

5. AUXILIARY FUNCTIONS

5.1. DATA AVAILABLE ON THE DISPLAY – DISPLAY WINDOW

By means of the instrument's *DISPLAY* window some additional data can be obtained. The *DISPLAY* window is available after pressing the <DISPLAY> push-button. This window consists of the following items: **DISPLAY MODES**, **DISPLAY SCALE**, **BUFFER VIEW**, **BATTERY**, **CONTRAST**, **BACKLIGHT** and **UNIT LABEL**. The items are selected by means of the <◀>, <▶> push-buttons. The user has to press the <ENTER> push-button on the inversely displayed text in order to get into the chosen window.



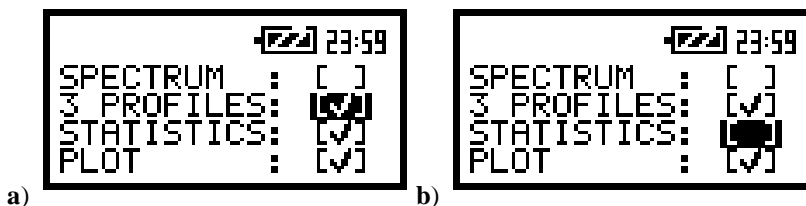
The view of the unit's displays with the *DISPLAY* window

Selection of the measurement results presentation – DISPLAY MODES window

The **DISPLAY MODES** window enables one the selection of the currently available ways of displaying the results of the measurement. The selection is made by placing or replacing the special character in the displayed inversely position of the **DISPLAY MODES** window by means of the <◀>, <▶> push-buttons. The selection must be confirmed by pressing the <ENTER> push-button. The way of the displaying the results is related with the selection of the instrument's function (SLM, 1/1 OCTAVE or 1/3 OCTAVE analyser, DOSE METER). Only One Profile mode cannot be switched off independently from the current mode of the instrument.

For the **Sound Level Meter** and the **DOSE METER** the following possibilities of the measurement results presentation are available:

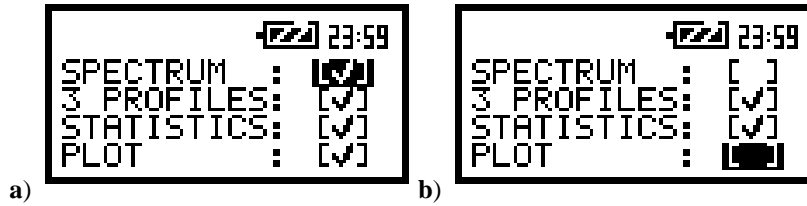
- **One Profile**,
- **3 PROFILES**,
- **STATISTICS**,
- **PLOT**.



The view of the **DISPLAY MODES** window for the SLM and the DOSE METER with all possibilities switched on (a) and **STATISTICS** switched off (b)

For **1/1 OCTAVE** and **1/3 OCTAVE** analysis the following ways of the measurement results presentation are available:

- **One Profile**,
- **SPECTRUM**,
- **3 PROFILES**,
- **STATISTICS**,
- **PLOT**.



The view of the **DISPLAY MODES** window with all possibilities of results presentation for 1/1 OCTAVE or 1/3 OCTAVE analysis switched on (a) and **PLOT** switched off (b)

The **PLOT** mode of results presentation is available if, and only if, data from at least one profile are logged in the buffer's file. If the **PLOT** position is switched on ([✓]) but there was nothing stored in the buffer's file (in the selected profile there was **BUFFER:None**) the **NO RESULTS** text is displayed (see Figure below).



The view of the display in the **PLOT** mode when there is nothing in the buffer to be displayed

Each available position of the **DISPLAY MODES** window can be switched on or off independently. The window is closed and the instrument returns to the **DISPLAY** window after pressing the **<ESC>** or **<ENTER>** push-button (the latter only in the case when the bottom line of the display is displayed inversely).

Selection of the scale in graphical results presentations – DISPLAY SCALE window

The **DISPLAY SCALE** window enables the user to change the scale in the available modes of graphical presentation of the measurement results (time history in the **PLOT** and so-called spectra in the **SPECTRUM**). It is possible to change the scale of the horizontal axis only. In order to enter this window one has to press the **<ENTER>** push-button on the inversely displayed the **DISPLAY SCALE** text of the **DISPLAY** window.

