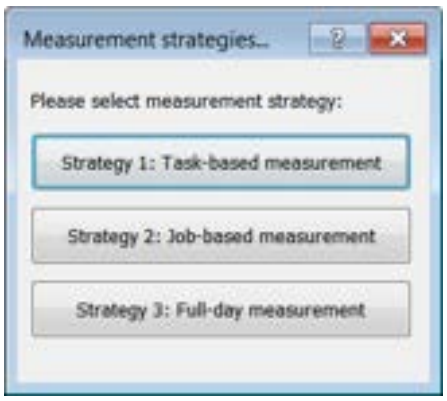


Fig. 5-10. *Measurement strategies...* selecting window

Task-based strategy

The Task-based strategy consists in calculating the LEQ values for separate tasks and estimating the daily noise exposure level according to the declared duration of tasks. You can specify the total duration of a task—using a time-picker field—or the duration of separate samples. In the latter case the average time will be used for calculation. The duration of samples needs to be typed in the format: hh:mm;hh:mm;... where the ';' sign separates different samples. The value in the *Duration of task m* field is taken into account only if the *Duration of samples of task m* field is empty. The value in the column *Average duration of task m* is the average value of the duration of samples specified in the column *Duration of samples of task m*.
Note: The number of specified samples and the dispersion of their duration affects the assessment of the estimation uncertainty.

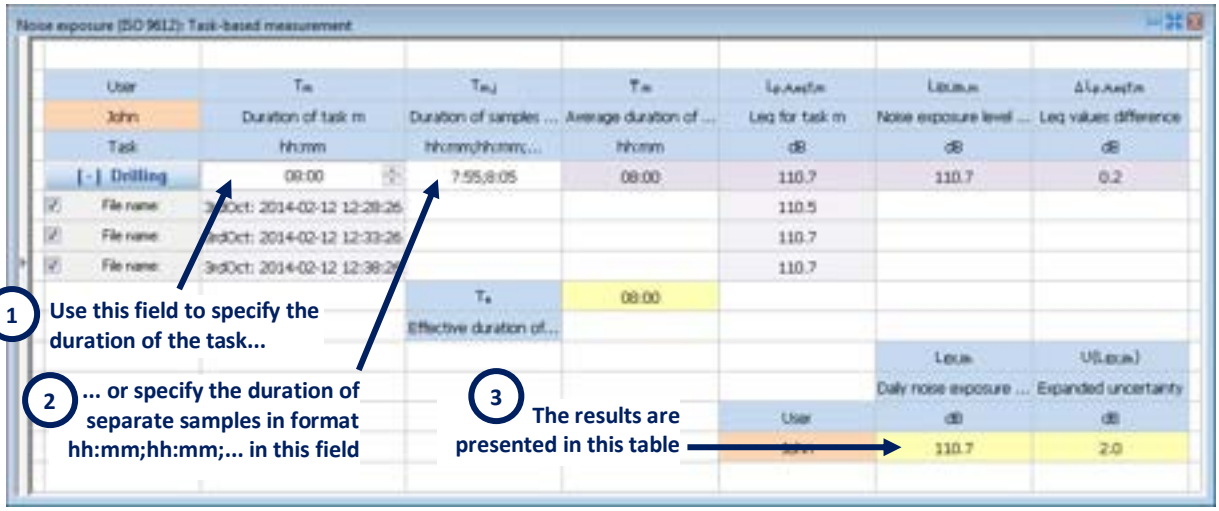


Fig. 5-11. *Noise exposure* panel with the Task-based strategy selected

The results of at least three independent measurements should be available for a single task. According to the ISO standard, each measurement should be long enough so that the measured level of noise is representative for the whole duration of the task.

If the expanded uncertainty of the LEQ values exceeds 3dB (which is signalized by red background of the cell), you can do one of the following:
– perform three or more measurements for the same task,
– divide the task into smaller ones,
– increase the duration of the measured samples for the task.

Job-based strategy

The Job-based strategy consists in averaging the results of a series of LEQ measurements performed during various fragments of the day, and then using a declared value of the effective duration of the working day to estimate the daily noise exposure level.

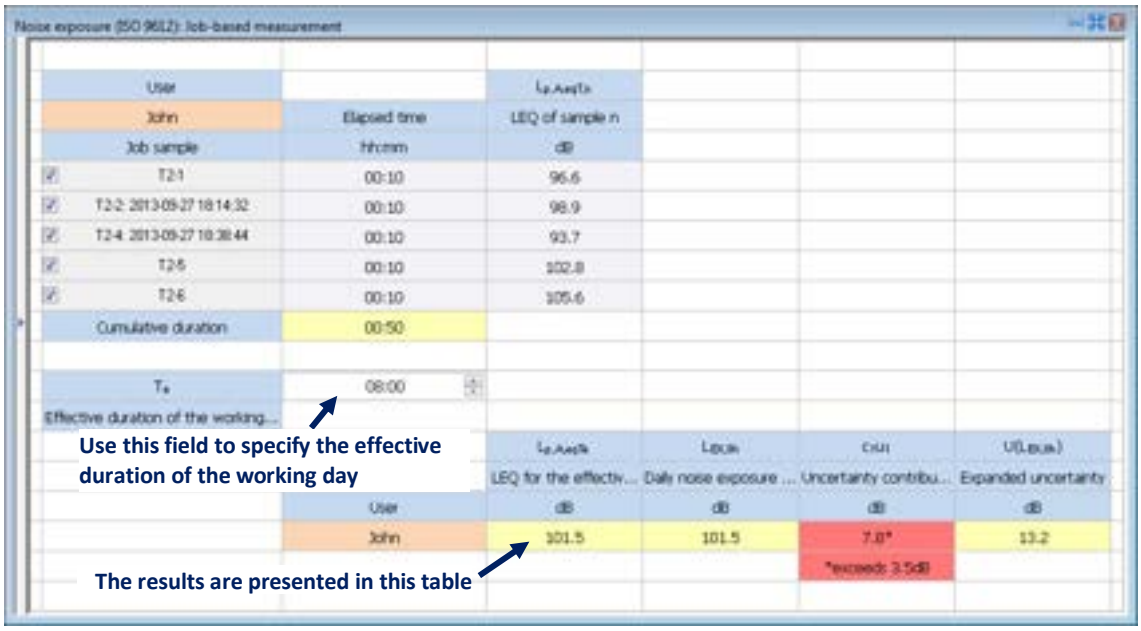


Fig. 5-12. *Noise exposure* panel with the Job-based strategy selected

The results of at least five independent measurements should be available for a single job. The necessary length of samples, specified in the ISO standard, depends on the number of workers and number of measurements.

Full-day strategy

The Full-day measurement-based strategy consists in averaging the LEQ values obtained in several full-day measurements and using them to estimate the daily noise exposure level according to a declared duration of the working day.

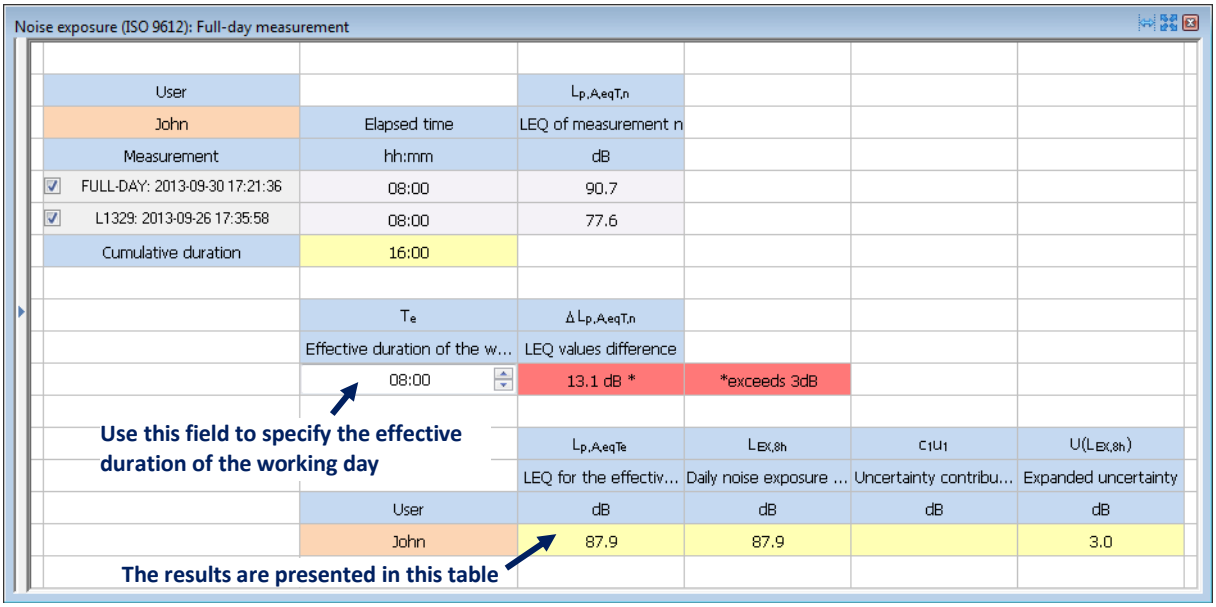


Fig. 5-13. *Noise exposure* panel with the Full-day strategy selected

The results of at least three full-day measurements should be available in order to use the Full-day strategy. The dispersion of data is also displayed, since if the dispersion is greater than 3 dB, two more full-day measurements should be performed.

The expanded uncertainty of estimation is also calculated and displayed next to the results. The contribution of uncertainty due to sampling, *i.e.* caused by limited length of samples, is displayed separately. If it exceeds 3.5 dB, it is advisable to consider a modification of the measurement plan.

5.4.4. NOISE DOSE/TWA

The *Noise dose* panel allows for the estimation of the Noise dose and the Time Weighted Average Noise Level (TWA) on the basis of the measured LAV data, according to standards OSHA HC and OSHA PEL.

Once data have been selected for calculation using the Configurator, you need to declare the exposure time for each task and user.

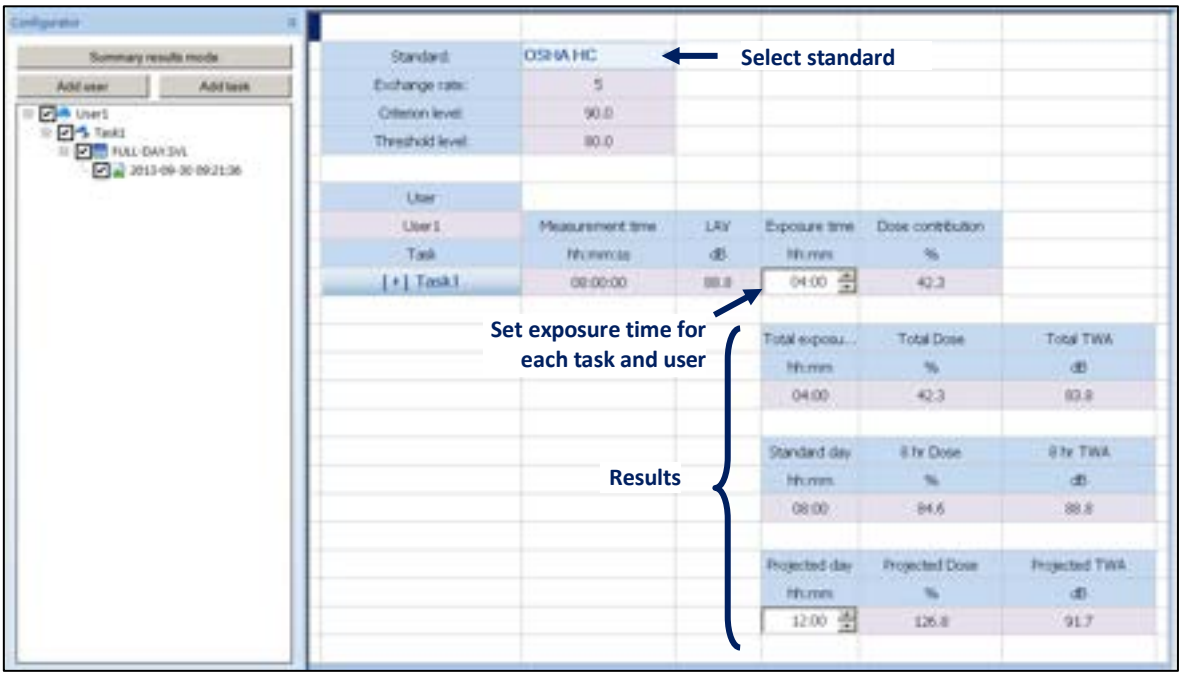


Fig. 5-14. *Noise dose/TWA* panel

The resulting values of Dose and TWA are presented for the total exposure time (sum of exposure times of all tasks), for a standard day (8 h) and for a custom projected duration.

Note: If the validation tool has been used, Supervisor Lite will use by default the validated data as the data source to calculate the Noise / TWA dose. Always make sure "Time History (Markers)" is selected as Mode if you want to calculate the Dose/TWA based on validated data. "

5.4.5. HAND-ARM VIBRATION EXPOSURE

The *Hand-Arm vibration exposure* panel allows for the estimation of the average daily (8 h) exposure to hand-arm vibration according to the ISO 5349-2 standard, as well as 4-hour or 2-hour per day exposures, using vibration measurement results.

The data are ordered according to the user and task information assigned to data; for details, see Chapter 5.4.1.

In order to select the mode (A(8) – 8-hour per day, A(4) – 4-hour per day or A(2) – 2-hour per day exposures), use the selector located at the top-left corner of the panel. The results can be presented as exposure levels or points. To switch the presentation mode, use the button located to the right of the 'Show exposure' label.

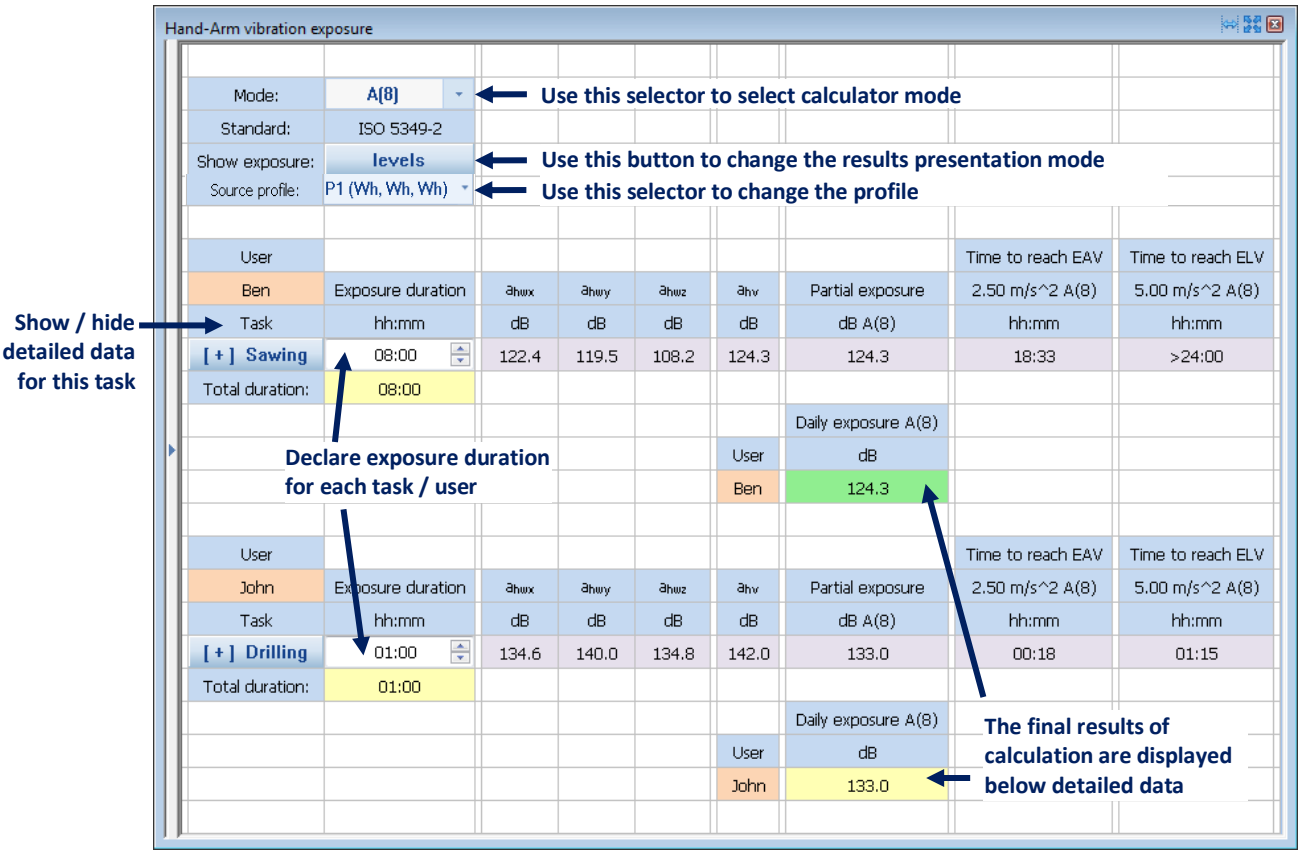


Fig. 5-15. *Hand-Arm vibration exposure* panel

Once data have been selected for calculation, you need to declare the exposure duration for each task and user. The daily exposure values for each of the users will then be displayed below the corresponding data.

The background of the result cells is colored according to the exposure level:

- green: if *Daily Exposure* < *EAV*,
- yellow: if *EAV* ≤ *Daily Exposure* < *ELV*,
- red: if *Daily Exposure* ≥ *ELV*.

You can show / hide the detailed data for each task by pressing the button labelled with the task's name.

5.4.6. WHOLE-BODY VIBRATION EXPOSURE

The *Whole-Body vibration exposure* panel serves for estimating the level of daily exposure to whole-body vibration according to various standards using vibration measurement results.

The data are ordered according to the user and task information assigned to data; for details, see Chapter 5.4.1.

Once data have been selected for calculation, you need to declare the exposure duration for each task and user. The final results of calculation (daily exposure, VDVR or aren – according to the selected mode) for each of the users will be displayed in the cells located below the detailed data.

The background of the result cells is colored according to the exposure level:

- green: if *Daily Exposure* < *EAV*,
- yellow: if *EAV* ≤ *Daily Exposure* < *ELV*,
- red: if *Daily Exposure* ≥ *ELV*.

