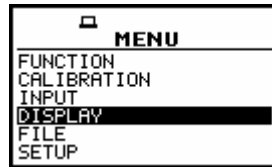


## 7 DATA AVAILABLE ON THE DISPLAY - DISPLAY

In order to open the **DISPLAY** list the user has to:

- press the **Menu**,
- select from the main list, using the <<>, <>> push-buttons, the **DISPLAY** text,
- press the <ENTER> push-button.



Main list with **DISPLAY** text highlighted

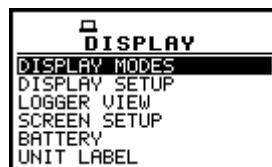
The **DISPLAY** list is used for setting the various parameters, which are dedicated mainly for the control of the display. The following items are present on this list:

- |                      |   |
|----------------------|---|
| <b>DISPLAY MODES</b> | it enables one to select the mode of the measurement results presentation.  |
| <b>DISPLAY SETUP</b> | it enables one to change the scale in the graphical modes of result's presentation and to select the views of the result presentation.                          |
| <b>LOGGER VIEW</b>   | it enables one to select and to present the results stored in the logger's files.   |
| <b>SCREEN SETUP</b>  | it enables one to set the contrast and to switch on/off the display backlight.  |
| <b>BATTERY</b>       | it informs the user about the powering source of the instrument and the current voltage of power supply.  |
| <b>UNIT LABEL</b>    | it informs the user about the serial number of the instrument, the version of the internal software and the standards to which conform the measurement results. |

In each available position any parameter change is performed by means of the <<>, <>> push-buttons, the change of highlighted position on the sub-lists is made by <<> or <>> push-button pressed together with <Shift>. In order to confirm the selection the <ENTER> push-button has to be pressed. After this confirmation, the opened window or list is closed. In order to ignore any changes made in the opened window or list the user has to press the <ESC> push-button.

### 7.1 Selection of the modes of results presentation - DISPLAY MODES

The **DISPLAY MODES** enables one the selection of the currently available modes of displaying the measurement results (**SPECTRUM, 3 PROFILES, STATISTICS, LOGGER, FILE INFO**).



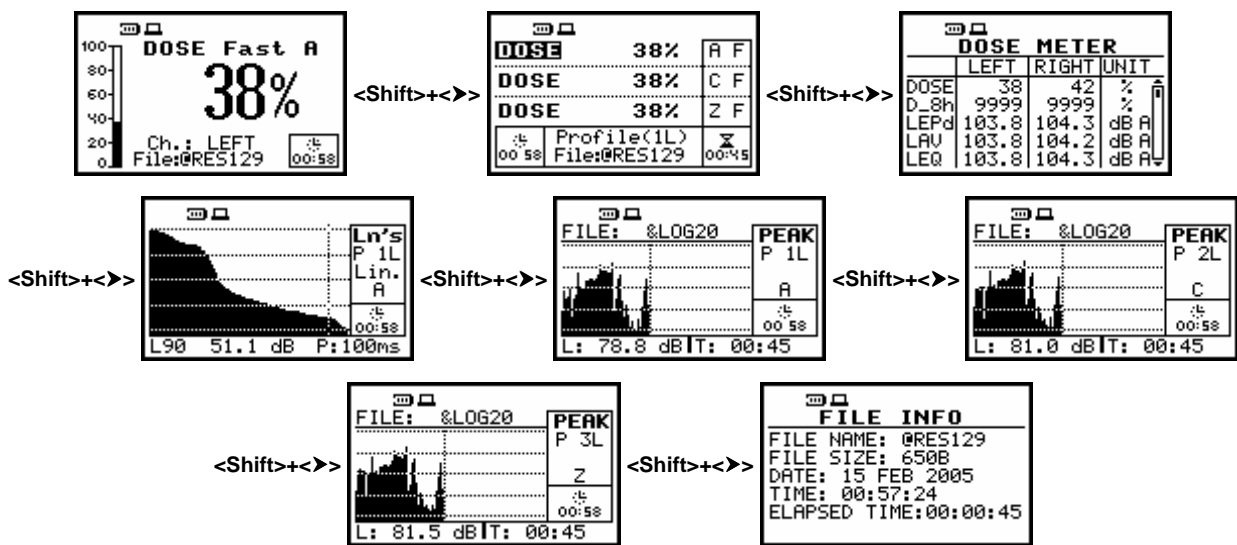
**DISPLAY** window with **DISPLAY MODES** text selected

One-profile mode (main results) and dosimeter results in the table are always available in the instrument and cannot be switched off. In one-profile mode the name of the measurement result (**DOSE, D\_8h, LEPd, LAV, LEQ, PEAK, MAX, E, SEL, E\_8h, SEL8, PSEL, PCTC, PCTP, RMS** – cf. the definitions in App. D) is presented in the first line of the display. Next, either the detector (*path: INPUT / PROFILE x / DETECTOR*) time constant (**Fast, Slow** or **Impulse**) is given for **DOSE, D\_8h, LAV, MAX** results or indicator of linear RMS integration (**Lin.**) (when the **RMS INTEGRATION** is set to linear (*path: SETUP / RMS INTEGRATION: LINEAR*)) – in the case of **LEPd, LEQ, E, SEL, E\_8h,**