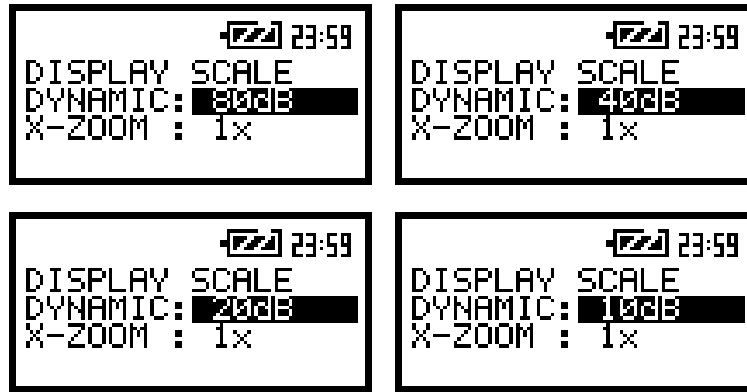


The view of the display in the **DISPLAY** window with the **DISPLAY SCALE** text selected

The **DISPLAY SCALE** window is closed and the instrument returns to the **DISPLAY** window after pressing the **<ESC>** (without the confirmation of the performed selection) or **<ENTER>** push-button (with the confirmation of the selection).

Scaling of the vertical axis of the graphical presentation – Y-SCALE

In the case of the vertical axis the user can obtain the double, four times and eight times expansion. As the default the vertical axis corresponds to 80 dB. After expansion it corresponds to 40 dB, 20 dB and 10 dB – respectively. The selection is performed by means of the **<◀>**, **<▶>** push-buttons.



The view of the displays with the possible values of the vertical axis in PLOT and SPECTRUM presentations

Scaling of the horizontal axis of the graphical presentation – X-ZOOM

It is not possible to make a scaling of the horizontal axis. The default value of the multiplier of this axis is equal to 1 as it is visible on the above figures.

Selection of the buffer's file to the display presentation – BUFFER VIEW window

The **BUFFER VIEW** window enables the user to examine the contents of the buffer. In order to enter this window one has to press the <ENTER> push-button on the inversely displayed the **BUFFER VIEW** text of the *DISPLAY* window.

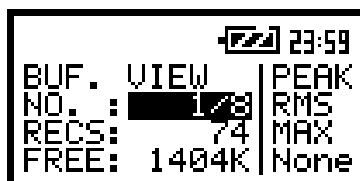


The view of the display in the *DISPLAY* window with the **BUFFER VIEW** text selected

The following parameters of the buffer are presented on the instrument's display:

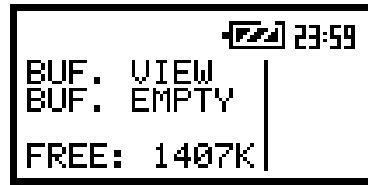
- The number of the current file in the buffer / the number of all files (**NO:**).
- The size of the current file in the buffer (**RECS:**).
- The size of the empty, still available memory (**FREE:**).

The type of the measurement results stored in the buffer in profiles 1, 2, 3 (chosen in the **PROFILE x** window of the **PROFILES SETUP** window) as well as the results selected for the registration in the case of **1/1 OCTAVE** or **1/3 OCTAVE** analysis (chosen in the **SPECTRUM** window of the **PROFILES SETUP** window) are given on the right side of the display. The change of the number of the file in the buffer is done after pressing the <◀>, <▶> push-buttons.



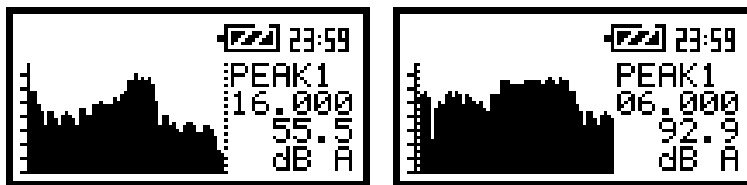
The view of the display with the **BUFFER VIEW** window opened: the selection of the file to be seen

The display of the instrument after entering the **BUFFER VIEW** window looks as on the figure below in the case when the buffer is empty (the measurement was not done or the measurements were performed but with the settings for all profiles and the spectrum **BUFFER: None** in the **PROFILES SETUP** window).



The view of the display with **BUFFER VIEW** window in the case when there are no files in the buffer

The contents of the selected file from the buffer is displayed after pressing the **<ENTER>** push-button. The cursor position changes after pressing the **<◀>**, **<▶>** push-buttons. 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 and the value are presented on the right side of the display together with the units and the type of the weighting filter the measurement were performed.