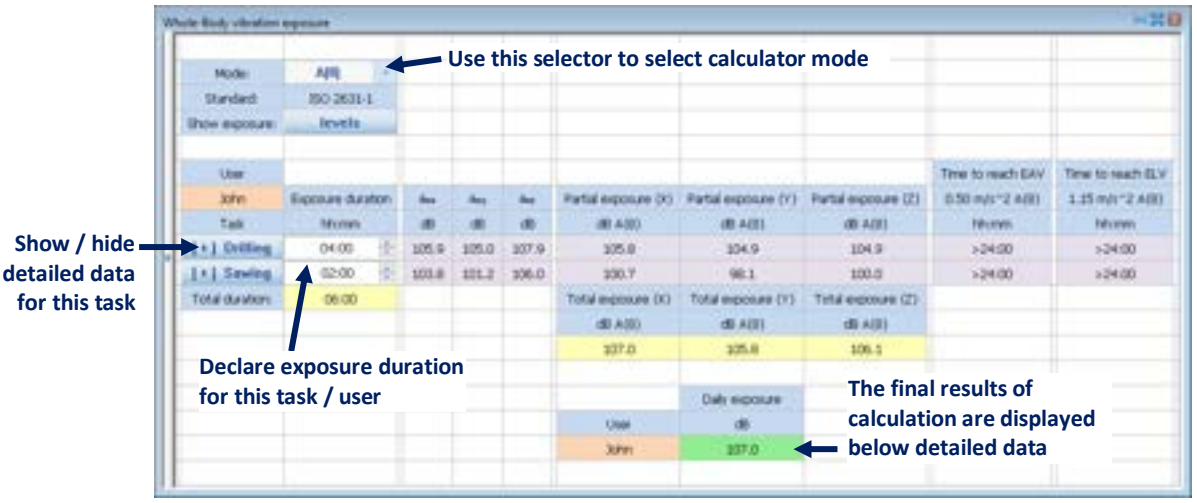


Fig. 5-16. *Whole-body vibration exposure* panel

The calculation can be performed in four different modes:

– A(8) (according to the standard ISO 2361-1),
– VDV (according to the standard ISO 2361-1),
– aren (according to the standard NHO 09),
– VDVR (according to the standard NHO 09).

To select the calculator mode, use the selector at the top-left corner of the table.

In case of the A(8) mode, the results can be presented as exposure levels or points. To switch the presentation mode, use the button located to the right of the 'Show exposure' label.

In case of the aren mode, the working day period can be specified manually.

You can show / hide the detailed data for each task by pressing the button labelled with the task's name.

5.5. HEARING PROTECTORS

The *Hearing protectors* panel is designed to provide information about the type of hearing protectors recommended for a user, given the results of dose measurement. It can only be used with noise dose data and is not applicable for vibration dosimetry.

This type of panel is always displayed in the form of a table.

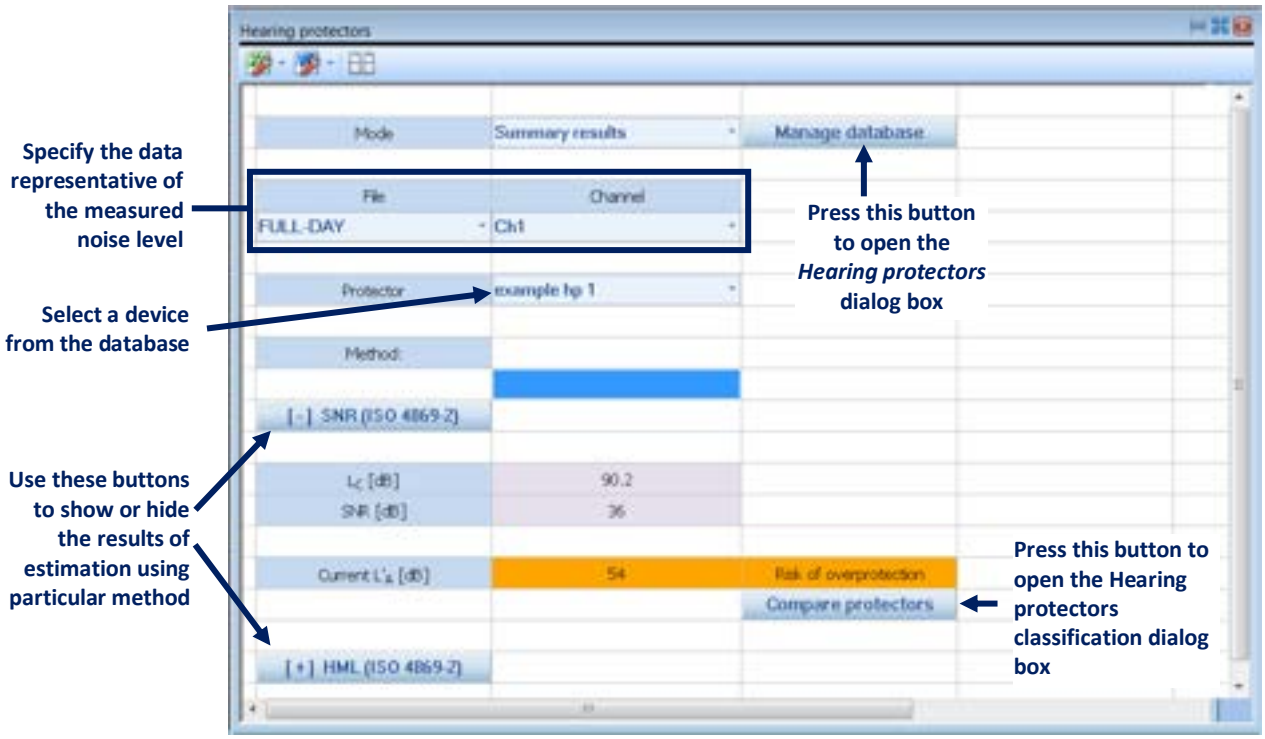


Fig. 5-17. *Hearing protectors* panel

You can use the *Hearing protectors* table in two calculator modes, based on *Summary results* or *Time history* results associated with a marker. To change the calculator mode, press the button containing the name of the current mode, located next to the *Mode* label.

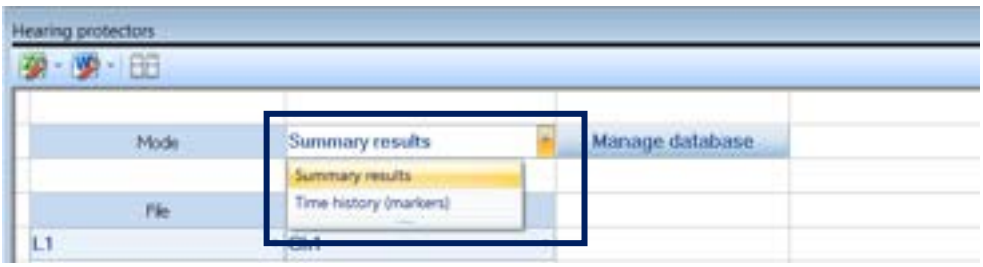


Fig. 5-18. Changing the mode of the *Hearing protectors* panel

The *Summary results* method operates on the LAeq, LCeq or 1/1 Octave results averaged with the Integration Period step and recorded by the instrument.

The *Time history* method operates on the LAeq, LCeq or 1/1 Octave results averaged with the Logger Step. The range of these results depends on some marker so that you can select fragments of the time history that are included in the calculations. To create a marker, open a Logger results panel and follow the instructions provided in Chapter 5.7.1.

When you open the *Hearing protectors* panel the *File* position shows the file containing data for calculation L_A and L_C values. If you select the *[None]* option, L_A and L_C values can be changed manually – these fields turn white. To change the L_A or L_C values, double click on the cell with value.

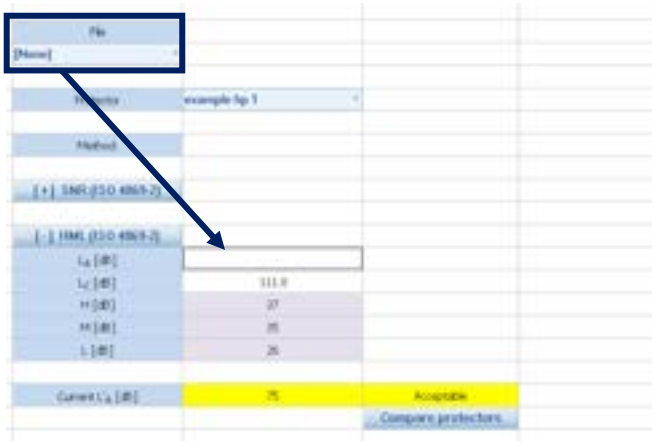


Fig. 5-19. Manual changing the L_A value in case of *[None]* option

In case the used file contains multiple Summary results, it is possible to perform calculations on a selected Summary results, or to average all Summary results. To decide, use the list box located next to the File and Channel fields.

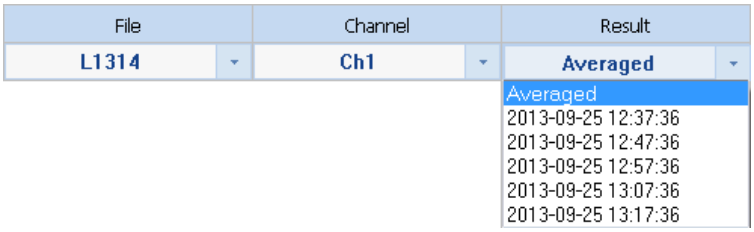


Fig. 5-20. Selecting a single Summary result or averaged results in the *Hearing protectors* panel

5.5.1. PROTECTORS DATABASE

The *Protectors database* mode allows to use the stored information about multiple hearing protection devices in a database to estimate the effective level of noise when wearing different protectors, and for different measured levels of noise, using three methods: the SNR method, the HML method and the Octaves method.

The program includes an exemplary base of protectors based on the offers of the most popular companies.

You can add your own hearing protection devices to the database. To do so, press the *Manage database* button located next to the button for switching modes and use the *Hearing protectors* dialog box.

After you save one or more hearing protection devices in the database, you can use them together with dose data to estimate the effective level of noise. It is not compulsory to fill in all the fields. The missing values will be treated as 0 (no attenuation).

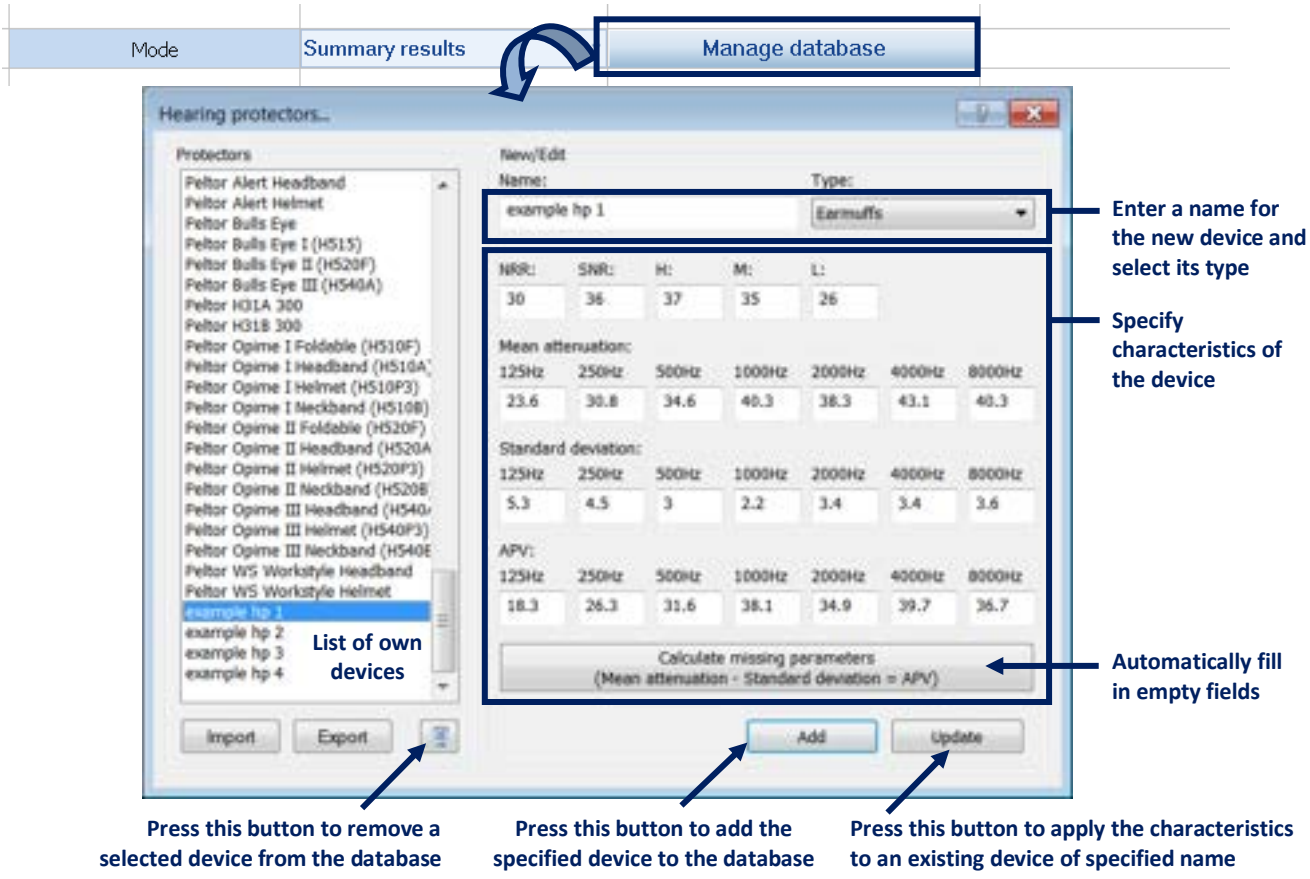


Fig. 5-21. *Hearing protectors...* dialog box, serving for managing the hearing protection devices database

It is also possible to fill in only two of the three parameters, and automatically calculate the remaining one according to the formula:

Mean attenuation – Standard deviation = APV

using the *Calculate missing parameters* button.

You can choose from three types of hearing protectors: *Earmuffs*, *Formable earplugs*, *All other earplugs* or *Undefined*.

The hearing protectors stored in the database can be exported to external CSV files (which use semicolon ";" as the field separator), as well as imported to Supervisor, using the *Export / Import* buttons, located at the bottom-left corner of the window.
Note: The easiest way to analyse the internal structure of such CSV files is to export an exemplary hearing protector (e.g. one with all parameters equal to zero).
Contents of the *Hearing protectors* table can be configured using the *Hearing protectors panel* category of the Main Options dialog box (Fig. 5-22).

You can choose which parameters of the hearing protector should be shown in the *Octaves method* part of the table. The available parameters are:
– Mean attenuation,
– Standard deviation,
– APV.

You can also enable displaying an optional preview of the APV, noise spectrum and reduced spectrum in graphical form below the results of the Octaves method (Fig. 5-23) by checking the *Show octaves graph preview* option.

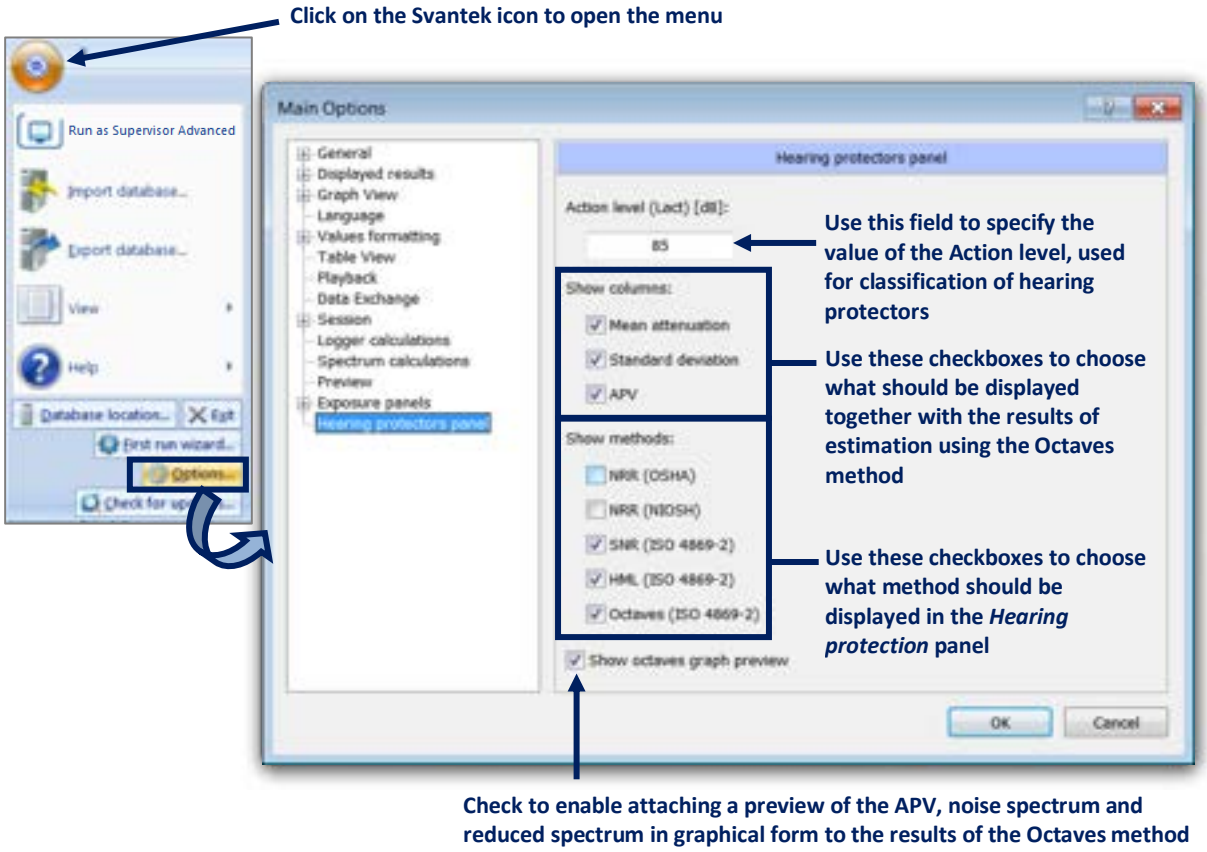


Fig. 5-22. Modifying the Hearing protectors preferences in the Main Options dialog box

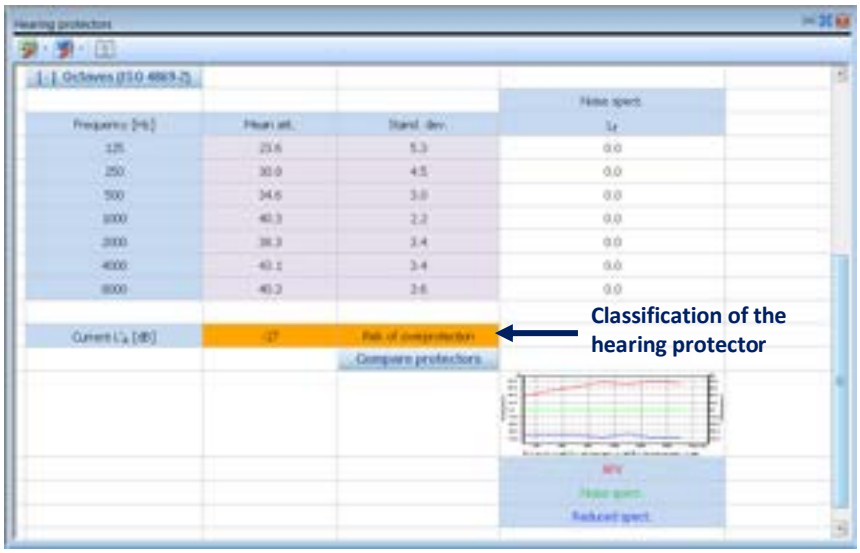


Fig. 5-23. Optional preview of the APV, noise spectrum and reduced spectrum in graphical form, attached to the results of the Octaves method.