**SEL8, PSEL, RMS** results. There is not any indication of the detector in the case of **PEAK, PCTC** and **PCTP** results. The name of the implemented filter (*path: INPUT / PROFILE x / FILTER*) is presented as the last element of the first line (**A, C** or **Z**). The result of the measurement together with its unit is given in the second line. The channel, the results are coming from, is visible in the bottom of the display (**Ch: LEFT** or **Ch: RIGHT**). The line showing the value of the result in the analogue-like form together with the scale is presented at the left side of the display. The real time clock is visible in the bottom right corner of the display. The selection of the result is made by pressing the **<<>**, **>>>** push-buttons. If the measurement results are saved in the internal memory in a file or the **AUTO SAVE** option is switched on, the name of the file is presented under the channel number. The same results as in the one-profile mode are presented in the table after double pressing **<Shift>** and **>>>** push-buttons.

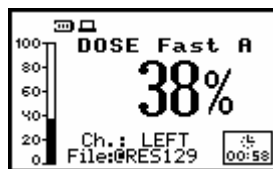
The **PEAK, PCTC, PCTP, RMS** results in one-profile mode are counted with **C** weighting filter. In the 3-profiles mode (in **DOSE METER**) **Ltm3, Ltm5, Lxx, OVL, TIME, MIN** and **SPL** values are additionally presented.

The switch between available modes is made by pressing **<Shift>** together with **<<>** or **>>>** push-button.



Switching between all available presentation modes in one-channel mode

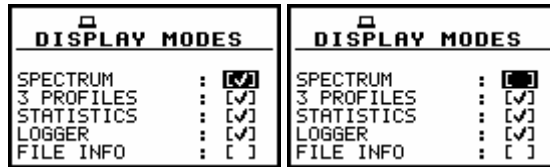
The results can be saved using **AUTO SAVE, SAVE** or **SAVE NEXT** functions after the end of the measurements caused by any reason (remote control, pressed **Stop** or fulfilment of the **INTEGR. PERIOD / REP. CYCLE** condition). It is not possible to save the results during the execution of the measurements. In the case of using **AUTO SAVE** option, the name of the file to be saved is presented in the bottom line of one-profile mode during and after the measurement. In the case of using **SAVE** or **SAVE NEXT** option the name of the file will appear on the display after execution of the saving option.



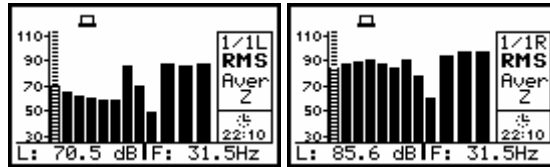
Display after the end of the measurements with the file's name the data are saved-in

### 7.1.1 Switching on/off spectrum view - SPECTRUM

The **SPECTRUM** is accessible only in **1/1 OCTAVE** mode (*path: FUNCTION / MEASUREMENT FUNCTION / DOSE & 1/1 OCTAVE* or *SLM & 1/1 OCTAVE*).

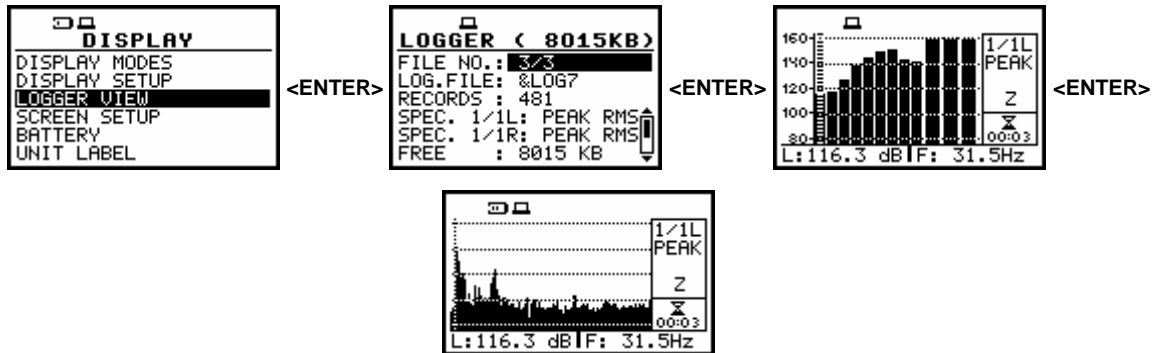


DISPLAY MODES windows with SPECTRUM



Displays in SPECTRUM mode for 1/1 OCTAVE analysis (LEFT (1L) and RIGHT (1R) channel)

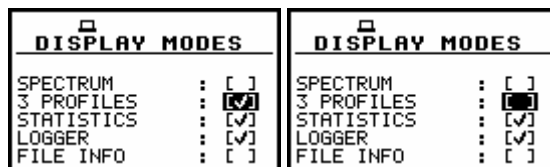
Additionally, after saving measurement results, it is possible to open logger plot for the selected centre frequency when during the measurement the logger was switched on (*path: INPUT / MEASUREMENT SETUP / LOGGER*) and the **LOGGER PEAK** or **LOGGER RMS** (or both) option was selected in the **SPECTRUM** window (*path: INPUT / SPECTRUM*). To view the logger plot the user has to select **LOGGER VIEW** (*path: DISPLAY / LOGGER VIEW*), select the proper file and press **<ENTER>**.