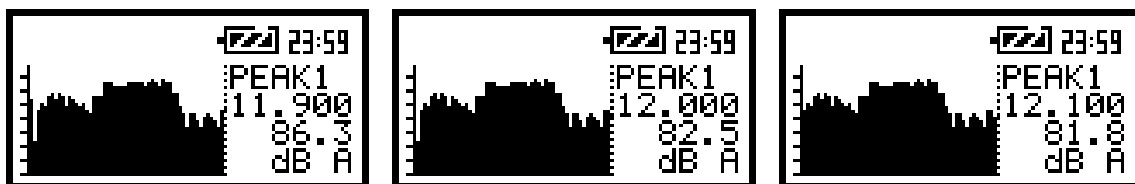


The view of the displays with the selected file from the buffer; the change of the cursor position

The scrolling of the screen is made when the cursor is at one of two limits of the graphical presentation space and the **<◀>**, **<▶>** push-buttons are still pressed and in the file there are still the results. The step of the scrolling increases during the continuous pressing of the **<◀>**, **<▶>** push-buttons.

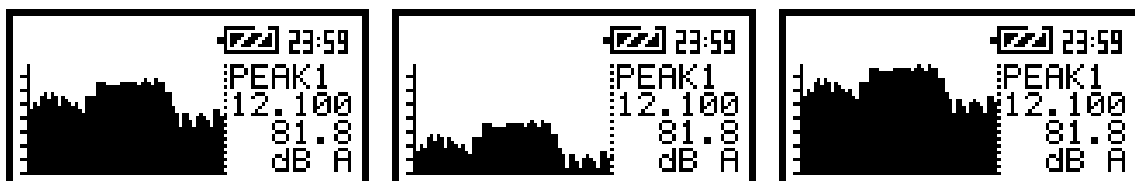


The view of the displays with the selected file from the buffer; the scrolling to the right



The view of the displays with the selected file from the buffer; the scrolling to the left

The position of the horizontal axis in relation to the vertical one can be changed after pressing the **<◀>**, **<▶>** push-buttons together with the **<SHIFT>** one.



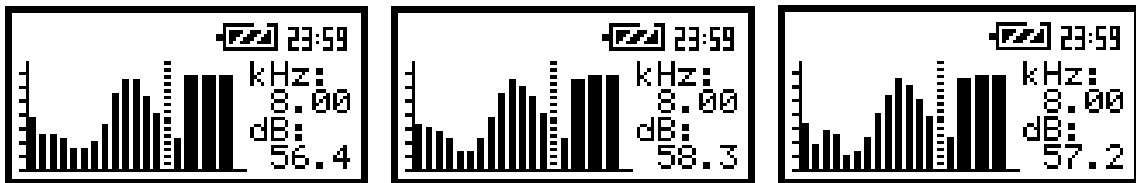
The view of the displays with the selected file from the buffer; the change of the axis relation

The selected file in the buffer can contain the measurement results from up to 3 profiles and the spectra. The change of the profile is possible after pressing the <ENTER> push-button.



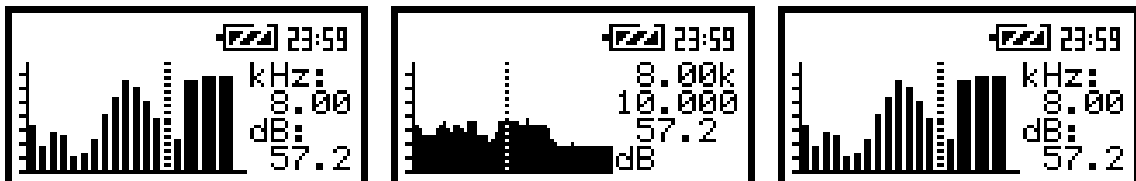
The display views with the selected file from the buffer; the change of the profile after pressing <ENTER>

The spectra are registered in the file's buffer with the same step as selected in the **BUF. STEP** position of the **MEASURE SETUP** window. In order to display the registered spectra the user has to press the <FILE> push-button for the spectra stored later and to press the <INPUT> one for the spectra saved earlier.



The view of the displays with the selected file from the buffer containing spectra; the change of the spectra after pressing <FILE> or <INPUT> push-buttons

In the file of the buffer containing the results of **1/1 OCTAVE** or **1/3 OCTAVE** analysis also the time history for each filter is stored. The user can observe these values pressing the <ENTER> push-button. The next pressing of <ENTER> causes the presentation of the results saved from the profiles (if they are present in the buffer).



The view of the displays with the selected file from the buffer containing spectra; the change between spectrum and time history after pressing <ENTER> when only results from **1/1 OCTAVE** analysis are saved in the buffer

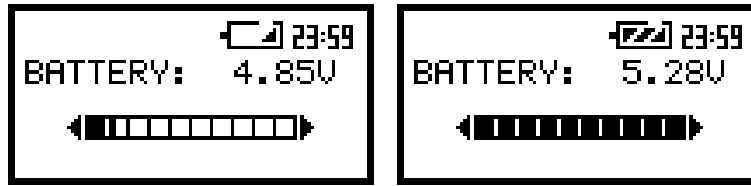
The window with the graphical presentation of the measurement results is closed and the instrument returns to the **BUFFER VIEW** window after pressing the <ESC> push-button. The exit from this window is also made after pressing any function push-button (the exception: <FILE> and <INPUT>) or after start of the measurements.