The following data is used in the calculations:

- In case of methods which use the values of the parameters L_A and L_C: these values can be entered manually (when '[None]' is selected in the 'File' field) or loaded from a selected file. In case of data acquired from some Svantek instruments, the difference $L_C - L_A$ may be available instead of the L_A or L_C value; the remaining value is then automatically calculated using the difference and other available value.
- In case of methods which use octave spectra: the data is loaded from a file; if only 1/3 octave spectrum is available in the selected file, the octave spectrum is automatically recalculated.

5.5.2. CLASSIFICATION OF PROTECTORS

Protectors are classified using the calculated effective level of noise according to the EN 458 standard. The result of classification is displayed next to the estimated L'_A in text form and is also shown by the colour of the table cells which contain the results. The possible classes are shown in Fig. 5-24.

Fig. 5-24. Classification of hearing protectors according to L'_A

Note: The classification is based on the value of the Action level, which can be specified in the Main Options dialog box (Fig. 5-22).

The results of classification can also be viewed using the *Hearing protectors classification* dialog box. To open it, press the *Compare protectors* button, located below the table cell which contains the classification result for the selected protector.

Fig. 5-25. Button for opening the *Hearing protectors classification* dialog box

The *Hearing protectors classification* dialog box contains lists of all protectors, stored in the database, which have been classified as Good or Acceptable (with the estimated effective noise level value either slightly higher or slightly lower than the optimal one) using the selected method of estimation.

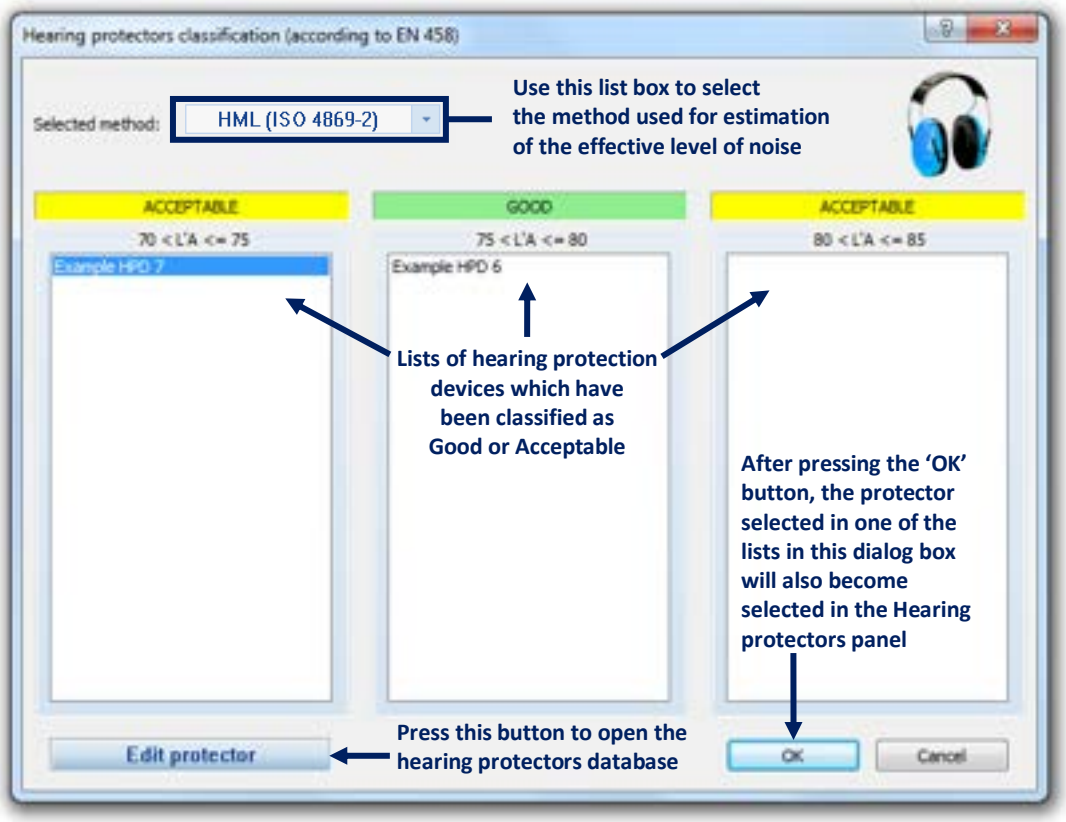


Fig. 5-26. *Hearing protectors classification* dialog box

5.6. 'WHAT IF' panel

The *'What if'* panel is a special tool which enables you to estimate the values of dose functions assuming different values of parameters such as threshold or criterion level. The recalculation is always based on logger (time history) data. To use it, specify the assumptions using the *'New value'* fields in the parameters-related part of the panel, and the recalculated values of the functions will appear in the yellow cells at the bottom of the panel.

You can select the functions for which recalculation will be done using a special version of the View configurator, specific for this type of panel. In this case, the View configurator can be opened by clicking on the vertical bar with the ◂ icon, located on the right side of the panel.

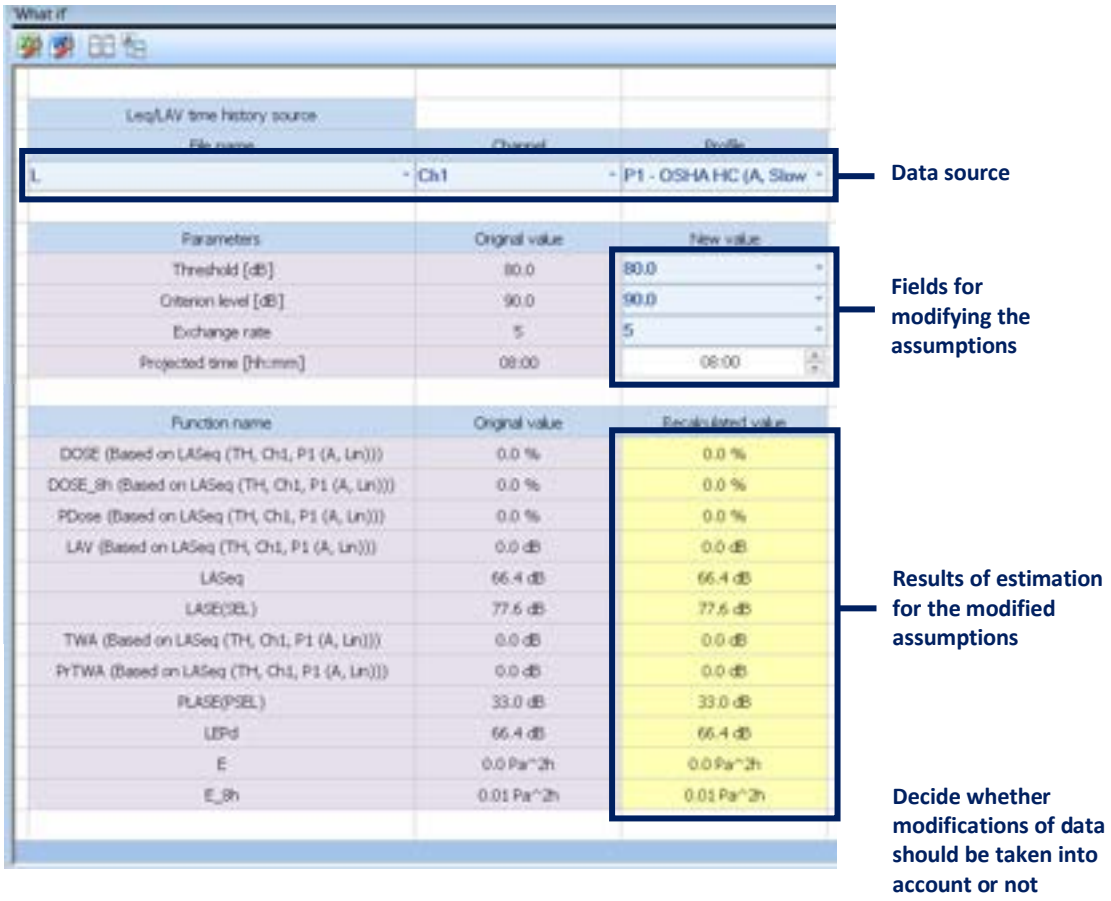


Fig. 5-27. *'What if'* panel

All modifications of the data, such as deletion, shifting and clipping, done in a Logger results panel, are considered when recalculating new values of parameters.

If the session is in validation mode, the *What if* panel retrieves data according to the *Validated data* marker range.

You can select dose functions to be recalculated in the Configurator.

Fig. 5-28. Configurator specific for the *'What if'* panel, serving for the selection of dose functions to be recalculated

5.7. MARKERS

Markers can be used as a tool for data classification. They constitute binary functions defined in the time domain. A marker denotes a certain range of data, specified automatically or selected by the user. Markers created by Svantek instruments and markers created in Supervisor are equivalent and can be used in the same way.

5.7.1. CREATING MARKERS

There are two types of markers:

- *Block* markers,
- *Point* markers.

The block markers contain a finite range of data, while point markers only contain one sample.

To create a *block* marker:

1. Make a block selection in the plot area, dragging the mouse with the left button pressed.
   Note: A block marker does not have to be continuous, *i.e.* it can be composed of several separate ranges.
2. Press the right mouse button to open a context menu and select *Edit markers* » *Use selected blocks* » *New marker*.
3. In the *Create New Marker* dialog box, specify the desired name and colour for the new marker.

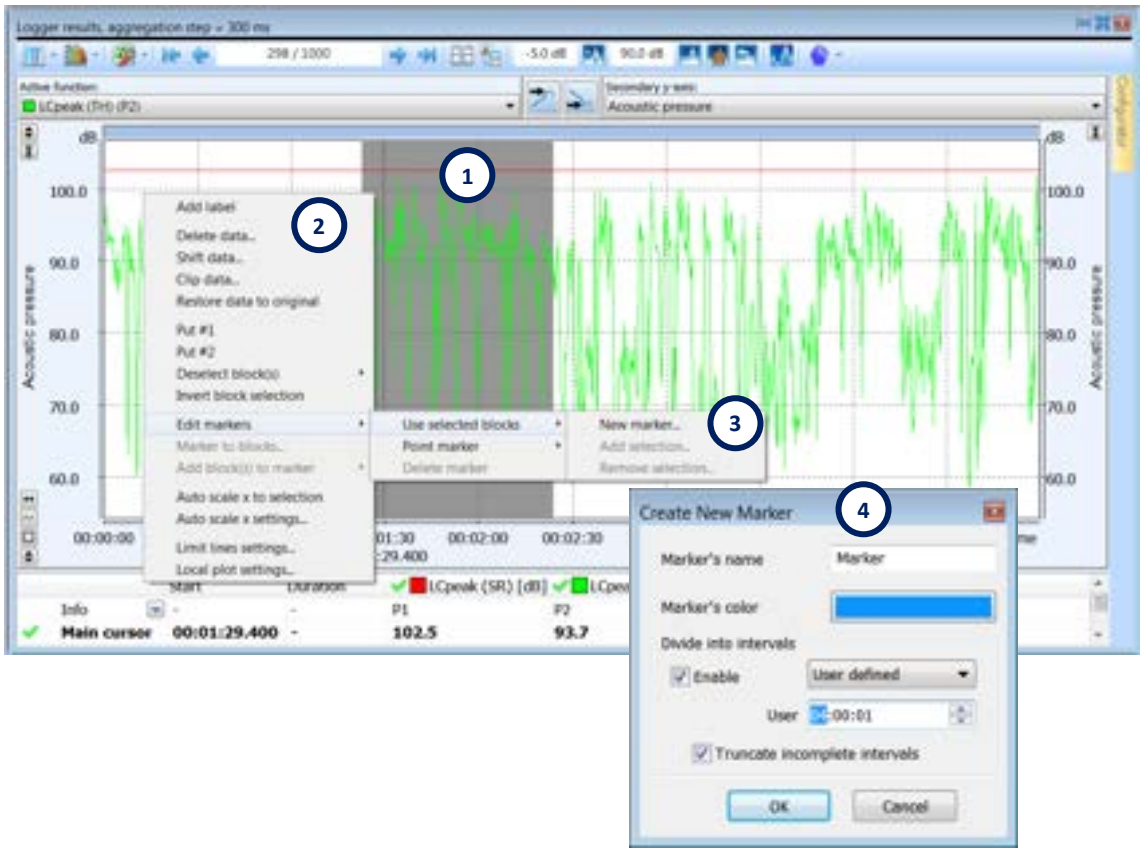


Fig. 5-29. Creating a block marker

You can also divide the block marker into intervals checking Enable checkbox and selecting the interval duration. The figure below presents marker divided into five 30-minutes intervals and one smaller interval. The last interval can be truncated if you check *Truncate incomplete intervals*.

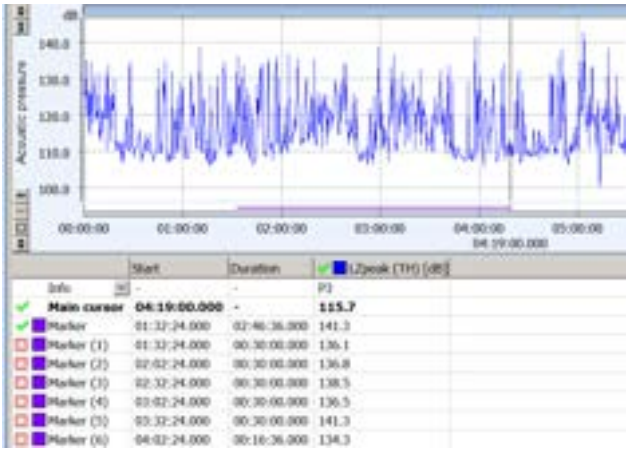


Fig. 5-30. Dividing a block marker into intervals

In case of *point* markers, instead of making block selections you only have to place the Main cursor at the desired location (clicking in the plot area). The rest of the process is analogous to the creation of block markers, the only difference being the path in the pulldown menu: *Edit markers* » *Point marker* » *New marker*.

5.7.2. VIEWING MARKERS

Block markers are visible in the Plot mode as horizontal lines below the plot area, above the x-axis. In case of point markers, vertical lines are also drawn. Each marker has its own colour. The markers are listed in the table below the plot. To show or hide markers, click on the ✔ / ✖ icons, located next to their names on the list.

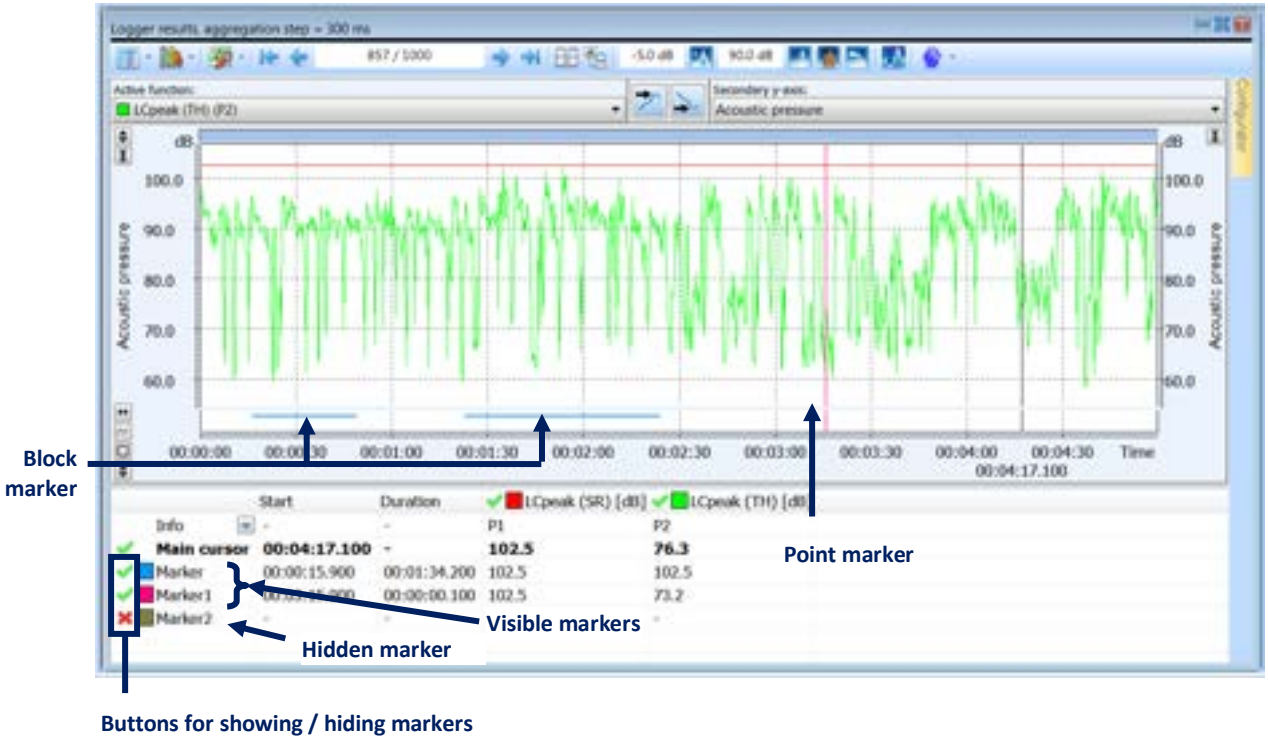


Fig. 5-31. Visualization of markers in the Plot mode

In the Table mode, markers are considered as one of the functions available for displaying. You can select the values displayed in the table for data contained / not contained within range of a marker using the *Table view* tab in the *Main options* dialog box.

In the Plot mode, you can highlight block markers selecting the *Highlight markers …* command and remove all highlights selecting the *Remove highlights* command.

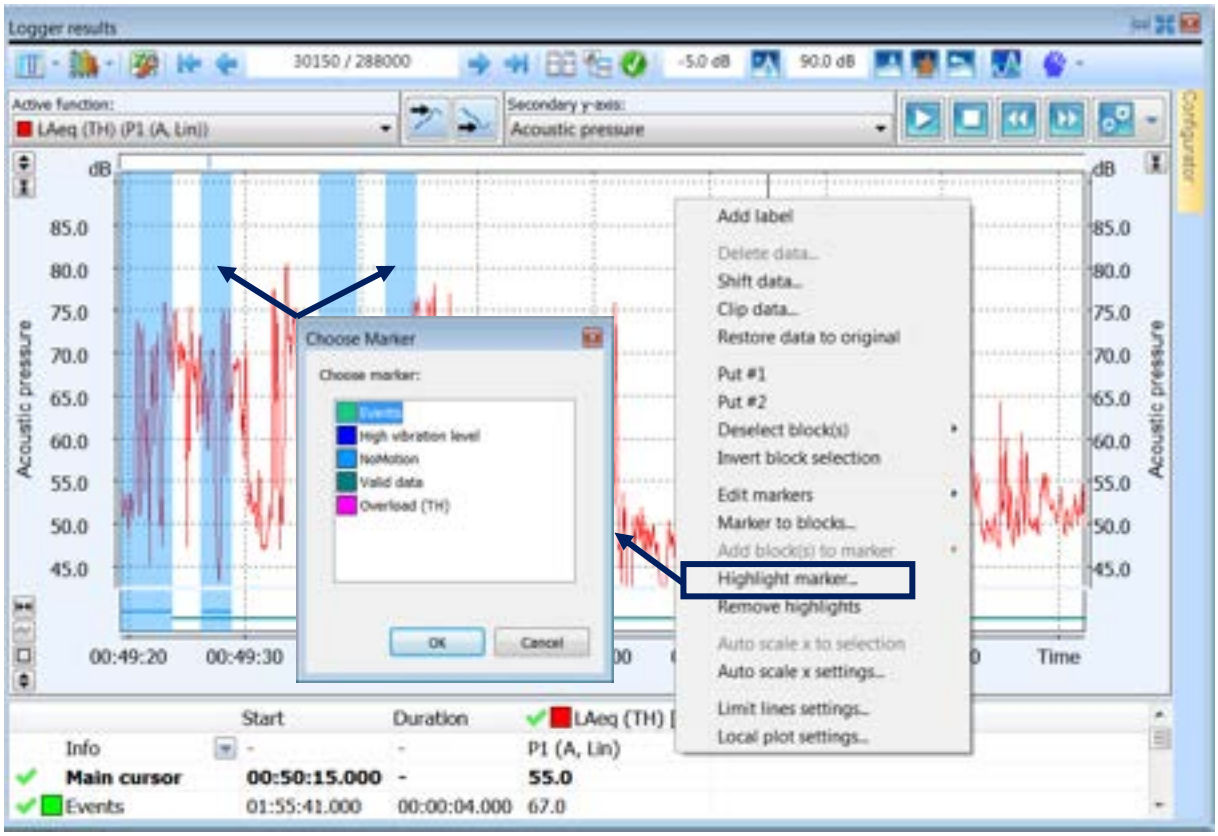


Fig. 5-32. Highlighting markers

5.7.3. EDITING MARKERS

A marker need not be continuous — it can be composed of several disconnected continuous fragments. Such an individual fragment is called a 'range' of the marker.