Displays with opening of logger plot for selected 1/1 OCTAVE centre frequency

### 7.1.2 Switching on/off three profiles view - 3 PROFILES

The possibility of the measurement results presentation in **3 PROFILES** can be switched on or off placing or replacing the special character in the highlighted line with the **3 PROFILES** text.



Setting on and off the accessibility of three-profiles presentation mode

The exemplary measurement results presented in **3 PROFILES** mode (the results from three profiles are on the display) are given below. In the case of **3 PROFILES** in three consecutive lines the following data are seen: the name of the function, the result together with the units, the filters and detector time constants in each profile. The current real time, the profile and channel from which the result is coming from and the name of the file (if the results are saved) are displayed at the bottom. At the right bottom corner, there is another clock, which displays actual time of the recent measurement cycle in the case when the measurements are performed or the time of the last measurement cycle, which has been completed.

<b>DOSE</b>	63%	A F
<b>DOSE</b>	78%	C F
<b>DOSE</b>	93%	Z F
Profile(1L)	File:0RES106	00:59

<b>DOSE</b>	58%	A F
<b>DOSE</b>	89%	C F
<b>DOSE</b>	148%	Z F
Profile(1R)	File:0RES106	01:07

Measurement results in 3 PROFILES mode

The presented result in a selected profile is changed using the <<>, >>> push-buttons.

<b>DOSE</b>	80%	A F
<b>DOSE</b>	91%	C F
<b>DOSE</b>	107%	Z F
Profile(1R)	File:0RES121	01:00

<>>

<b>D_8h</b>	9999%	A F
<b>DOSE</b>	91%	C F
<b>DOSE</b>	107%	Z F
Profile(1R)	File:0RES121	01:00

Results in 3 PROFILES

The change of the selected profile is done by pressing the <ENTER> push-button.

<b>DOSE</b>	63%	A F
<b>DOSE</b>	78%	C F
<b>DOSE</b>	93%	Z F
Profile(1L)	File:0RES106	10:47

<ENTER>

<b>DOSE</b>	63%	A F
<b>DOSE</b>	78%	C F
<b>DOSE</b>	93%	Z F
Profile(2L)	File:0RES106	10:47

<ENTER>

<b>DOSE</b>	63%	A F
<b>DOSE</b>	78%	C F
<b>DOSE</b>	93%	Z F
Profile(3L)	File:0RES106	10:47

Results in 3 PROFILES mode with selection of the profile

The selection of the statistical levels is made in 3-profiles mode by pressing <ESC> push-button (<Shift> and <ENTER>). In the SLM modes the change of statistical levels is also possible in one-profile mode.

<b>L10</b>	85.2dB	A L
<b>D_8h</b>	2884%	C F
<b>D_8h</b>	6761%	Z F
Profile(1L)	File:0RES12	03:53

<Shift> + <ENTER>

<b>L20</b>	82.5dB	A L
<b>D_8h</b>	2884%	C F
<b>D_8h</b>	6761%	Z F
Profile(1L)	File:0RES12	03:53

Results in 3 PROFILES mode with selection of statistical level

### 7.1.3 Setting on/off statistics view - STATISTICS

The possibility of the presentation of the statistical results can be switched on or off placing or replacing the special character in the highlighted line with the **STATISTICS** text.

DISPLAY MODES	
SPECTRUM	: [ ]
3 PROFILES	: [✓]
STATISTICS	: [✓]
LOGGER	: [✓]
FILE INFO	: [ ]

a)

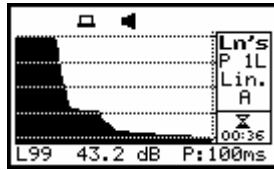
DISPLAY MODES	
SPECTRUM	: [ ]
3 PROFILES	: [✓]
STATISTICS	: [ ]
LOGGER	: [✓]
FILE INFO	: [ ]

b)

Setting on (a) and off (b) the accessibility of statistics presentation mode

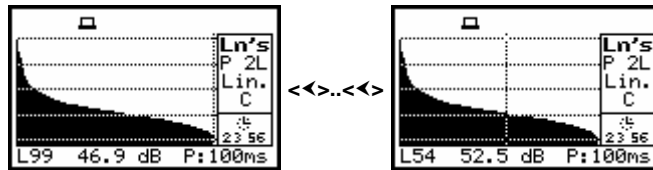
The display with the statistical analysis results presents in the graphical form the values from **L01** to **L99**. The **Lxx** level selected by the cursor is displayed in the bottom line together with its value and units (dB). The P value indicating that the statistical results are updated every 100 ms is placed at the end of the bottom line. The profile's number and the channel the statistics are taken from, the RMS

detector (**Lin.** or Exp.: **Fast**, **Slow** or **Imp.**), the filter's name (**A**, **C** or **Z**) and real time are displayed on the right side of the view in the presentation modes. The selection of the profile is made by pressing the **<Shift>** and **<>>** or the **<Shift>** and **<<>** push-buttons.