Checking the state of the internal battery – **BATTERY** window

The **BATTERY** window enables the user to check the internal battery condition. The current battery voltage is displayed. In order to enter this window one has to press the <ENTER> push-button on the inversely displayed the **BATTERY** text of the **DISPLAY** window.

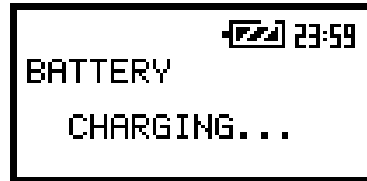


The view of the display in the **DISPLAY** window with the **BATTERY** text selected



The view of the displays with the BATTERY window opened when the external supplier is not connected

If the instrument is switched on when the external supplier is connected the special message is displayed in the BATTERY window.



The view of the BATTERY window when the external supplier is connected to the instrument

The window is closed and the instrument returns to the DISPLAY window after pressing the <ESC> or <ENTER> push-button.

Setting the contrast of the display – CONTRAST window

The CONTRAST window enables the user to set the proper contrast of the display. In order to enter this window one has to press the <ENTER> push-button on the inversely displayed the CONTRAST text of the DISPLAY window.



The view of the display in the DISPLAY window with the CONTRAST text selected

The change of the display's contrast is done by pressing of the <◀>, <▶> push-buttons. The window is closed and the instrument returns to the DISPLAY window after pressing the <ESC> or <ENTER> push-button.



The view of the displays with the CONTRAST window

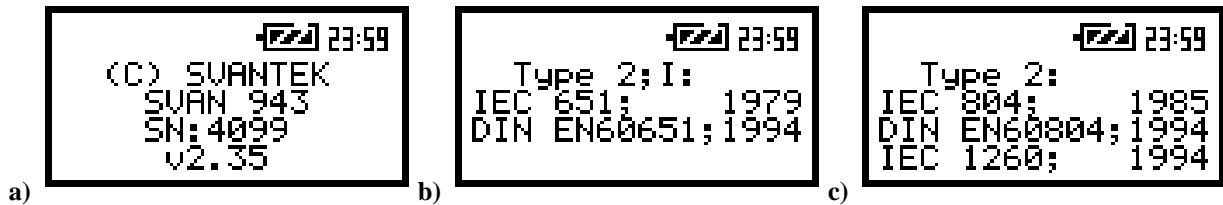
Checking specification of the instrument – UNIT LABEL window

The **UNIT LABEL** window displays **the type of the instrument, its serial number and the current software version installed in it**. In order to enter this window one has to press the **<ENTER>** push-button on the inversely displayed the **UNIT LABEL** text of the *DISPLAY* window.



The view of the display in the *DISPLAY* window with the **UNIT LABEL** text selected

After pressing the **<◀>**, **<▶>** push-buttons the displayed text is scrolled on the display and the user can check the number of standards fulfilled by the instrument. The window is closed and the instrument returns to the *DISPLAY* window after pressing the **<ESC>** or **<ENTER>** push-button.



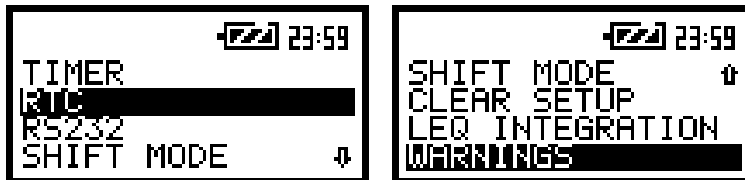
The view of the displays with the **UNIT LABEL** window opened (a) and after scrolling with the **<◀>**, **<▶>** push-buttons (b), (c)

5.2. SETUP MENU

Setting of the other parameters important for the sound measurements can be done by means of the *SETUP* window, which can be entered after pressing the **<SETUP>** push-button (the **<INPUT>** and the **<SHIFT>** push-button pressed in conjunction or in a sequence – cf. the description of the **SHIFT MODE** window).

In the *SETUP* window the following items are available:

- **TIMER** window which enables the user to set the Timer function.
- **RTC** window which enables the user to set the Real Time Clock.
- **RS232** window which enables the user to set the transmission speed and the timeout in the RS232 interface.
- **SHIFT MODE** window which enables the user to set the operating mode of the **<SHIFT>** and the **<PAUSE>** push-buttons.
- **CLEAR SETUP** window which enables the user to return to the producer's set up.
- **LEQ INTEGRATION** window which enables the user to select the way of integration for the **LEQ** measurement.
- **WARNINGS** window which enables the user to select the active warnings displayed during the usage of the instrument.