To modify the ranges of markers, you can use the pulldown menu opened by right-clicking somewhere in a plot area, when working with a panel in the Plot mode. Following commands are available:

- *Edit markers* » *Use selected blocks* » *Add selection* – adds the current block selection to a chosen marker.
- *Edit markers* » *Use selected blocks* » *Remove selection* – subtracts the current block selection from a chosen marker.
- *Edit markers* » *Point marker* » *Add cursor position* – adds the range of the current cursor position to a chosen marker.
- *Edit markers* » *Point marker* » *Remove cursor position* – removes the range of the current cursor position from a chosen marker.
- *Edit markers* » *Delete marker* – deletes a chosen block or point marker.

Every time you modify or delete a marker, the *Choose marker* window will appear. It serves for selecting the marker you wish to modify or delete. You can select multiple markers, clicking on their names with CTRL pressed. You can also select several successive markers, clicking on the first one and then the last one with SHIFT pressed.

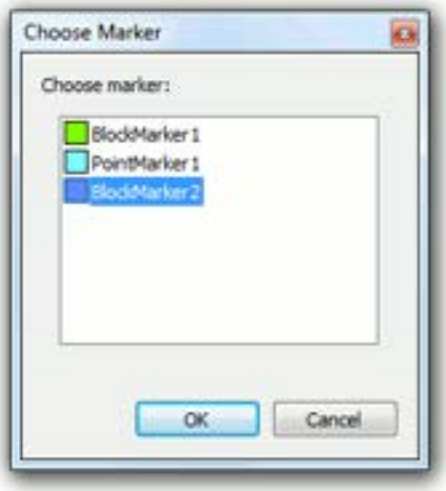


Fig. 5-33. *Choose Marker* dialog box

Note: A group of ranges can be selected in order to perform some operations on several markers simultaneously. To select/deselect a range, click on it with the SHIFT button pressed. You can also use the *Add/remove marker range to/from selection* to select/deselect ranges. Selected ranges are drawn in black.

You can easily modify ranges in the following ways:

- Clicking with the left mouse button in the middle of a range and moving the mouse without releasing will move the selected range within the time domain. When the mouse is in a position allowing for moving a range, the marker's name and the number of the range is displayed (Fig. 5-34 a).
  Note: If multiple ranges are selected, moving one of them automatically moves the whole group.
- Clicking with the left mouse button on one of the ends of a range and moving the mouse without releasing will resize the selected range. When the mouse is in a position allowing for resizing a marker range, the <<, >> signs are added to the name of the marker (Fig. 5-34 b).

a) Clicking and moving mouse will move the range. **b)** Clicking and moving mouse will resize the range.

Fig. 5-34. Labels that appear when the mouse is in a position allowing for the modification of a marker range

Right-clicking on a marker range activates a pulldown menu, containing the following commands (all these commands can be used for a group of selected ranges):

- *Open comment file* – opens the comment file that the selected marker corresponds to.
- *Export event(s)* – in case of markers denoting the range of audio events, this command can be used to open the *Export Events* dialog box (see Chapter Error! Reference source not found.); the event corresponding to the clicked marker will be automatically selected.
- *Add marker range to selection* – selects the range that was clicked.
- *Remove marker range from selection* – deselects the range that was clicked.
- *Selected ranges to blocks* – adds the selected ranges to the block selection on the plot.

- *Add selected ranges to another marker* – adds the selected ranges to a chosen marker.
- *Remove current range from marker* – removes the range that was clicked from the marker that it belonged to.
- *Remove all selected ranges from marker* – removes the selected ranges from a chosen marker.

5.7.4. ADDING BLOCKS TO MARKERS

You can add new blocks to the existing markers. For this:

1. Make a block selection in the plot area, dragging the mouse with the left button pressed.
2. Press the right mouse button to open a context menu and select *Add block(s) to marker*.
3. Choose the marker to which you want to add the block.

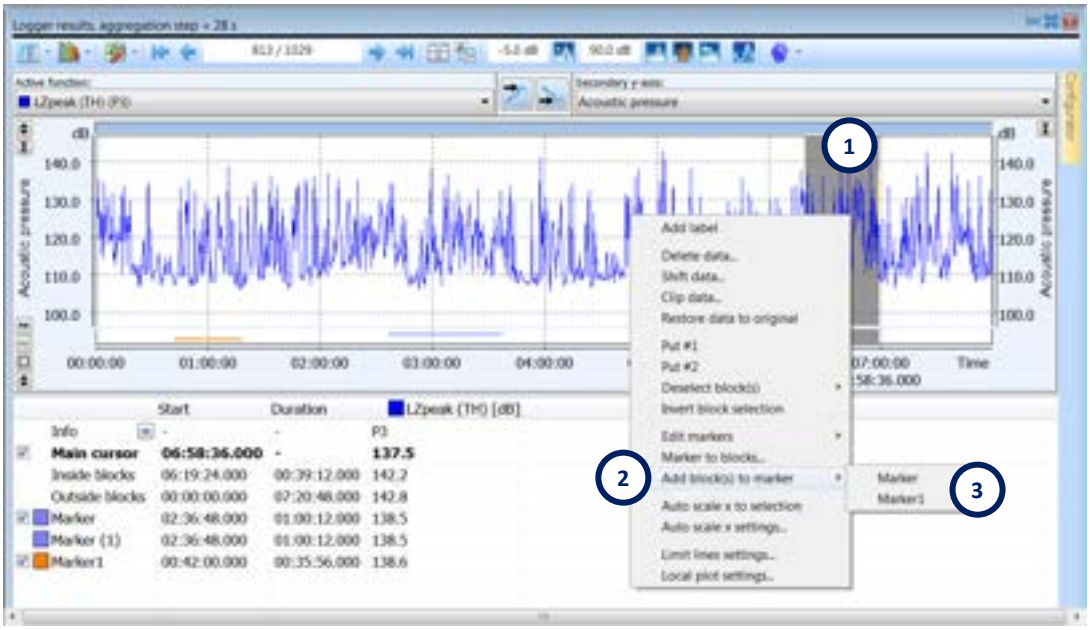


Fig. 5-35. Adding blocks to the marker

5.7.5. SPECIAL MARKERS

Some markers are created automatically and cannot be edited. This includes:

- The *Comment markers* denote the ranges of audio comments attached to the measurement results.
  Note: Double-click a Comment marker to open the corresponding audio file in the default audio player.
- The *Audio markers* denote the position of audio events, recorded automatically by Svantek instruments, and allow for their export to external files.
- The *Wave* marker denote fragments of logger data to which a .WAV file is associated.
- The *Missing wave* marker denote fragments of logger data to which a .WAV file was associated but has not been downloaded.
- The *Whole data marker* contains the whole-time domain.

- The *Pause* or *Break* marker shows the time ranges containing pauses or breaks, if available in the currently viewed data.
- The *Block selection marker* denotes the current block selection.
- The *Overload* and *Underrange* markers denote the ranges in which measurement results are outside of the measurement range.
- The *Changed data* marker denotes the ranges in which data has been shifted or clipped (see Chapter 4.2.3)
  Note: The Underrange marker is hidden by default and has to be enabled in the View Configurator.

There are more types of special markers, which are created by Svantek instruments. For details, see the manual of the instrument.

Note: The *Whole data marker* and the *Block selection marker* are only applicable in the Table mode.

5.7.6. TRIGGER LEVEL+ MARKERS

In the currently opened logger file, you can easily generate a marker corresponding to the time ranges with high level using the *Show trigger level+ marker parameters* button, located at the right end of the View Toolbar.
Note: This button may be hidden if the panel is too narrow.

For example, when force measurement results are available, you can generate a marker corresponding to the time ranges with high force level.

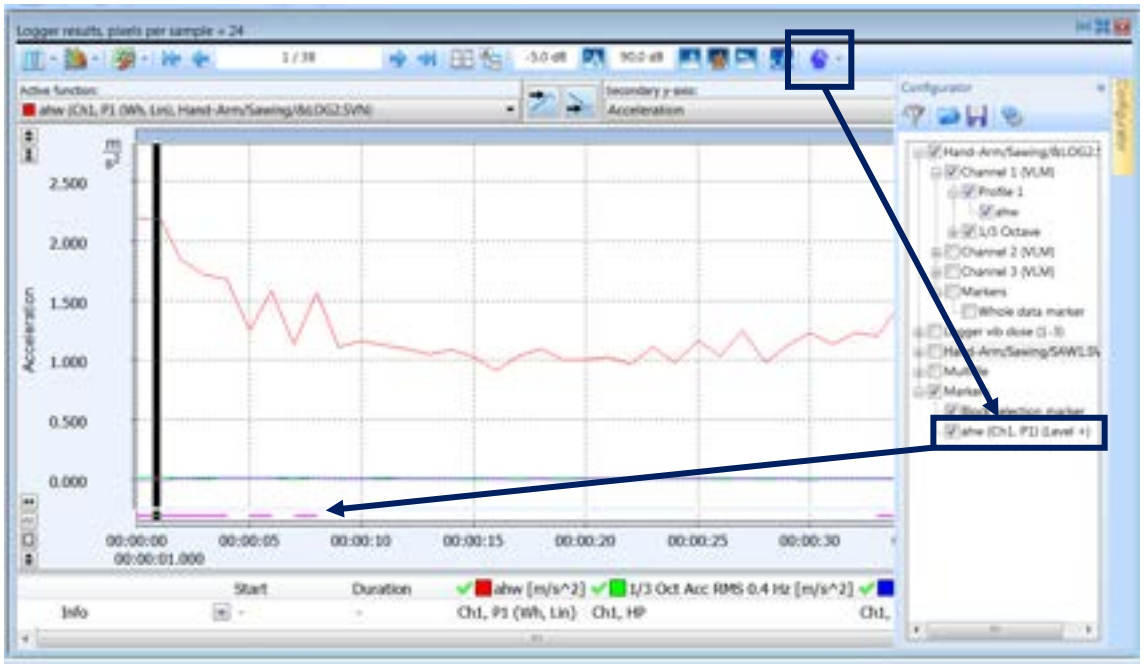


Fig. 5-36. Displaying automatically generated markers corresponding to high levels

The parameters related to the generation of the Level+ marker are available in the menu, as shown in the figure below.

Fig. 5-37. Level+ marker generation parameters

- *Function* – result function that is compared for excess;
- *Threshold* - minimum level taken into account in the analysis;
- *Minimum duration* - optionally, allows for removing all the generated Level+ marker's ranges of duration lower than the specified minimum duration;
- *Smoothing samples* - optionally, allows for smoothing the measured level using selected number of samples;
- *Remove distortions* - if this option is enabled, the ranges in which an overload, underrange, high vibration level or force underrange marker occurs are removed from the generated Level+ marker.

5.7.7. EXPORTING LOGGER EVENTS

To export events included in the active logger view, right-click on a marker range and in the pulldown menu select the *Export event(s)* command (see Chapter 5.7.3).

After activating this command, the *Export Events* dialog box will appear. *Logger events* available in the current data are listed in the upper part of the window. You can set the target directory for the output *wave* files by clicking on the icon next to the *Path* field.

To export the Events as *WAV* files, press the *Export* button located at the bottom of the window.

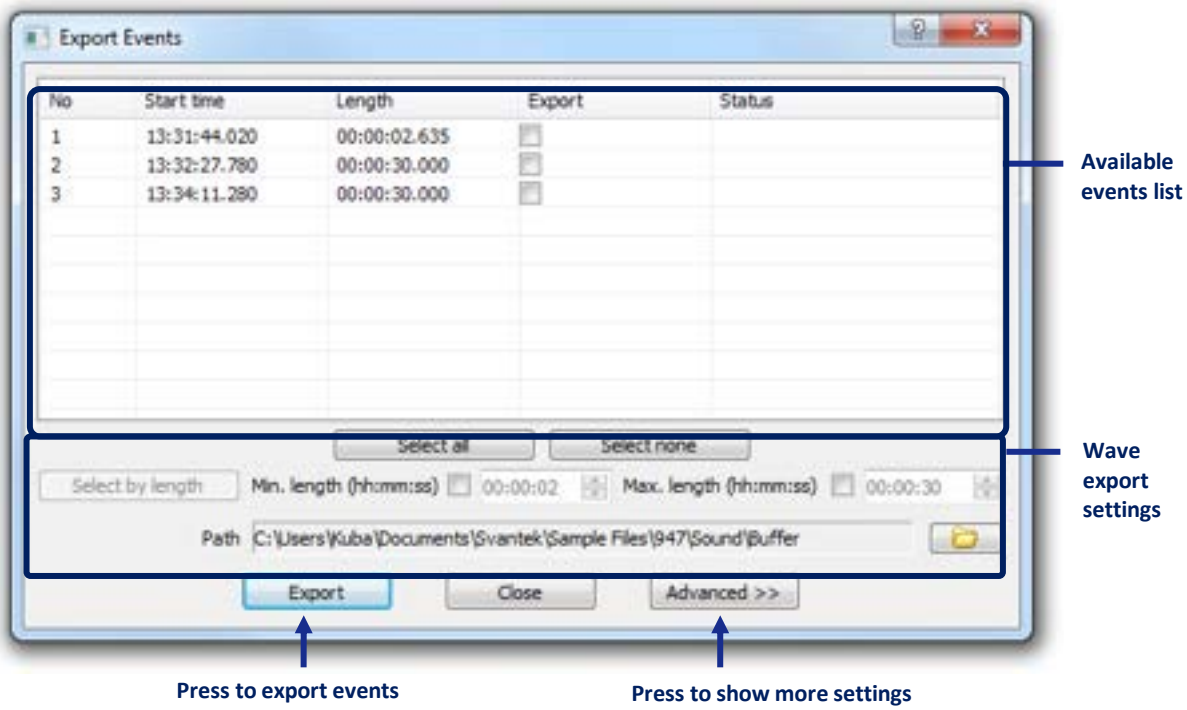


Fig. 5-38. *Export Events* dialog box

You can select the events you wish to export using the checkboxes in the *Export* column, or the *Select all* and *Select none* buttons. It is also possible to select events according to their length. To do so, specify minimum and/or maximum length and press the *Select by length* button.

If you want to configure more detailed export settings, press the *Advanced >>* button.

Fig. 5-39. Advanced settings of the *Export Events* dialog box

The available settings are:

- *Filename prefix* – text string with which the output filename will start,
- *Naming convention* – select between appending the number of the event or its start time to the filename,
- *Output Files Format* – the format of created file,

▪ **Note:** Currently only *WAV* file format is supported.

- *Settings – wave* parameters settings (*Compression*, *Sampling Rate [Hz]*, *Channels*, *Bits Per Sample*),

- *Gain control* – select whether to use no signal boost, constant-level signal boost or *Automatic gain control* smart signal boosting mechanism,
- *Play* – playback of the last selected audio event.

5.8. LOGGER DOSE CALCULATOR

5.8.1. CALCULATION OF DOSIMETRIC FUNCTIONS

Supervisor makes it possible to quickly calculate the values of several dose functions using the measurement results. In case of noise dosimetry, the available functions include:
– DOSE,
– DOSE_8h,
– LAV,
– SEL,
– TWA,
– PDose.
In case of vibration dosimetry, the available functions include:
– Current exposure,
– Daily exposure,
– AEQ,
– awv (for whole-body vibration) / ahv (for hand-arm vibration),
– awmax (for whole-body vibration) / ahwmax (for hand-arm vibration),
– Current dose,
– Daily dose,
– MaxVDV.
Note: The presentation of the values of calculated dose functions is only available in the *Logger results* panels, displayed in the Plot mode. The availability of particular functions depends on the data used for calculation. Similar functions are also calculated (in a different manner) in the 'What if' panel (see Chapter 5.6).

You can calculate the values of these functions immediately when viewing data. All you need to do is select the desired functions in the Configurator (located at the right hand side of the panel; more details on the Configurator are presented in Chapter 4.4).

The calculation of noise-dose functions can be based on Leq data or LAV data. The functions available for calculation are contained in two sub-branches of the Configurator tree: *Leq calculations* and *LAV calculations*.

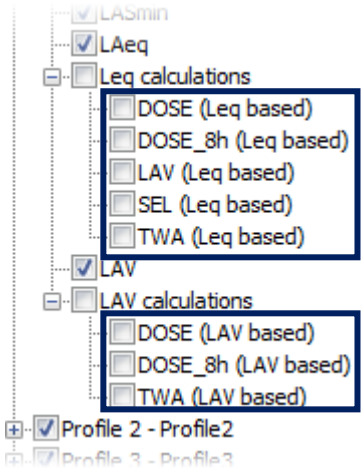


Fig. 5-40. List in the Configurator containing noise-dose functions available for calculation

The **vibration-dose** functions available for calculation are contained in the *Logger vib dose* branch of the Configurator tree. The numbers in brackets correspond to the numbers of channels used for calculation of the RMS or VDV functions (1–3 or 4–6).

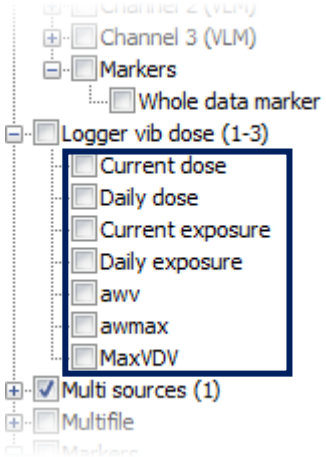


Fig. 5-41. List in the Configurator containing vibration-dose functions available for calculation

5.8.2. DISPLAYING THE RESULTS OF CALCULATION

The results of calculation are displayed in the table below the plot area (if it is hidden, you can show it using the button located at the bottom-left corner of the panel).