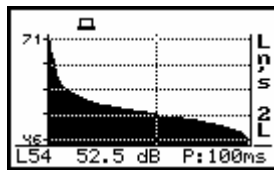
Results presented in the statistics presentation mode

The selection of the **Lxx** to be displayed is done by pressing the **<<>**, **<>>** push-buttons.



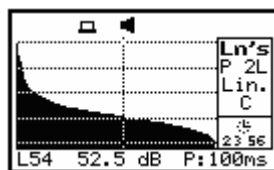
Instrument's Lxx statistical levels presented in graphical form

It is possible to change statistics view into **EXTENDED** (path: **DISPLAY / DISPLAY SETUP / STATISTICS VIEW / EXTENDED**). The second mode differs slightly from the first one described above: the description on the left side is shorter but on the right side the value of the statistical levels are shown.



Statistics presentation mode, **VIEW: EXTENDED**

During the measurements, which are indicated by the loudspeaker icon, the current time from the range [1, **INTEGRATION PERIOD**] is displayed on the right bottom clock in the first mode. The envelope icon indicates that results selected in the profiles (path: **INPUT / PROFILE x**) are logged.



Results presented in statistic presentation mode during the measurements

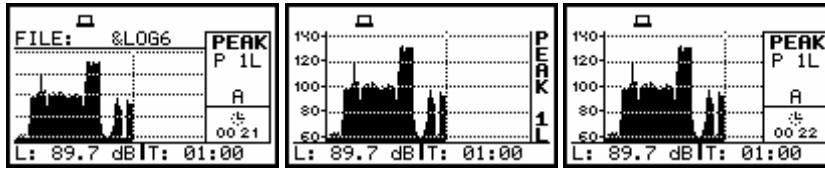
### 7.1.4 Setting on/off logger view - **LOGGER**

The possibility of the presentation of the measurement results, which are saved in the logger, on the instrument's display can be switched on or off placing or replacing the special character in the highlighted line with the **LOGGER** text.

DISPLAY MODES		DISPLAY MODES	
SPECTRUM	: [ ]	SPECTRUM	: [ ]
3 PROFILES	: [✓]	3 PROFILES	: [✓]
STATISTICS	: [✓]	STATISTICS	: [✓]
LOGGER	: [✓]	LOGGER	: [LOGGER]
FILE INFO	: [ ]	FILE INFO	: [ ]

Setting on and off the possibility of presentation the results saved in the logger

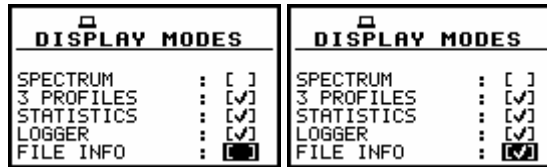
The results saved in the logger can be presented in three different modes, which differ slightly each other. These modes can be set in the **VIEW** (path: *DISPLAY / DISPLAY SETUP / LOGGER VIEW / VIEW*).



Different presentation modes of the results stored in logger (extended, full, normal)

### 7.1.5 Setting on/off the view of the file description - FILE INFO

The possibility of the additional file description presented on the instrument's display can be switched on or off placing or replacing the special character in the highlighted line with the **FILE INFO** text.



Setting on and off the logger's file description presentation mode

In the **FILE INFO** window, the following parameters are presented: the file name, its size, date and time of the registration of the main results (cf. App. B) and time (*ELAPSED TIME*) during which the main results saved in the logger were measured. The value presented there belongs to the range [1, **INTEGRATION PERIOD**] and depends on the moment and the way the measurements were stopped.



Exemplary contents of FILE INFO window

## 7.2 Setting parameters of graphical presentation modes - DISPLAY SETUP

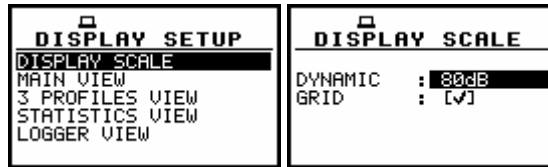
The **DISPLAY SETUP** enables the user to change the scale in the available modes of graphical presentation of the measurement results and set the parameters of the logger's files presentation.



DISPLAY window with DISPLAY SETUP selected

### 7.2.1 Setting the scale of presentation and display's grid - DISPLAY SCALE

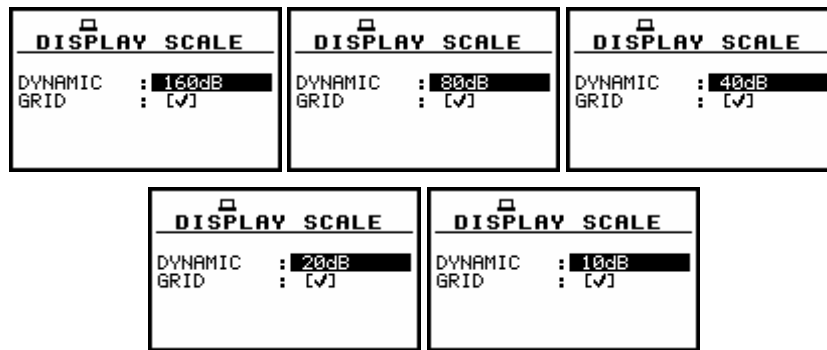
The **DISPLAY SCALE** enables the user to change the scale in the available modes of graphical presentation of the measurement results and switch on/off the grid.