The view of the displays with the *SETUP* window

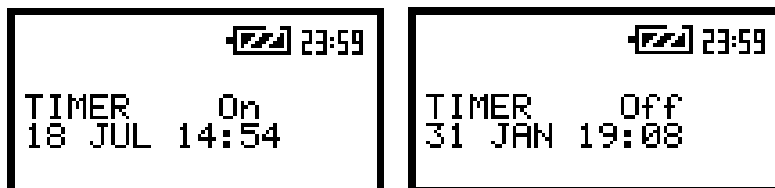
Programming of the instrument's internal timer – *TIMER* window

The **TIMER** window enables one to programme the internal timer. In order to enter this window one has to press the **<ENTER>** push-button on the **TIMER** text displayed inversely in the *SETUP* window.



The view of the display in the *SETUP* window with the **TIMER** text selected

The instrument can be switched on by itself in the programmed time and can perform the measurements using the set up which was used before its switching off. The operation of the **TIMER** setting is performed in the same way as it was described in the case of the **FILE NAME** window. The selection of the setting parameter is performed using the **<◀>**, **<▶>** push-buttons and the change of its value – using the **<◀>**, **<▶>** push-buttons pressed together with the **<SHIFT>**. The parameter, which value has to be changed, is switched on and off. The change of the selected parameter is done after pressing the **<◀>**, **<▶>** push-buttons, any additional confirmation of this operation does not exist!



The view of the **TIMER** window

The instrument, in which the **TIMER** is programmed, switches on one minute before the set time, displaying the text:

WARM UP TIME=60s

The counter is decreased after each second. After the warm up time the instrument starts the measurements in the mode and with the parameters which were set in the moment of its switching off.



Notice: The instrument's **TIMER** function can be used only once (at the programmed day and time). The **TIMER** can be programmed up to one month ahead.

The window is closed and the instrument returns to the **SETUP** window after pressing the **<ENTER>** or **<ESC>** push-button.

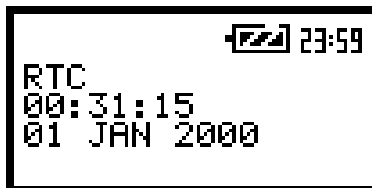
Programming of the instrument's internal Real Time Clock – RTC window

The **RTC** window enables one to programme the internal **Real Time Clock**. In order to enter this window one has to press the **<ENTER>** push-button on the **RTC** text displayed inversely in the **SETUP** window.



The view of the display in the *SETUP* window with the **RTC text selected**

This clock is displayed in the top right corner of the instrument's display. The operation is performed in the same way as it was described in the case of the **FILE NAME** window. The change of the selected parameter is done after pressing the **<◀>**, **<▶>** push-buttons, any additional confirmation of this operation does not exist!

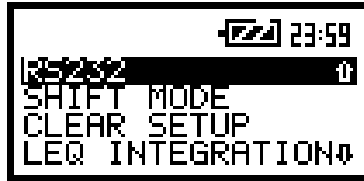


The view of the **RTC window**

The window is closed and the instrument returns to the **SETUP** window after pressing the **<ENTER>** or **<ESC>** push-button.

Setting the parameters of the serial interface – RS232 window

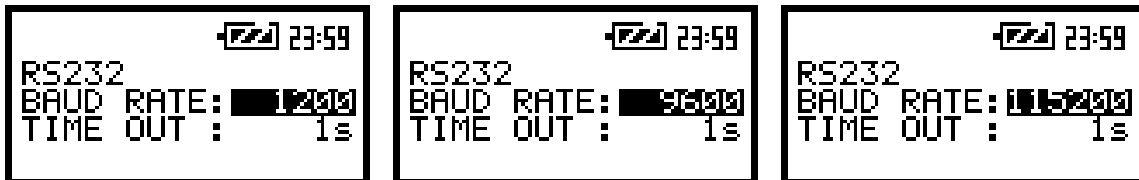
The **RS232** window enables the user to programme the RS 232 interface transmission speed (**BAUD RATE** position) and to set the time limit before which the interface operation should be performed (**TIME OUT** position). In order to enter this window one has to press the **<ENTER>** push-button on the **RS232** text displayed inversely in the **SETUP** window.