Calculation is performed for the whole data set, as well as for ranges selected in one of two ways: as markers and as block selections. To show / hide results for time ranges determined by markers, select the markers in the View configurator (in the *Markers* branch, at the bottom of the list). To show / hide results for whole data or time ranges determined by block selections, use the context menu opened by right-clicking anywhere in the table area. This context menu, as well as the selection of data and markers, are described in detail in Chapter 4.3.2, describing the Plot display mode.

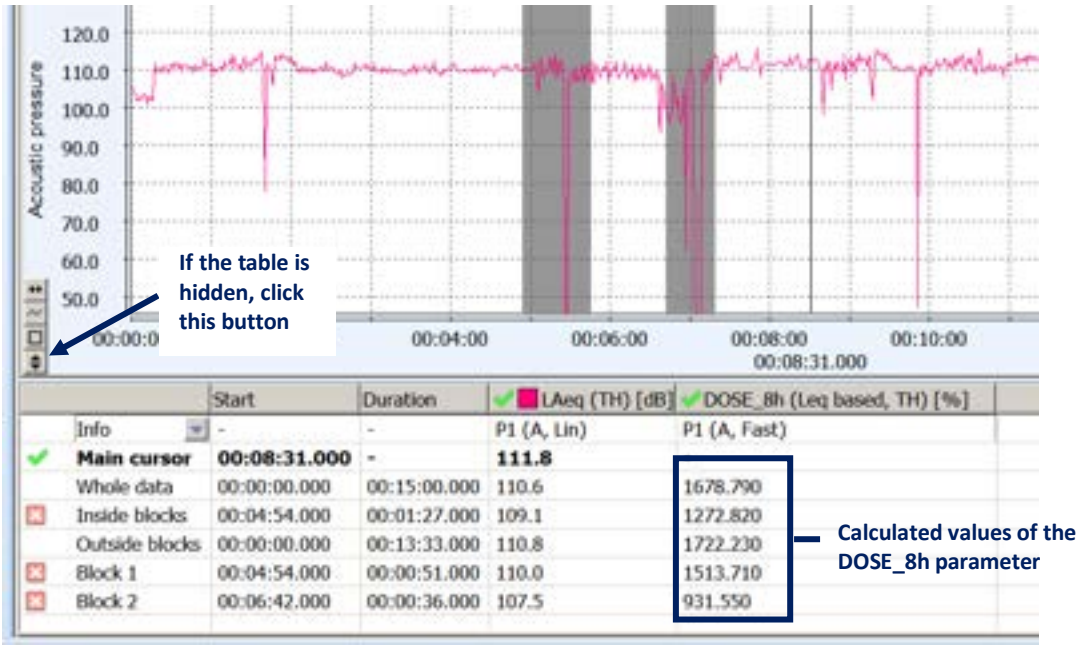


Fig. 5-42. Results of Logger dose calculation displayed in the table below the plot

Except of the total values displayed in the table, it is also possible to draw the time histories of the dose functions calculated using the Logger Dose Calculator. This option can be enabled in *Main Options* » *Logger calculations*.

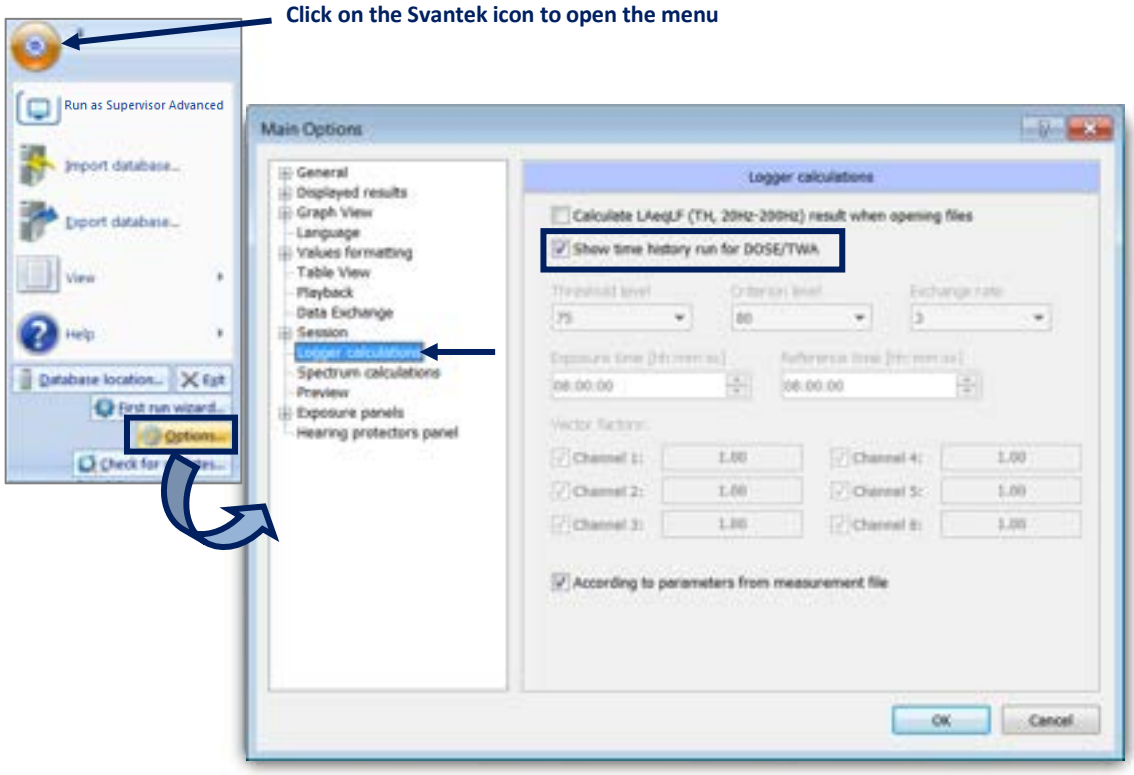


Fig. 5-43. Drawing time histories of calculated dose functions

5.8.3. PREDICTING DOSE RESULTS FOR SIMULATED DATA

The Logger dose calculator tool can also turn out useful for viewing the values of dose results and manipulating the data simultaneously (using shifting, clipping and deletion of data, as described in Chapter 4.2.3). You can, for example, display the DOSE result and see how the dose reduces when a range of measured LEQ values is decreased by 10 dB. Such an exemplary procedure is illustrated in the figure below.

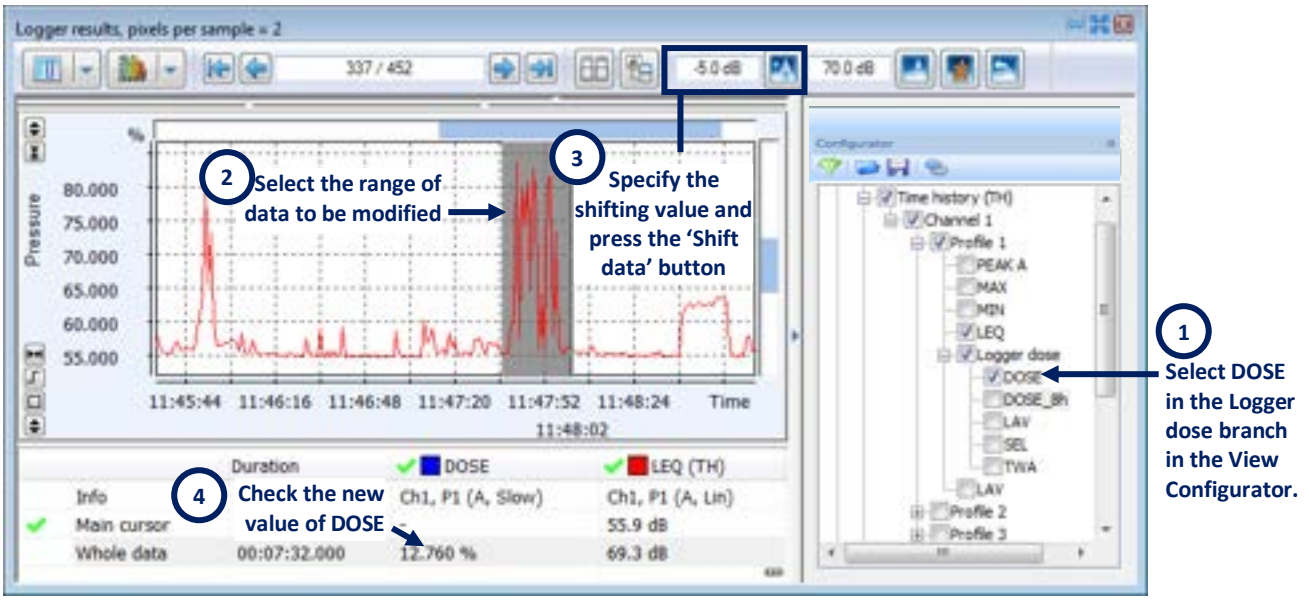


Fig. 5-44. Using the Logger dose calculator to predict the values of dose results for simulated data – an example: viewing how the value of DOSE changes when the LEQ data in a selected range is shifted by –5dB

5.8.4. MODIFYING PARAMETERS OF CALCULATION

Calculations can be performed according to the values of parameters loaded from the measurement file, or the values of the parameters can be specified manually. To manually modify the parameters values, use the Logger calculations settings panel in the Main Options dialog box (Fig. 5-Error! Bookmark not defined.).

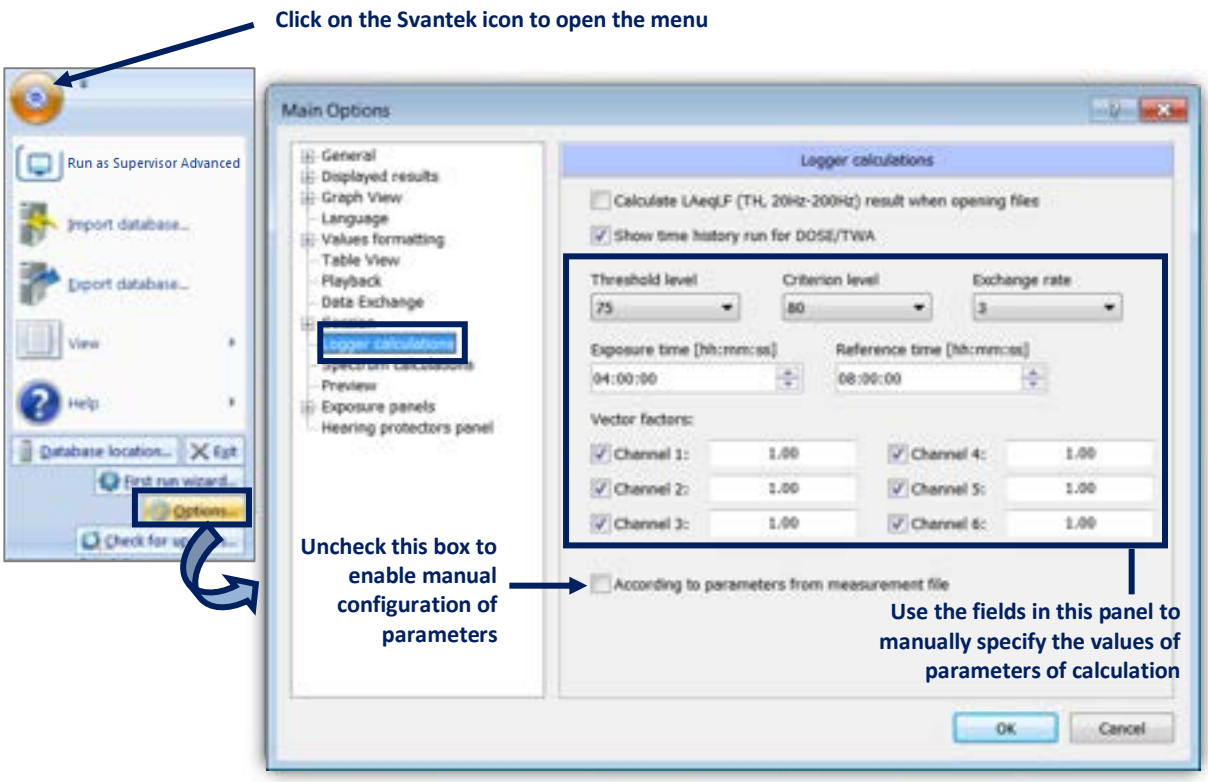


Fig. 5-45. Modifying the Logger calculations parameters in the Main Options

5.9. NOISE RATING AND NOISE CRITERION

If LZeq spectral data (e.g. 1/1 Octave LZeq results) are available, the Noise Rating (NR) can be calculated according to the ISO 1996 standard, and Noise Criterion (NC) can be calculated according to the ANSI S12.2-1995 or ANSI S12.2-2008 standard.

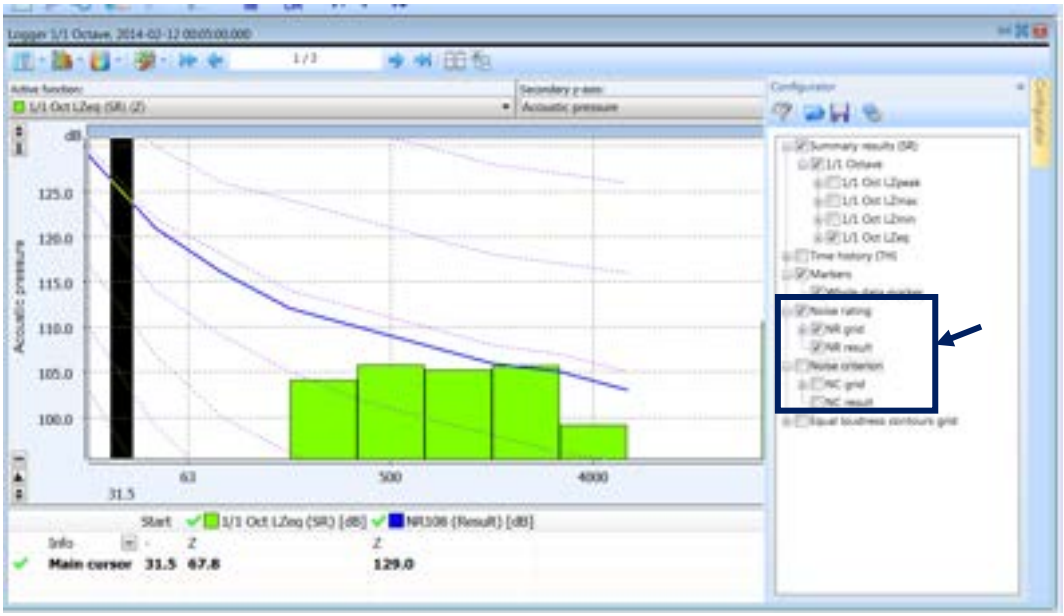


Fig. 5-46. Calculation of the NR results

To show calculation results, use the Configurator:

- Select the *grid* option to display NR / NC curves.
- Select the *result* option to display the NR / NC value calculated for the current measurement data.

To select the standard used for the calculation of NC, go to *Main Options » Spectrum calculations*.

6 OTHER FEATURES

6.1. DATABASE MANAGEMENT AND BACKUP

The Supervisor's database contains the following data:
- files downloaded from Svantek instruments,
- location, user and task information assigned to the downloaded files,
- sessions created in Supervisor, as well as their templates.

Multiple databases can be stored on a PC in different locations, but only one can be used in Supervisor at a time. The possibility of exporting and importing whole databases enables one to easily create backup copies of measurement results and reports, as well as to exchange data between different PCs.

Note: In order to understand and properly use the tools described in this section, two forms in which Supervisor's databases are stored need to be distinguished.
- The database that is accessed by the Supervisor application every time you use it is stored in some location in the PC's memory in the form of various folders and files, corresponding to the measurement results, sessions, *etc.* that you create and process using Supervisor. The location of this database can be managed using methods described further in this section. There can also be several such databases stored on the same PC and you can switch between them while working with Supervisor. The folders corresponding to these databases should not be deleted, moved or renamed manually using Windows Explorer.
- Databases created using the Export tool and loaded to Supervisor using the Import tool are stored in the form of .SVP files (a single .SVP file corresponds to a single database). You can move these files freely, *e.g.* in order to exchange data between different PCs. Note that when you import a database from a .SVP file, the .SVP file remains unchanged, while all the files that co-create the current database are deleted and replaced with the contents of the new, imported database.

Managing the database location

The location of the current database in the PC's memory can be managed using the Database location dialog box, opened using the *Database location...* command available in the main menu.

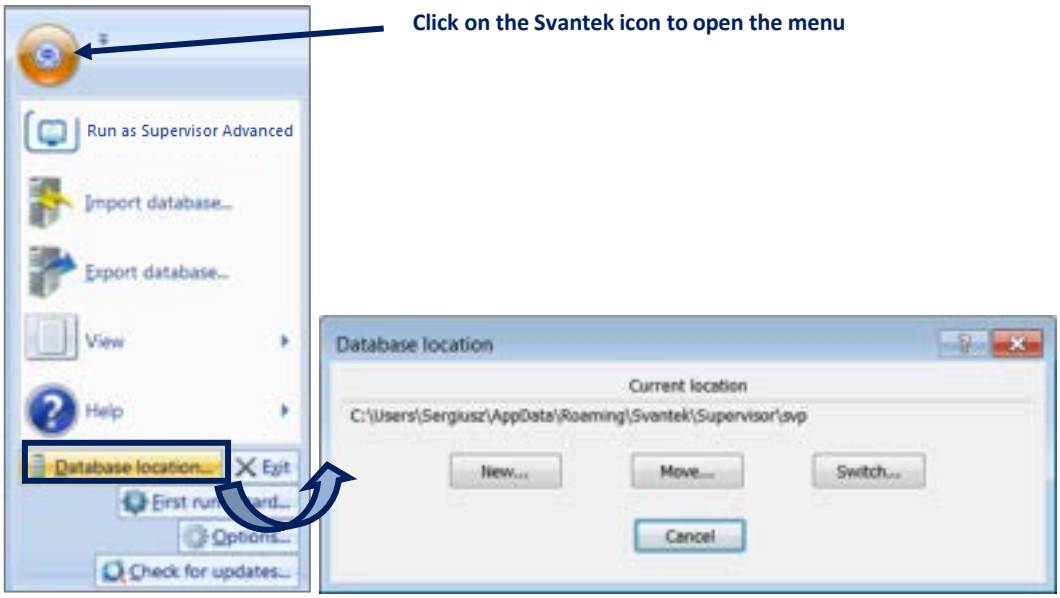


Fig. 6-1. Managing location of the currently used database in the PC's memory

There are three modes in which the database location can be changed:

– *New...* – creates a new, empty database in the specified location and sets it as the current database. The previous database remains unchanged.
  Note: The files that are present in the selected location at the moment of creating a new database are not deleted. A unique catalogue is created for the new database.
– *Move...* – moves the whole current database to the specified location. The data currently used in Supervisor remain the same. The previous location of the database becomes cleared.
– *Switch...* – sets an existing database, stored in the PC's memory, as the current database. The previous database and its location remain unchanged.

When you press one of the buttons corresponding to different modes of managing the database location, a dialog box will appear allowing you to select a new location.

Importing / exporting the database

To import the database, use the *Import database...* command, available in the main menu (Fig. 6-2).