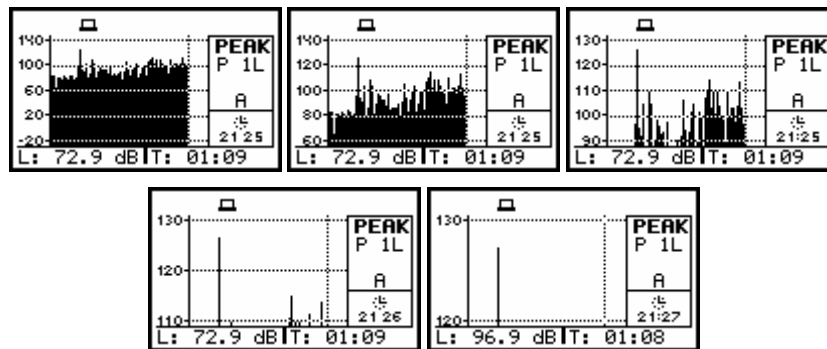
DISPLAY SETUP window in SLM and 1/1 OCTAVE and DISPLAY SCALE one

7.2.1.1 Scaling the vertical axis of graphical mode presentation - DYNAMIC

The **DYNAMIC** enables the user to select the proper scaling of the graphical mode presentation. In the case of the vertical axis one can obtain the double, four times, eight times and sixteen times expansion using the <<>, >>> push-buttons and pressing the <ENTER> for the confirmation.



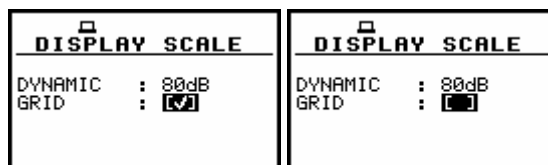
DISPLAY SCALE windows with the possible values of DYNAMIC parameter



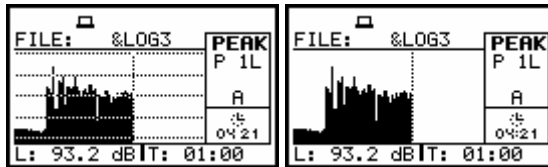
Results stored in logger presented with different DYNAMIC (160 dB, 80 dB, 40 dB, 20 dB, 10 dB)

7.2.1.2 Switching on/off the grid in graphical presentation - GRID

The **GRID** enables the user to switch on or off the grid in any graphical presentation placing or replacing the special character in the highlighted line with the **GRID** text.



DISPLAY SCALE windows with the grid switched on and off



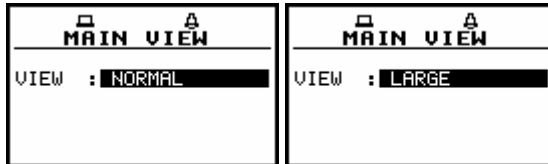
Displays with the grid switched on and off

### 7.2.2 Setting main results view - MAIN VIEW

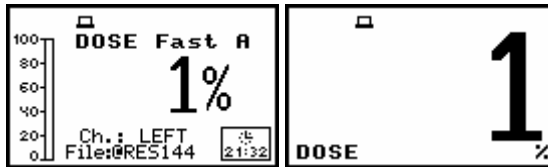
In the **MAIN VIEW** it is possible to select **NORMAL** or **LARGE** view of the main results in the one profile mode.



DISPLAY SETUP window, the MAIN VIEW text selected



MAIN VIEW window, VIEW selection



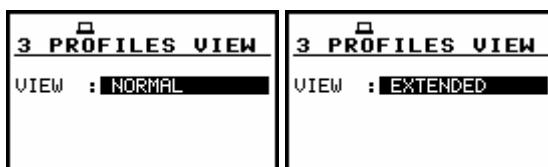
MAIN VIEW, NORMAL and LARGE VIEW

### 7.2.3 Setting 3 profiles view - 3 PROFILES VIEW

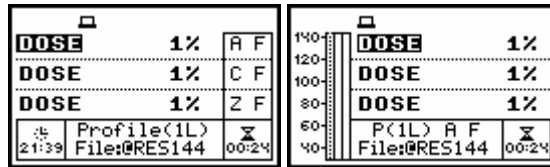
In the **3 PROFILES VIEW** the user can select **NORMAL** or **EXTENDED** view of 3-profiles presentation mode.