The view of the display in the *SETUP* window with the RS232 text selected

Setting the transmission speed of the serial interface – BAUD RATE position

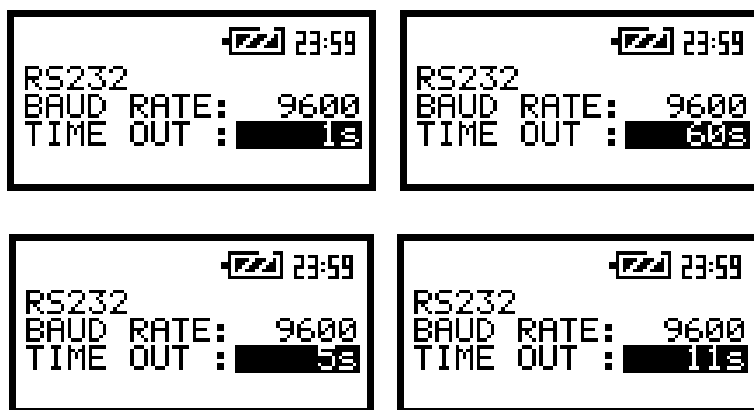
The transmission speed can be selected from the following items: **1200** (bits / second), **2400** (bits / s), **4800** (bits / s), **9600** (bits / s), **19200** (bits / s), **38000** (bits / s), **57600** (bits / s) or **115200** (bits / s). The selection is made by means of the <◀>, <▶> push-buttons and the confirmation - with the <ENTER> one. The other RS 232 transmission parameters are fixed to: **8 bits for data, No parity & 1 Stop bit**. After setting the transmission speed, which occurs by pressing the <ENTER> push-button, the next position can be programmed.



The view of the RS232 window – the setting of the BAUD RATE

Setting time limit for the performance of serial interface operation – TIME OUT position

The value shown in the inversely displayed line is increased or decreased by one with each pressing the <◀>, <▶> push-buttons and it is within the limits <1s, 60s>. The step is increased to ten after pressing the <◀>, <▶> push-buttons together with the <SHIFT> one. The default value of this parameter is equal to 1s but it can be too short time for the printers which are not too fast. In such case the **TIME OUT** parameter has to be increased.



The view of the RS232 window – the setting of the TIME OUT

The window is closed and the instrument returns to the *SETUP* window after pressing the <ENTER> or <ESC> push-button.

Selection of few push-button's mode – SHIFT MODE window

The **SHIFT MODE** window enables the user to programme the operation mode of the **<SHIFT>** and **<PAUSE>** push-buttons. In order to enter this window one has to press the **<ENTER>** push-button on the **SHIFT MODE** text displayed inversely in the **SETUP** window. The selection of a parameter in both positions is done by means of the **<◀>**, **<▶>** push-buttons and confirmed by the **<ENTER>** one.

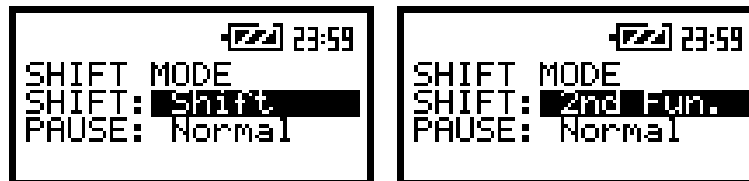


The view of the display in the **SETUP** window with the **SHIFT MODE** window selected

Selection of the working mode of <SHIFT> push-button – SHIFT

In the **SHIFT** option the user can choose between **Shift** and **2nd Fun.**. When the **Shift** text is selected the push-button with this name operates as in the keyboard of a computer – in order to achieve the desired result the second push-button has to be pushed in conjunction with the **<SHIFT>** one.

When the **2nd Fun.** text is selected the **<SHIFT>** push-button operates in the sequence with the other one. This mode is additionally signalled by the flashing **2n dF** text placed instead of the **Clock** icon. This flashing starts after pressing the **<SHIFT>** and lasts till pressing any other function push-button.

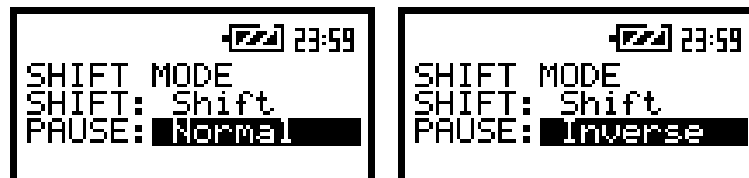


The view of the displays in the **SHIFT MODE** window; the available settings in the **SHIFT** option

Selection of the working mode of <PAUSE> push-button – PAUSE

In the **PAUSE** option the user can choose between **Normal** and **Inverse**. When the **Normal** text is selected the **<PAUSE>** push-button operates as it is described in Chapter 2 – the function **PAUSE** is available after pressing the push-button and the function **ST/SP** is available after pressing (in conjunction or in a sequence) two push-buttons: **<PAUSE>** and **<SHIFT>**.