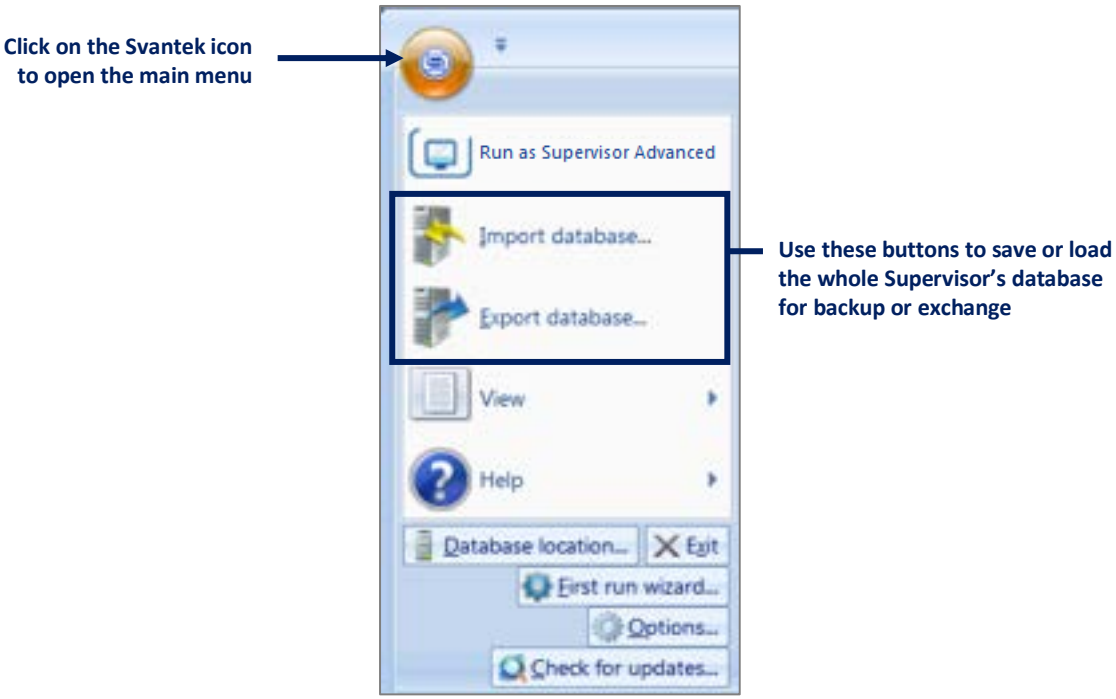


Fig. 6-2. Buttons for importing / exporting the Supervisor's database

When importing a Supervisor database from an external SVP file, you have two options:

- *Replace whole database with new one*, which means deleting all the contents of the previous database prior to importing the new one.
  Note: In this case, if you import an earlier copy of your database, any newly downloaded files may be deleted.
- *Import measurement files and add them to current database*, which means that the previous database will stay unchanged, and the imported data will be placed in a separate folder, called "Imported".

Fig. 6-3. Selecting an import option

When you choose one of these options, a dialog box will appear, allowing for the selection of the SVP file to be imported.

To export the database, use the *Export database...* command. You can export the whole database, or you can use the Wizard to select elements of the current database (*i.e.* particular files, folders and/or sessions) to be exported.

Fig. 6-4. Selecting an export option

The folders and files are displayed in the *Folders & files* panel of the *Database export wizard* dialog box in a similar way as in the Library panel of the Data Browser (see Chapter 3.2.1): the Catalogue branch contains all the files and sub-folders as they have been configured after downloading, and the Assigned branch contains a list of files with a specified location, user or task, ordered according to the assigned values. Similarly, the *Sessions* panel contains lists of the currently opened sessions and of the archived sessions.

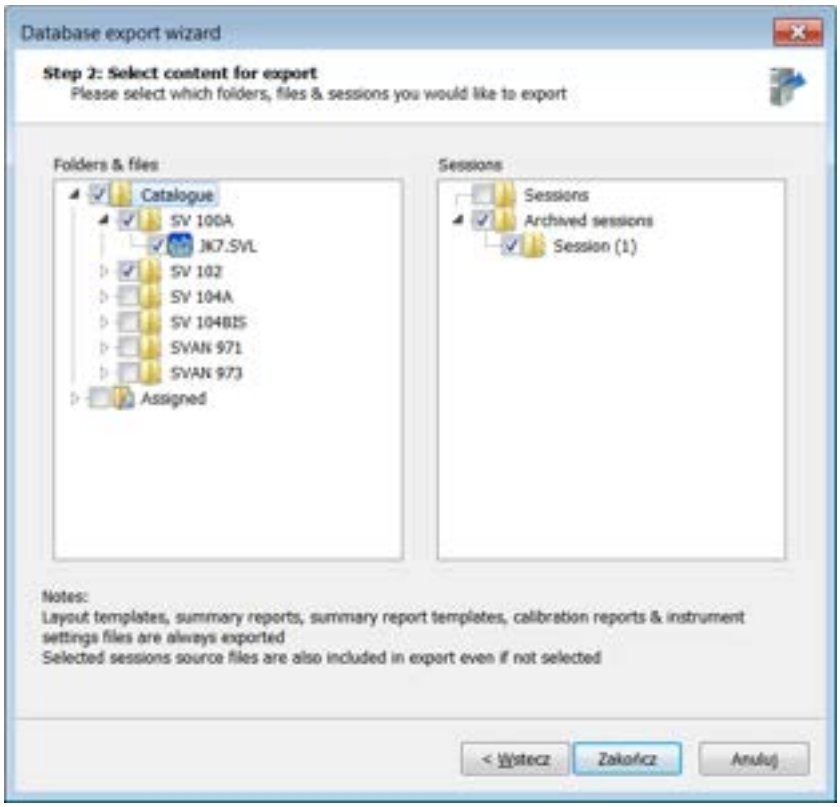


Fig. 6-5. Database export wizard, allowing you to select folders, files and sessions to be exported

To select a folder, file or session for exporting, check the checkbox next to its name. When you select a folder, all of the files and sub-folders contained inside it become automatically selected too. When you finish selecting files, a dialog box will appear allowing for the selection of the location for the exported database.

Note: It is also possible to export selected folders and files using the File manager's Library: after activating the *Export database…* command for a selected folder or file, the *Database export wizard* is opened and configured automatically to match the selection made in the Library (see Chapter 3.2.1 for details).

6.2. AUDIO SIGNALS

Three types of audio signals should be distinguished when working with Supervisor:

Audio events - audio signals, recorded automatically by Svantek instruments during measurement, when some specified conditions are met; they are integrated into the files containing logger measurement results (not stored in separate files).

Audio comments - audio signals, recorded manually by the user, such as voice recordings; they are stored as a special type of Wave files.

Wave files - recorded automatically by Svantek instruments, stored as separate files, but linked to the fragments of logger files.

6.2.1. AUDIO NAVIGATOR

The Audio Navigator is located at the top-right corner of the panels with logger data in the plot mode. It allows for playing audio signals associated with the currently viewed logger data (e.g. recorded during measurement by the SV 104 instrument). The Audio Navigator's interface consists of a set of buttons whose functions are described in Table 6-1.

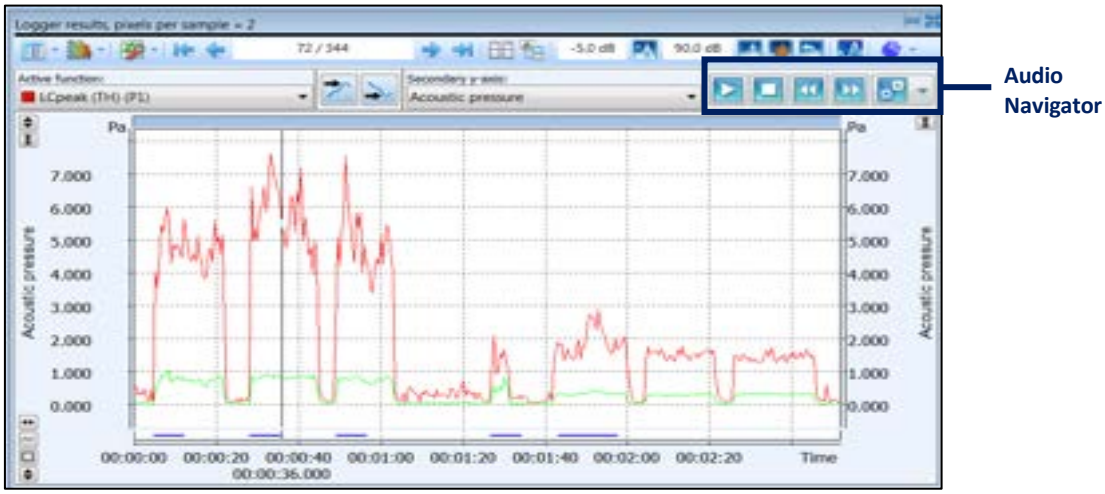


Fig. 6-6. Audio Navigator

Table 6-1 Buttons of the Audio Navigator.

Button	Function
	Play event / resume playback
	Pause playback
	Stop playback
	Jump to the previous event (press this button and CTRL simultaneously to jump to the first event)
	Jump to the next event (press this button and CTRL simultaneously to jump to the last event)
	Show options (described below)

Several options are available for the Audio Navigator after pressing the *Show options* button:

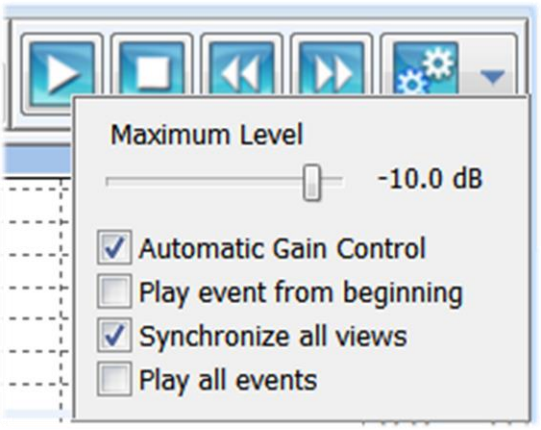


Fig. 6-7. Show options menu in case of audio events

- The *Maximum Level* slider allows for setting the audio signal boost level. 0 dB leaves the signal at its original level.
- The *Automatic Gain Control* tool serves to automatically adjust the signal boost. With this option enabled, fragments of audio data will be constantly analysed in order to maximize the signal dynamics, given the *Maximum Level* slide bar is left at 0 dB. The length of analysed fragments can be specified in *Main Options* » *Audio Playback* » *Buffer Length*. The minimum value of the *Maximum Level* parameter depends on signal bit depth, *e.g.* -144 dB for 24 bit, -96 dB for 16 bit. Differences below 12 dB between subsequent fragments of audio data will not affect the boost level. The algorithm is designed to reduce the boost level faster than when increasing it, so that sudden loudness is avoided.

– The *Play event from beginning* option (available only in case of audio events) alters the behaviour of the *Play* button, automatically moving the Main cursor to the beginning of current event before starting playback.
– The *Synchronize all views* option allows for simultaneous movement of the data selection tools in all panels which contain the audio record (comprising the Main cursor in case of the Plot mode and the selection bar in case of the Table mode).
– If the *Play all events* option (available only in case of audio events) is enabled, after reaching the end of an event, playback will automatically continue from the beginning of the next event. Otherwise it will stop.
– The *Mix to mono* option (available only in case of Wave files) allows for mixing the signal from all channels to be played equally in all output channels.
  Note: In case of multi-channel audio events, all the channels are always played simultaneously.
– The *Loop playback* option (available only in case of Wave files) causes the Wave file to be played from the beginning again when the end of file is reached.

Note: A minimized version of the Audio Navigator is also shown in the Preview panel in case a .WAV file is selected in the File Details list (see Chapter 3.2.3).

6.2.2. EXPORTING AUDIO EVENTS

You can export the audio events, which are originally integrated with logger files, to external .WAV files. In order to export an audio event, recorded automatically by a Svantek instrument, find its corresponding Audio marker on a plot-mode panel, right-click on it and select the *Export event(s)* command from the pop-down menu.

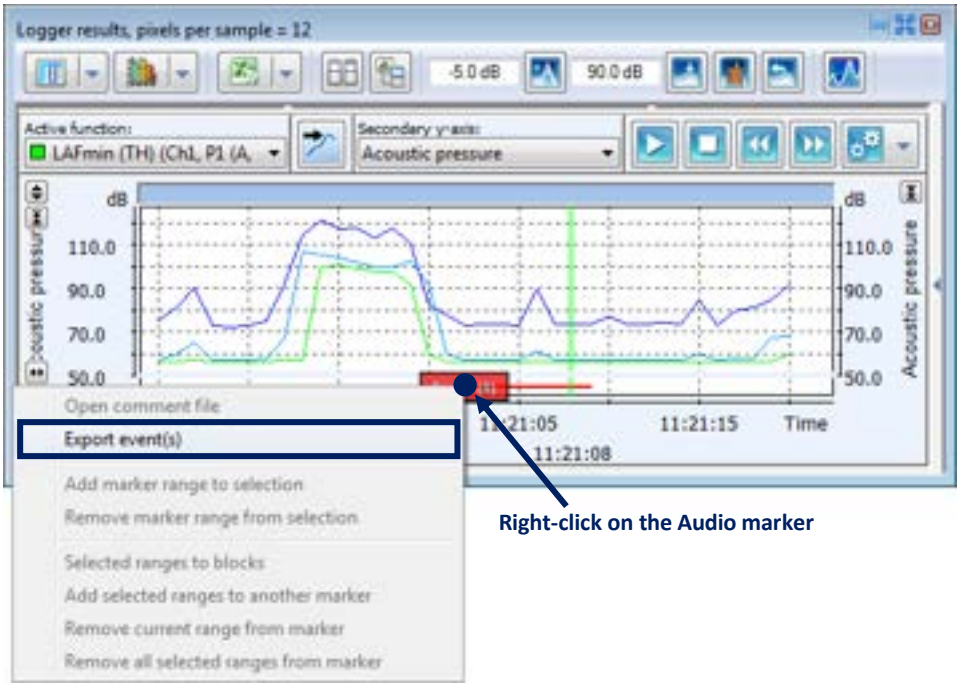


Fig. 6-8. Exporting audio events

In the *Export Events* window, you can select the events you wish to export using the check-boxes in the *Export* column, or the *Select all* and *Select none* buttons. It is also possible to select events according to their length. To do so, specify minimum and/or maximum length and press the *Select by length* button.

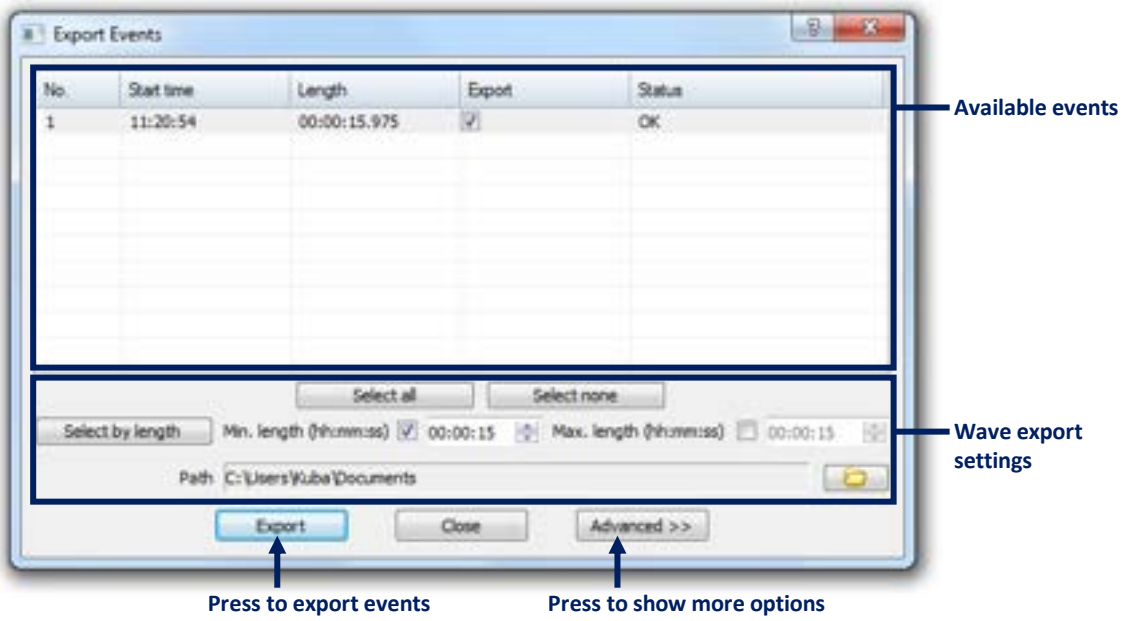


Fig. 6-9. *Export Events* window

If you want to configure more detailed export settings, press the *Advanced >>* button.

Fig. 6-10. Advanced options in the *Export Events* window

Available options include:

Path – select target directory
Filename prefix – set text to start the filename with
Naming convention – select between appending number of the event or start time to the filename
Output Files Format – currently only WAV file format is available
Settings – displays exported WAV file parameters
Gain control – select whether to use no signal boost, constant level signal boost or 'Automatic gain control' smart signal boosting mechanism (see Chapter 6.2.1 for more details)
Play – playback of the last selected audio event
Export – export selected audio events using given settings

6.2.3. PLAYING AUDIO COMMENTS

In case there are audio comments attached to a logger file, the *Notes* column of the File Details table (see Chapter 3.2.2) will contain the ▶ button in the row corresponding to that logger file. Pressing this button will open a menu, containing a list of all comments attached to the selected logger file. Selecting one of the comments will start its playback.

Note: In order to see the Notes column and enable playback of audio comments, you have to check the appropriate option in the File Details table's context.

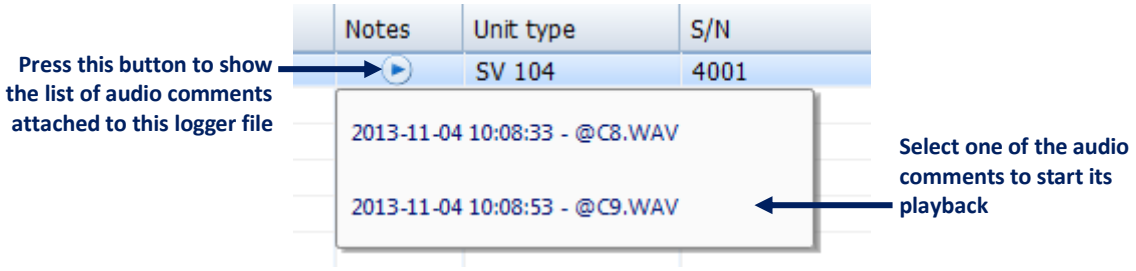


Fig. 6-11. Playback of the audio comments

Some options related to the audio comments are also available in the Notes dialog box, which can be opened using the Notes command in the context menu, available after right-clicking on a file in the File details panel.