DISPLAY SETUP window with 3 PROFILES VIEW text selected



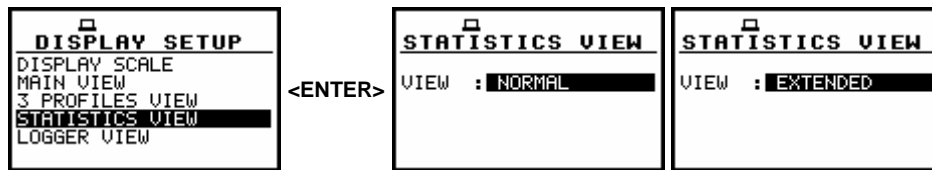
3 PROFLES VIEW windows, VIEW selection



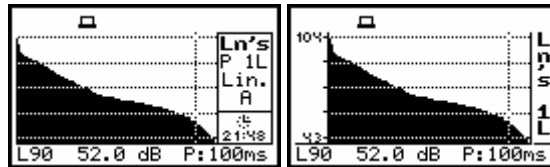
3 PROFILES presentation mode, NORMAL VIEW and EXTENDED VIEW

### 7.2.4 Setting the view of statistics presentation mode - STATISTICS VIEW

In the **STATISTICS VIEW** the user can select **NORMAL** or **EXTENDED** view of statistics presentation mode.



DISPLAY SETUP window with STATISTICS VIEW selected and STATISTICS VIEW windows



STATISTICS presentation mode, NORMAL VIEW and EXTENDED VIEW

### 7.2.5 Setting the parameters of logger files presentation - SPECTRUM VIEW

The **SPECTRUM VIEW** appears on the **DISPLAY SETUP** list in the case of **DOSE&1/1 OCTAVE** or **SLM&1/1 OCTAVE** analysis modes and enables the user to change **TYPE** parameter as well as to activate the presentation on the display the **MAX** and **MIN** spectrum.

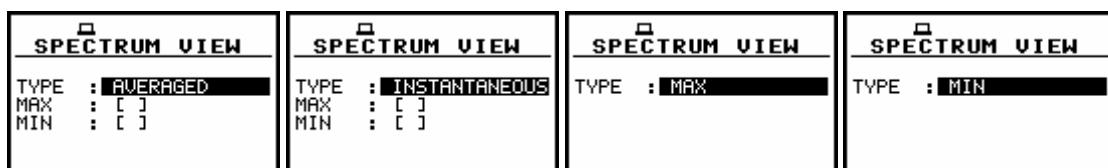


DISPLAY SETUP window with SPECTRUM VIEW text highlighted

#### 7.2.5.1 Selection of spectrum type for the presentation - TYPE

In the **TYPE**, the **AVERAGED**, **INSTANTANEOUS**, **MAX** and **MIN** options are available.

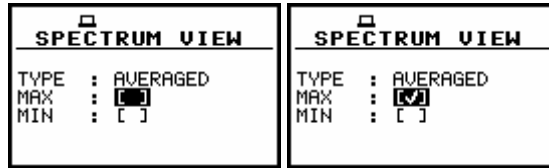
Each text corresponds to the different spectrum type to be presented on the display in the graphical presentation modes.



SPECTRUM VIEW windows with TYPE selection

### 7.2.5.2 Selection of MAX spectrum for the presentation - MAX

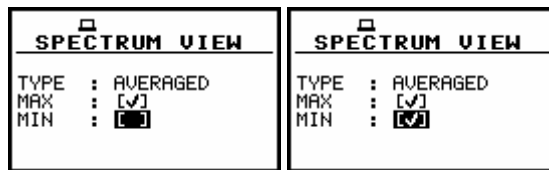
In the **MAX**, the corresponding spectrum can be selected to the presentation on the display in the graphical modes.



SPECTRUM VIEW windows with MAX spectrum selection

### 7.2.5.3 Selection of MIN spectrum for the presentation - MIN

In the **MIN**, the corresponding spectrum can be selected to the presentation on the display in the graphical modes.



SPECTRUM VIEW windows with MIN spectrum selection

### 7.2.6 Setting the parameters of logger files presentation - LOGGER VIEW

The **LOGGER VIEW** enables the user to change the shape of the graphical presentation and a **TIME** parameter.



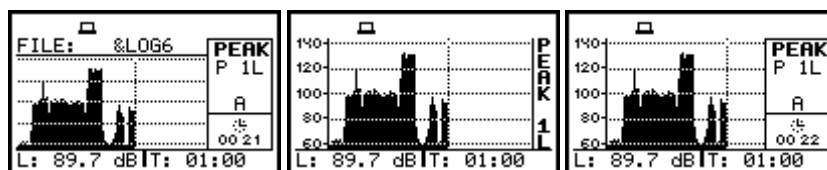
DISPLAY SETUP windows with **LOGGER VIEW** text highlighted

#### 7.2.6.1 Selecting the shape of graphical presentation - VIEW

The **VIEW** enables the user to select the shape of the graphical mode presentation. Three different views are available which are called as **NORMAL**, **FULL** and **EXTENDED**.