When the **Inverse** text is selected the **<PAUSE>** push-button operates in the opposite mode: the function **ST/SP** is available after pressing the push-button and the function **PAUSE** is available after pressing (in conjunction or in a sequence) two push-buttons: **<PAUSE>** and **<SHIFT>**.



The view of the displays in the **SHIFT MODE** window; the available settings in the **PAUSE** position

The window is closed and the instrument returns to the **SETUP** window after pressing the **<ENTER>** or **<ESC>** push-button.

Return to the factory made settings – CLEAR SETUP window

The **CLEAR SETUP** window enables the user to return to the producer's set up of the instrument. In order to enter this window one has to press the **<ENTER>** push-button on the **CLEAR SETUP** text displayed inversely in the **SETUP** window.



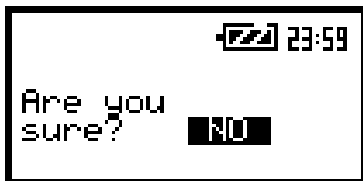
The view of the display in the **SETUP** window with the **CLEAR SETUP** text selected

After entering this window the request for the confirmation is displayed. The window is closed without any action and the instrument returns to the **SETUP** window after pressing the **<ESC>** push-button.

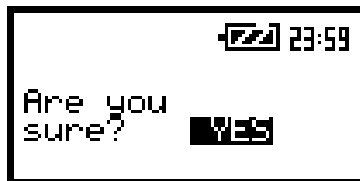
The proper answer for the request is selected by means of the **<◀>**, **<▶>** push-buttons. The instrument returns to the default set up after pressing the **<ENTER>** push-button in the case when the answer **YES** was chosen. During the process of the resetting the message is displayed:

Wait . . .

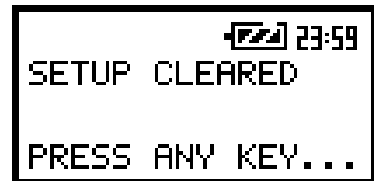
The following message is displayed after the return to the default settings and the instrument waits for the user's reaction.



a)



b)



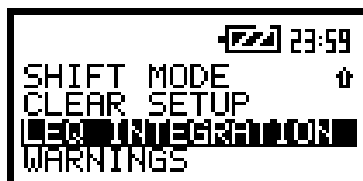
c)

The displays with the request for the confirmation for the **CLEAR SETUP** window execution (a), (b) and after the execution of the function (c)

The window is closed and the instrument returns to the **SETUP** window after pressing any push-button with an exception of the **<SHIFT>** one.

Selection of detector's type in the LEQ calculations – LEQ INTEGRATION window

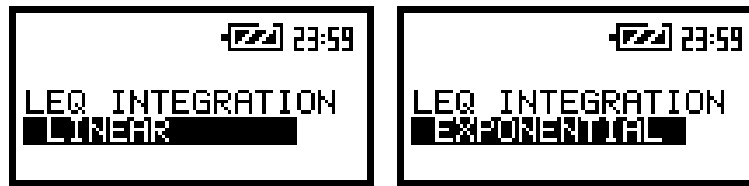
The **LEQ INTEGRATION** window enables the user to select the detector type for the calculations of the **LEQ** function. In order to enter this window one has to press the **<ENTER>** push-button on the **LEQ INTEGRATION** text displayed inversely in the **SETUP** window.



The view of the display in the **SETUP** window with the **LEQ INTEGRATION** window selected

Two options are available: **LINEAR** and **EXPONENTIAL**. The required parameter can be selected by means of the **<◀>**, **<▶>** push-buttons. The window is closed and the instrument returns to the **SETUP**

window after pressing the **<ENTER>** (with the confirmation of a change made in the window) or **<ESC>** push-button (ignoring a change made in the window).



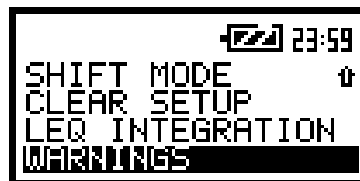
The view of the displays with the available options of the LEQ INTEGRATION window

The formulae used for the **LEQ** calculation are given in Appendix D. Setting **LINEAR** is required for the IEC 61672-1 standard (for getting the true RMS value of the measured signal). When this option is selected the value of the **LEQ** and **SEL** function does not depend on the detector time constant (the results are displayed **without** the indicator of the detectors selected in the profiles).

Setting **EXPONENTIAL** enables the user to fulfil the requirements of the IEC 804 standard for the **LEQ** measurements. When this option is selected the value of the **LEQ** and the **SEL** function depends on the detector time constant (the results are displayed **with** the indicator of the detectors selected in the profiles).