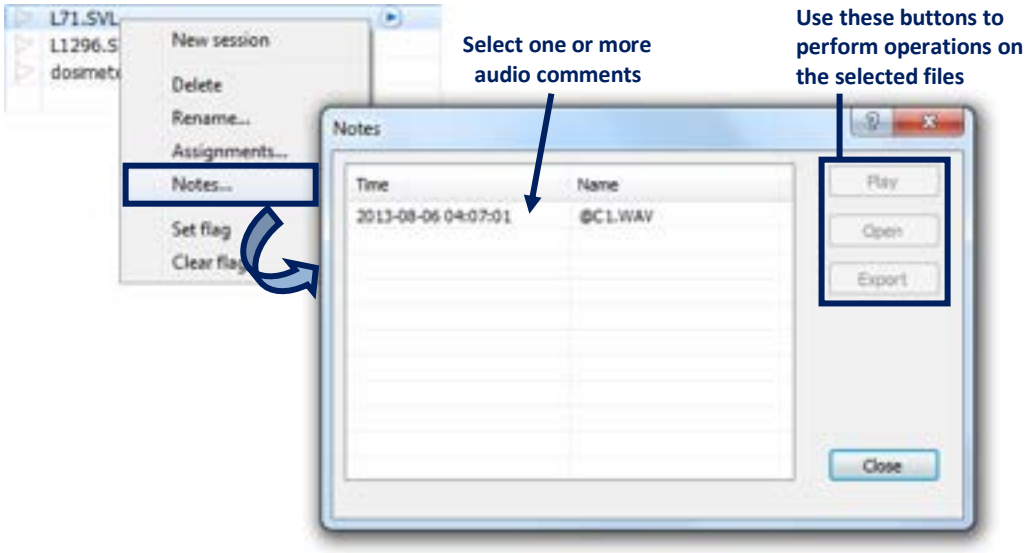


Fig. 6-12. *Notes* dialog box

The *Notes* dialog box contains a list of all audio comments attached to the selected file. You can select one or more of them in order to perform one of the following operations, using the buttons located at the right-hand side of the window:

– *Play* / *Stop* – starts / stops the audio playback of the audio comment.
– *Open* – opens the audio comment file in your default application for audio files.
– *Export* – allows for storing the audio comment file in a selected location in the PC's memory.

You can adjust the audio playback settings, such as the device used for playback and the length of the buffer, in the *Playback* panel of the Main Options dialog box.

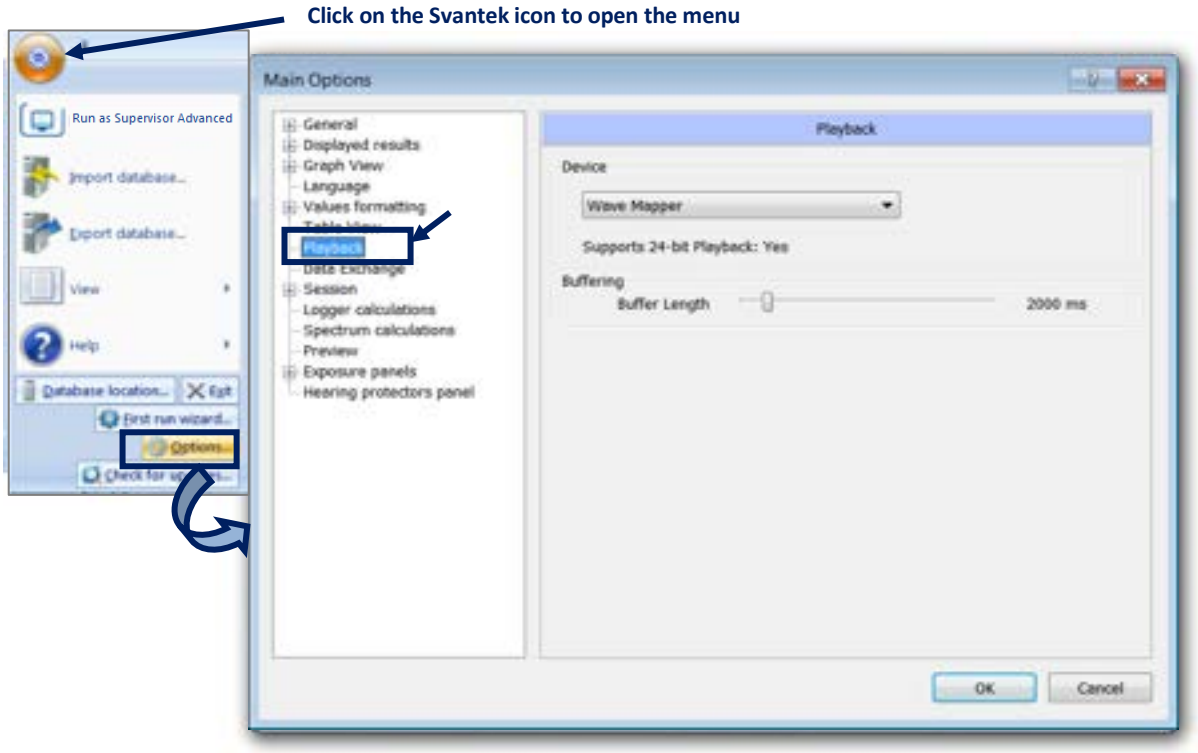


Fig. 6-13. Adjusting the playback options

6.2.4. DOWNLOADING AUDIO COMMENTS

Some Svantek measuring instruments (SVAN 971, SV 971A, SV 973 and SV 104) support attaching audio comments, in the form of .WAV files, to logger measurement files. Such audio files are, by default, not shown in the files list of the Download panel (see Chapter 3.1). Furthermore, they are also (by default) downloaded automatically when the logger file to which they are attached is downloaded. However, you can modify these settings in order to treat the audio comments files in the same way as all the other types of files downloaded from connected Svantek instruments. To do so, go to the Data Exchange settings in the Main Options and use the following checkboxes:

– *Download associated audio comments after downloading logger(s)* – if this option is enabled, the audio comments will be downloaded automatically when the logger file to which they are attached is downloaded.
– *Hide audio comments in Download panel* – if this option is enabled, audio comment files will not be displayed in the files list of the Download panel.

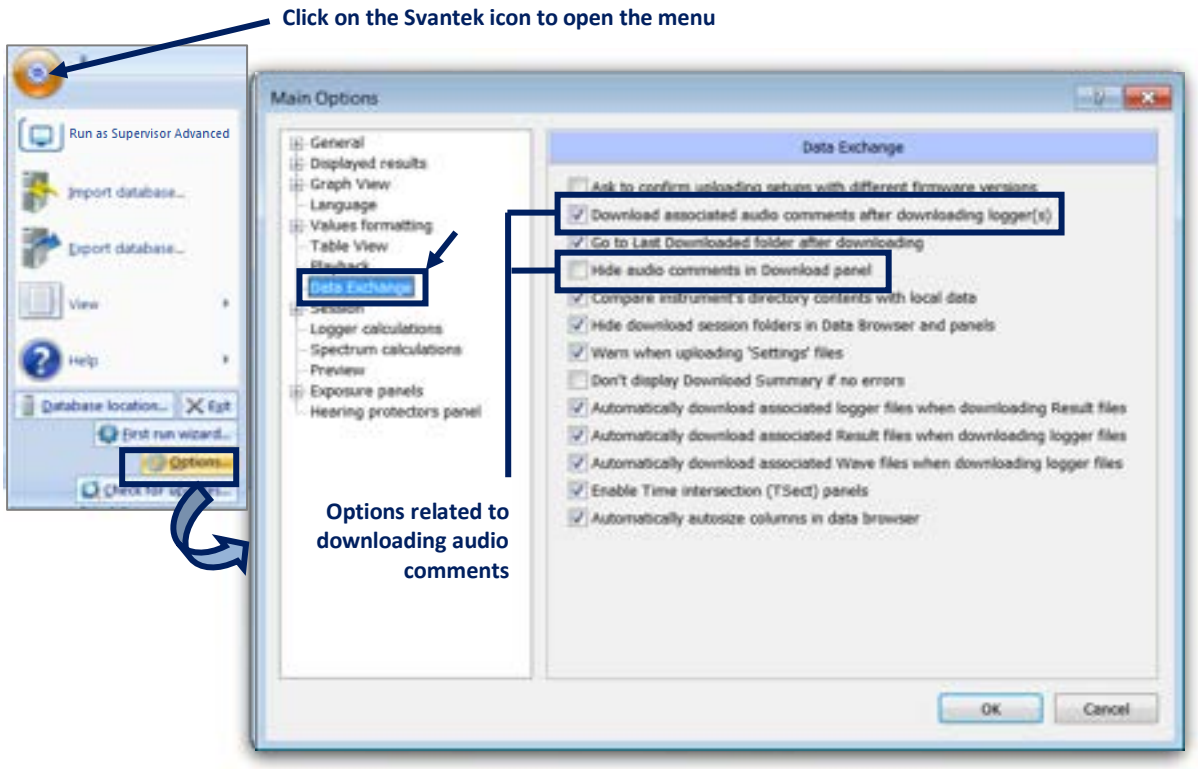


Fig. 6-14. Settings related to the downloading of audio comments in the Main Options

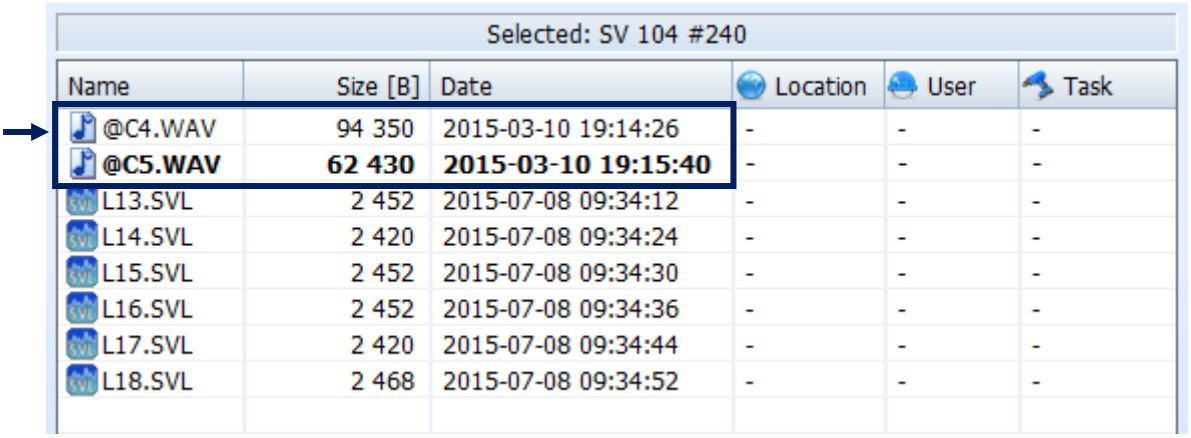


Fig. 6-15. If the *Hide audio comments in Download panel* option is disabled, the audio comments are shown just like other files

6.2.5. DOWNLOADING WAVE FILES

Some Svantek measuring instruments allow for automatically recording audio signals and storing them in the form of separate .WAV files. Such files can be downloaded just as any other types of files using the Download panel; however, each such .WAV file is linked to a logger file, which results in some additional features related to their downloading and viewing.

The .WAV files, unlike audio comments, are not downloaded automatically together with the associated logger files; they are listed in the Download panel (see Chapter 3.1) and have to be downloaded separately.

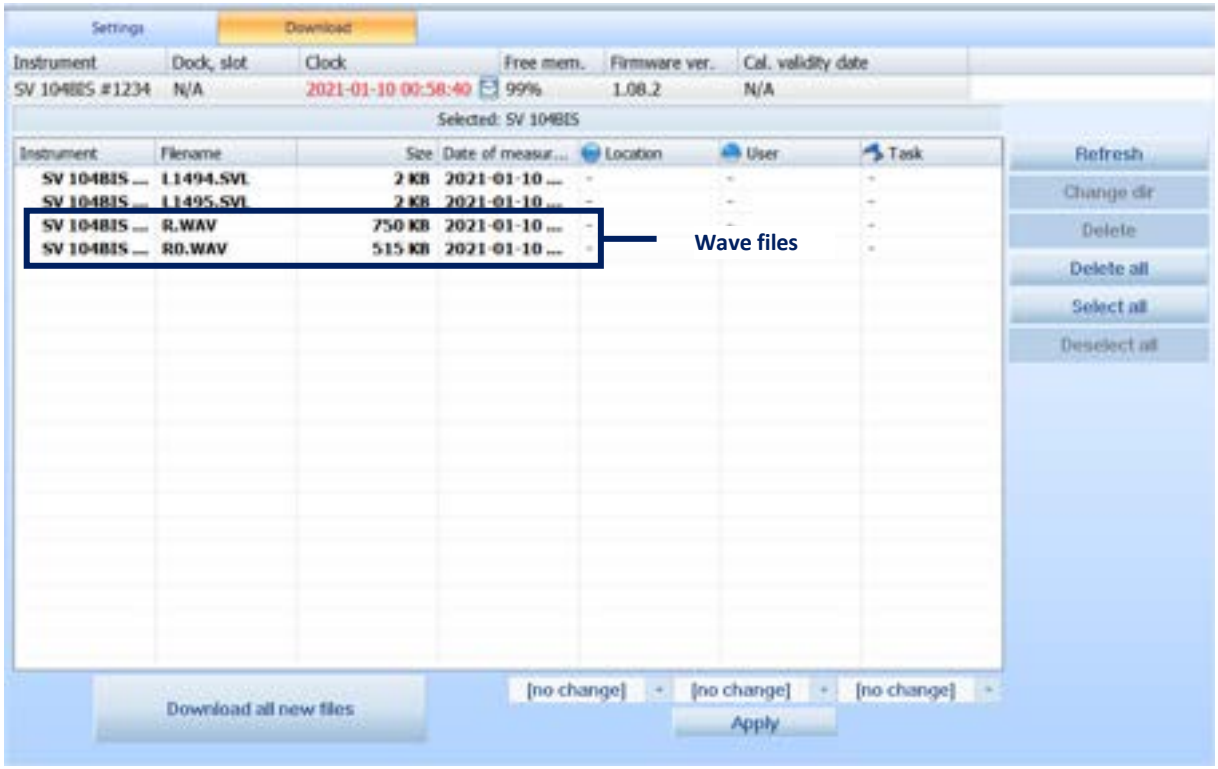


Fig. 6-16. Wave files in the Download panel

Note: A simple way to recognize which logger file is connected to a given .WAV file is to look at the Date column and find a pair of files whose dates are identical.

Instrument	Filename	Size	Date of measuremen...	Locat
SV 104BIS ...	L1494.SVL	2 KB	2021-01-10 00:55:26	2021-0
SV 104BIS ...	R.WAV	750 KB	2021-01-10 00:55:26	2021-0
SV 104BIS ...	L1495.SVL	2 KB	2021-01-10 00:58:02	2021-0
SV 104BIS ...	R0.WAV	515 KB	2021-01-10 00:58:02	2021-0

Fig. 6-17. Wave files associated with the logger files

If the currently viewed logger results have a .WAV file associated with them, a *Wave marker* is created. It denotes the range of the logger linked with the .WAV file. In the Plot mode, you can right-click on the Wave marker and select the *Remove selected wave* command in the pop-down menu in order to delete the .WAV file.

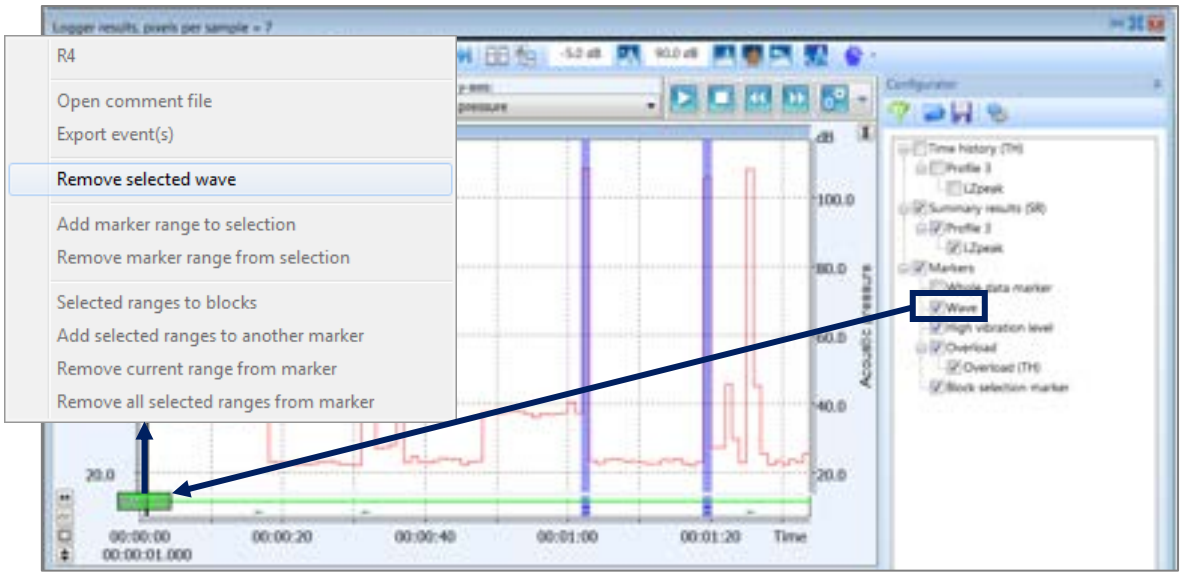


Fig. 6-18. Wave marker

In case a logger file has been downloaded, but some .WAV file associated to it has not, a *Missing wave* marker is created, denoting the range in which the .WAV file should be present. When you click on the *Missing wave* marker with the right mouse button, you can select *Get missing wave files from connected instrument* or *Get missing wave files from local directory* to download the linked .WAV file from a connected instrument or associate one stored on the PC memory.

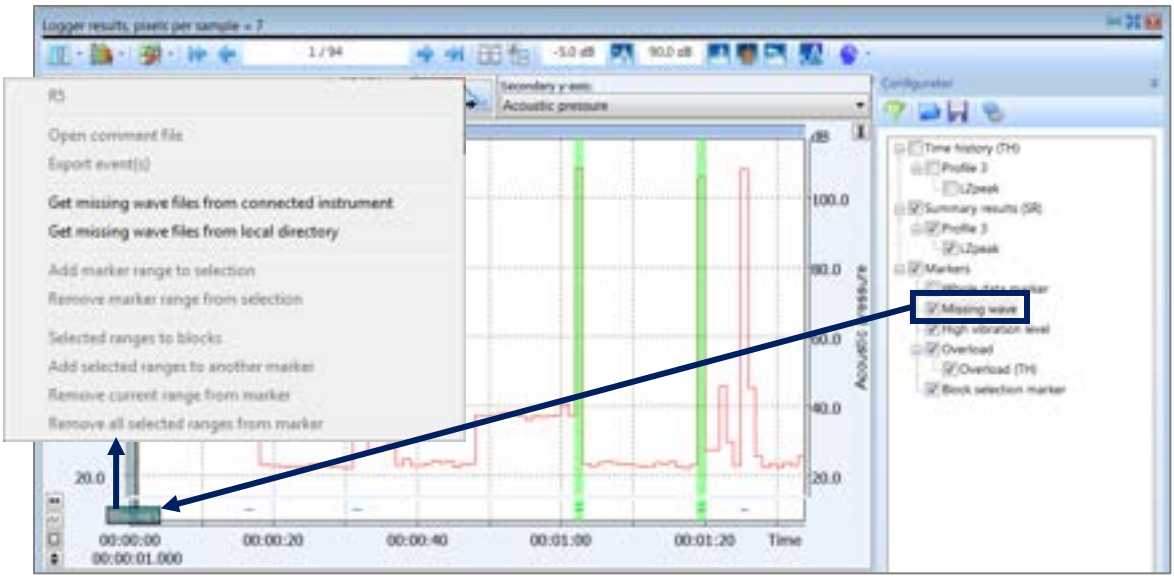


Fig. 6-1. *Missing wave* marker

6.3. LANGUAGES

Supervisor is available in various languages. In order to enable a language different than English, you should acquire an activation key from your local Svantek distributor. Then, the key has to

be entered in the Enter Activation Key dialog box, available via the Help branch of the main menu (Fig. 6-Error! Bookmark not defined.).