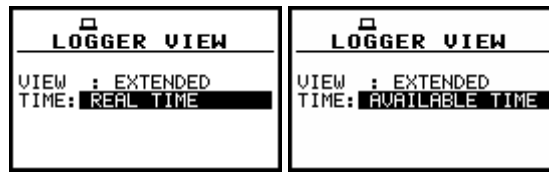


LOGGER VIEW windows with available values of **VIEW** parameter



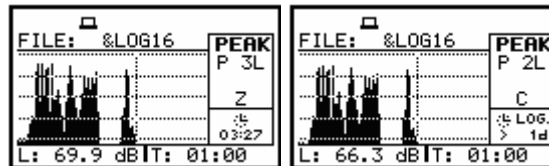
Presentation of displays with different **VIEW** parameter; **EXTENDED**, **FULL** and **NORMAL**

### 7.2.6.2 Setting time to be presented - TIME



Displays with the possible values of TIME parameter

The **TIME** enables the user to select the time to be presented with the logger's file results. The **REAL TIME** selection means that on the display the real time is visible, while **AVAILABLE TIME** means that time after which the logger's memory will be filled up by the current measurement result is given there.



Possible values of TIME parameter, REAL TIME and AVAILABLE TIME (more than 1 day)

## 7.3 Selection of logger's file to display presentation - LOGGER VIEW

The **LOGGER VIEW** enables the user to examine the contents of the logger files.



DISPLAY window with **LOGGER VIEW** text highlighted

In the first line, the available still logger's memory is displayed followed by:

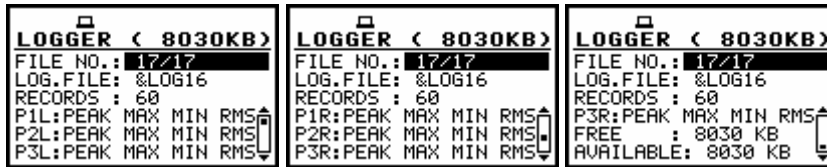
- The selected number of the logger's file and the number of all saved files (**FILE NO.**).
- The name of the logger's file (**LOG.FILE**).
- The number of the records in the file, which name is displayed in the previous line (**RECORDS**).
- The results saved (if any are present) in the logger from the first profile of left channel (**P1L**), from the second profile of left channel (**P2L**), from the third profile of left channel (**P3L**), from the first profile of right channel (**P1R**), from the second profile of right channel (**P2R**), from the third profile of right channel (**P3R**), in the case of **DOSE&1/1 OCTAVE** mode or **SLM&1/1 OCTAVE** mode also the results saved in the logger (if any are present) of **1/1 OCTAVE** analysis from left channel (**SPEC. 1/1L**) and from right channel (**SPEC. 1/1R**).
- The size of the remaining free memory for logger files (**FREE**).
- The size of the available memory for logger files (**AVAILABLE**).

The change of the number of the logger's file is done by pressing the <<>, <>> push-buttons.



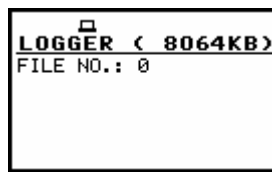
LOGGER VIEW windows with the selection of the file to be seen

The size of the free memory for logger files is equal to the size of the available memory for logger file in the case when the logger files were not deleted from the memory. If it has happened, the **FREE** memory is always smaller than **AVAILABLE**. In order to increase the free memory space and achieve the available, the user has to perform the defragmentation (*path: FILE / DEFRAGMENTATION / LOGGER DEFRAGMENT.*).



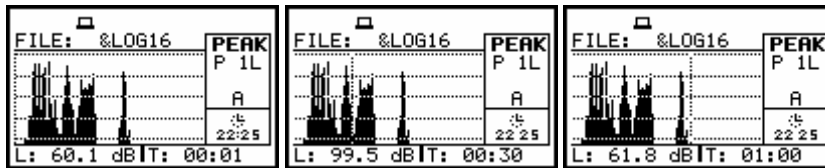
LOGGER VIEW windows with the scrolling of the file to be seen

The display of the instrument after entering the **LOGGER VIEW** looks as on the figure below in the case when the logger's file does not exist (there was not any measurement or the measurements were performed but with the settings **LOGGER: Off** (*path: INPUT / MEASUREMENT SETUP*)).



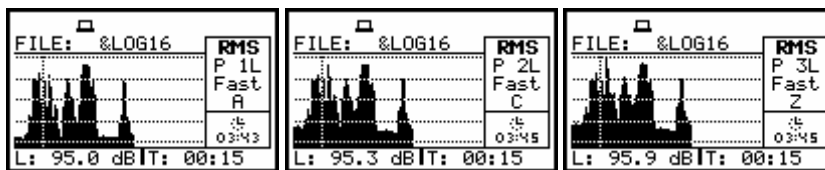
LOGGER VIEW window in the case when the files do not exist

The type of the registered result, the number of the profile the result is coming from, the related time from the beginning of the registration, the value with the units and the indicator of the filter are presented in the **NORMAL** and **EXTENDED** logger's view mode on the right side of the display.



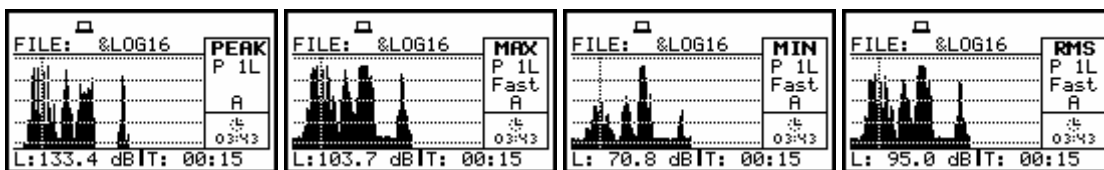
Displays with the selected logger's file; the change of the cursor position

The results from logger's file, coming from different profiles, are changed after pressing the **<Shift>** and **<>>** or **<Shift>** and **<<>** push-buttons – after each pressing the result from the next profile is displayed.