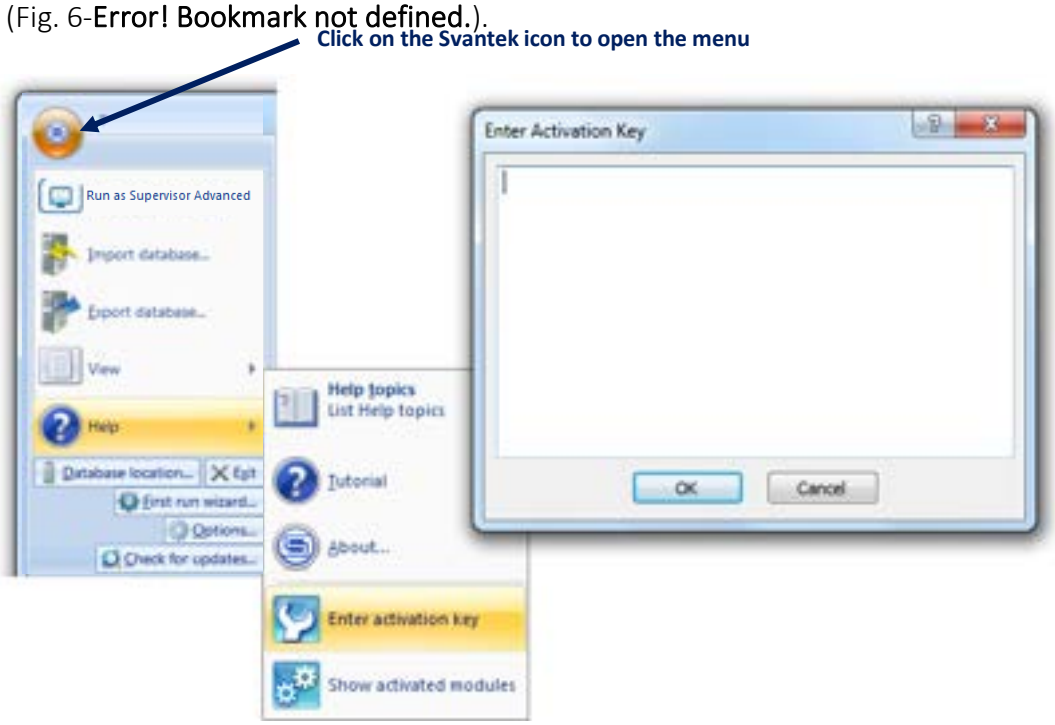


Fig. 6-19. Entering an activation key for a different language version

Once a language is activated, it can be set in the *Language* settings in the Main options dialog box.

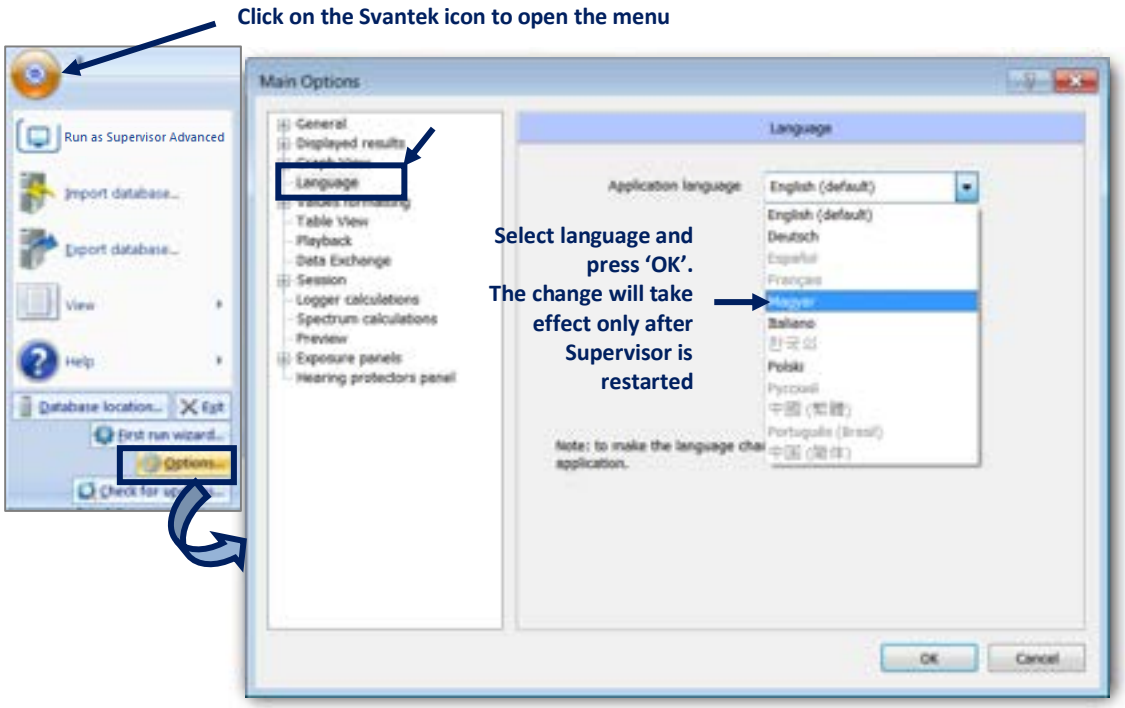


Fig. 6-20. Changing the language in the Main options dialog box

After entering the activation keys, all the activated languages are listed in the Activated Modules window.

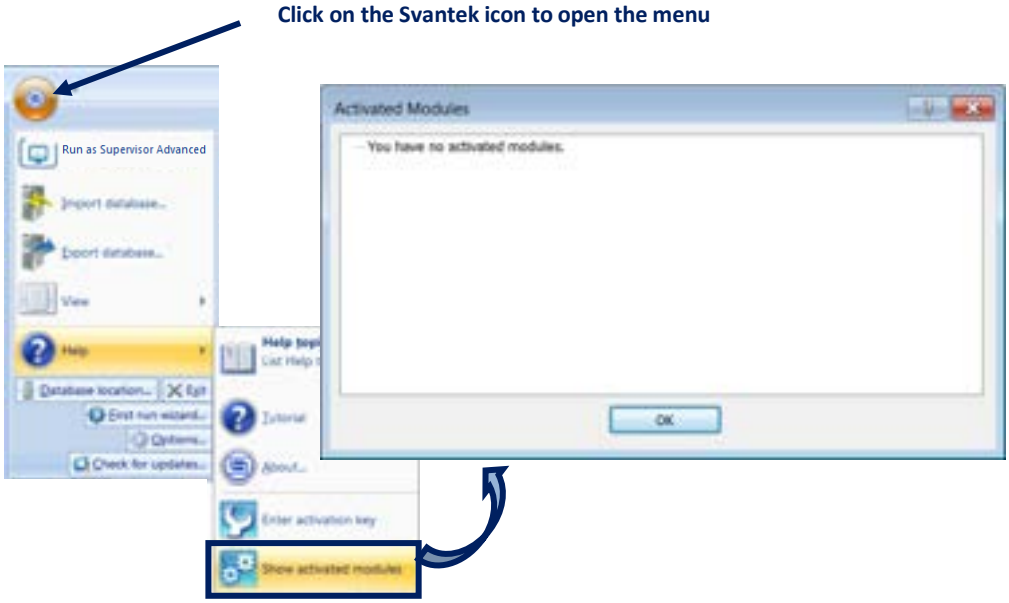


Fig. 6-21. *Activated Modules* window, containing a list of all languages for which activation key has been entered

6.4. STATUS BAR

The Status bar can be displayed at the bottom of the Supervisor application window. It contains some information, such as the currently used version of Supervisor.

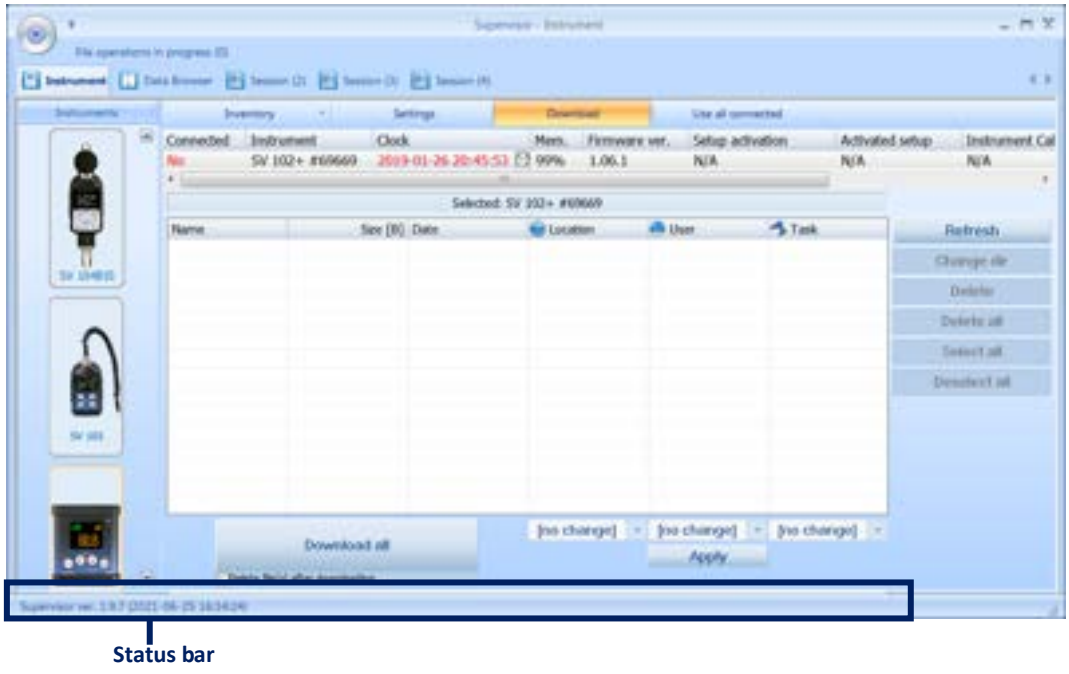


Fig. 6-22. Location of the Status bar in the Supervisor application window

The visibility of the Status bar can be toggled using the main menu, as shown below.

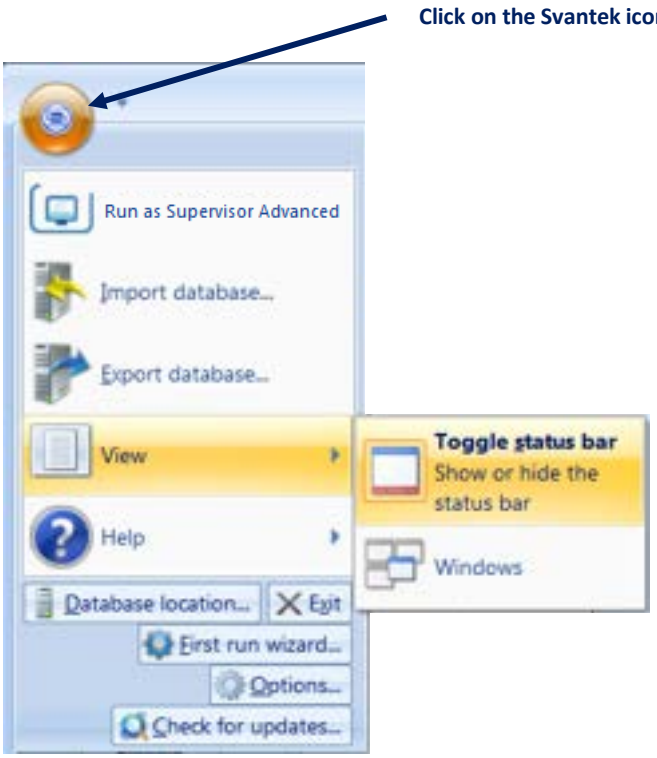


Fig. 6-23. Command in the main menu for toggling the visibility of the status bar

You can also configure the status bar by right-clicking somewhere in its area and selecting the information you want to be displayed.

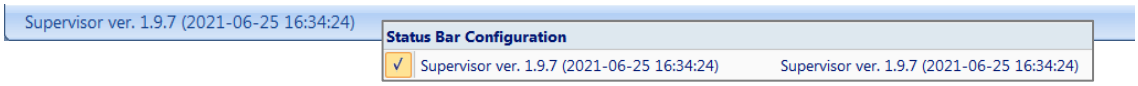


Fig. 6-24. Status bar configuration

6.5. QUICK ACCESS TOOLBAR

The Quick Access Toolbar can be used to make selected buttons from the main menu easily accessible. It can be located above or below the Ribbon (Fig. 6-25). Its location can be chosen using the Customize Quick Access Toolbar menu (Fig. 6-26).

a) Above the Ribbon b) Below the Ribbon

Fig. 6-25. Two possible locations of the Quick Access Toolbar

By default, the Quick Access Toolbar is empty. You can fill it with buttons using the *More commands...* button in the Customize Quick Access Toolbar menu (Fig. 6-Error! Bookmark not defined.). When you press this button, the *Customize* dialog box will appear.

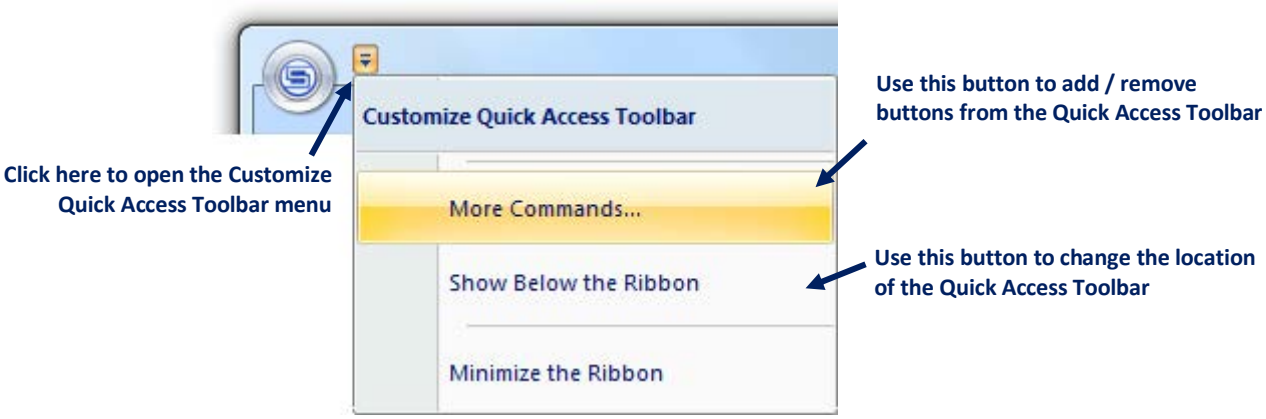


Fig. 6-26. Customize Quick Access Toolbar menu

The Commands panel at the left side of the Customize dialog box contains a list of all commands available to include in the Quick Access Toolbar. To add a command, select it and press the *Add >>* button. The panel at the right side of the dialog box contains a list of commands currently contained in the Quick Access Toolbar. You can also configure the order of the commands in the Quick Access Toolbar using the arrow buttons.

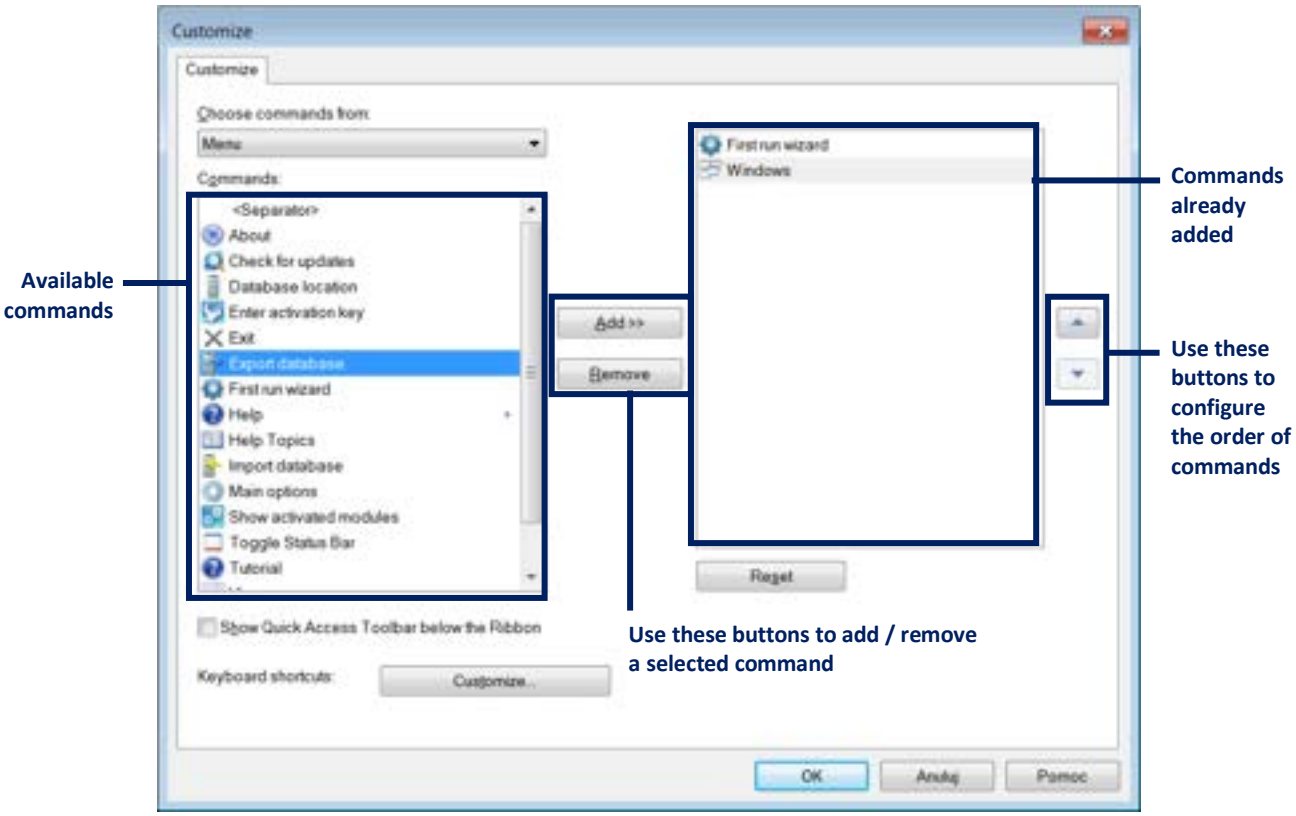


Fig. 6-27. Dialog box for customizing the Quick Access Toolbar