Displays with the selected logger's file; the change of the profile

The results from logger's file, coming from the same profile, are displayed after each pressing of the **<ENTER>** push-buttons.

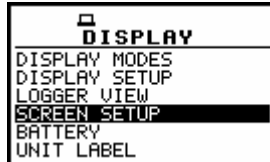


Displays with the selected logger's file; the change of the result from a profile (PEAK, MAX, MIN, RMS)

In **DOSE & 1/1OCTAVE** and **SLM & 1/1 OCTAVE** mode, it is possible to view logger plots for each centre frequency (cf. part 7.1.1).

## 7.4 Setting the parameters of the display - SCREEN SETUP

The **SCREEN SETUP** enables the user to set the proper contrast of the display and switch on the backlight's automatic switch off after a certain period.



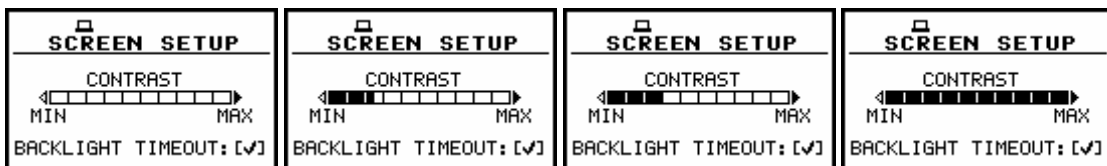
DISPLAY window with SCREEN SETUP text highlighted

### 7.4.1 Setting contrast of the display - CONTRAST

The **CONTRAST** enables the user to set the proper contrast of the display. The user can select 21 different values of this parameter.



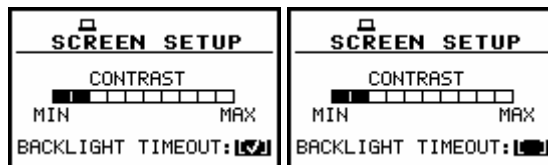
**Notice:** The new value of the contrast is confirmed after each pressing of the <<>, <>> push-buttons (new value is selected without any confirmation from the <ENTER> push-button).



SCREEN SETUP windows; the change of the contrast

### 7.4.2 Automatic switch off of the backlight - BACKLIGHT TIMEOUT

Taking into account the saving of the internal source of the instrument's power the backlight should be used relatively rare. It is possible to set the backlight's automatic switch off. In the case when this option is set, after 30 seconds from pressing **any push-button** the backlight is switched off. If it happened, the first pressing of any push-button would cause the switch on of the backlight.

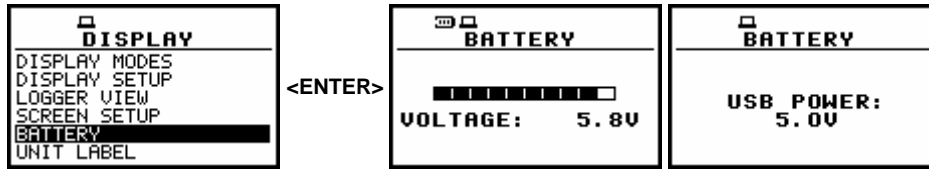


SCREEN SETUP windows; the BACKLIGHT TIMEOUT active and not active

## 7.5 Checking the state of internal battery - BATTERY

The **BATTERY** enables the user to check the internal battery condition.

The instrument can be powered from four AA standard or rechargeable batteries or from the USB interface when its **USB Device** socket is connected by means of the cable to a PC. The view presented on the display in each case is different. The current battery voltage is displayed together with its approximate state (in the graphical form).



DISPLAY window with BATTERY selected and BATTERY windows for different powering sources

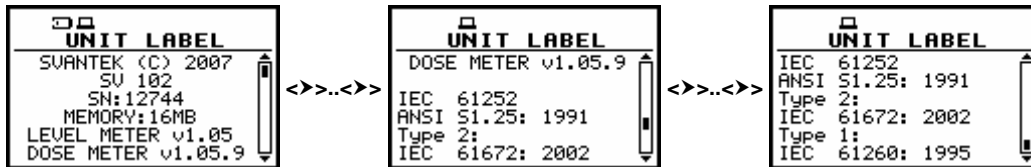
### 7.6 Checking specification of the instrument - UNIT LABEL

The **UNIT LABEL** enables the user to check **the type of the instrument, its serial number, the current software versions installed in it** and the standards, which the instrument fulfils.



DISPLAY window with UNIT LABEL text highlighted

After pressing the <<>, <>> push-buttons the displayed text is scrolled on the display and the user can check the number of the standard fulfilled by the instrument and the current software version.



UNIT LABEL windows opened and scrolled with the <<>, <>> push-buttons



**Notice:** The contents of the **UNIT LABEL** should be always transmitted to the Svantek's service in the case of any problems faced by the user during the instrument's operation.