Selection of the warnings – WARNINGS window

The **WARNINGS** window enables the user to select the messages which could be displayed during the operation of the instrument. In order to enter this window the user has to select the **WARNINGS** text in the **SETUP** window, using the **<◀>**, **<▶>** push-buttons and press the **<ENTER>**. In the internal software version 3.01 this window contains only one position.



The view of the display in the **SETUP** window, the **WARNINGS** text highlighted (displayed inversely)

Saving the measurement results in a file –RES.NOT SAVE

In order to switch on the displaying of this message the user has to place, by means of the **<◀>**, **<▶>** push-buttons, the special character in the inversely displayed position. The window is closed and the instrument returns to the **SETUP** window after pressing the **<ENTER>** (with the confirmation of a change made in the option) or **<ESC>** push-button (ignoring a change made in the option).



The view of the displays in the **WARNINGS** window; the selection of the **RES.NOT SAVE** option

When the option is set to be active the special warning can be displayed on the screen after pressing the **<START / STOP>** push-button. It can happen in a case when the result of the previous

measurement was not saved in a file of the instrument. The warning which appears in this case on the screen is presented below.



The view of the displays with the warning that the previous results were not saved and the confirmation

The default value of the **CONTINUE** position is **NO**. After pressing the **<ESC>** or **<ENTER>** push-button the instrument returns to the active mode of measurement result's presentation without starting the new measurement process. Using the **<◀>**, **<▶>** push-buttons one can change the value of the **CONTINUE** option to **YES**. To confirm the change the **<ENTER>** should be pressed, after which the instrument returns to the active mode of measurement result's presentation starting the new measurement process.

5.3. SAVING THE MEASUREMENT RESULTS

The registration of the measurement results is an essential task for the efficient use of the instrument. All available measurement results can be stored in the FLASH type capable memory of the instrument.

There are two main ways for storing the measurement data in the instrument:

1. Saving files in the FLASH DISC using the *FILE* window.
2. Logging data in the files of the buffer.



Notice: The instrument's buffer memory is independent from the FLASH DISC memory.

Saving files

In the case of the SVAN 943 there are four different types of files containing data:

- from **Sound Level Meter** mode and from **DOSE METER** mode;
- from **1/1 OCTAVE** analysis;
- from **1/3 OCTAVE** analysis;
- stored in the instrument's buffer.



Notice: The files in the buffer are created automatically (the usage of the **SAVE** window is not required).

Each file consists of some elements which are the same for all kind of files:

- a file header;
- the unit and software specification;
- the user's text stored together with the measurement data;
- the parameters and global settings;
- the special settings for profiles;
- the marker of the end of the file.

The other elements of the file structure depend on the type of the file (**SLM** or **DOSE METER**, **1/1 OCTAVE** or **1/3 OCTAVE** analysis, buffer) and on the setting of the **SAVE STAT.** option from the **SAVE OPTIONS** window from the *FILE* window. These elements are as follows:

- the main results;
- the results coming from **1/1 OCTAVE** analysis;
- the results coming from **1/3 OCTAVE** analysis;
- the statistical analysis header;
- the results of statistical analysis;
- the header of the statistical analysis performed in the full or third octave analysis;
- the results of statistical analysis performed in the full or third octave analysis;
- the header of the buffer's file;
- the data stored during the measurements in the files of the buffer.



Notice: The detailed description of all types of file structures is given in the Appendix B.

Selection of the file's operation – FILE window

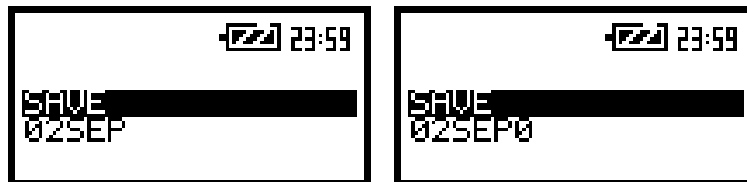
Storing of the sound measurement results as files in the instrument's FLASH DISC can be done by means of the **FILE** window. This window is opened after pressing the <FILE> push-button. The **FILE** window contains the following items: **SAVE**, **SAVE OPTIONS**, **LOAD**, **DELETE**, **DELETE ALL**, **CLEAR BUFFER**, **CATALOGUE**, and **FREE SPACE**.



The view of the displays with the **FILE** window of the instrument

Saving files in the instrument's memory – SAVE and SAVE NEXT windows

The **SAVE** window is used for storing data in the internal non-volatile (FLASH DISC) memory as a file (see Appendix B for the file formats). The entering of this window is possible by pressing the <ENTER> push-button when the **SAVE** text is displayed inversely in the **FILE** window. The additional function for results saving (the **SAVE NEXT** – save a file with the name increased by one) is available after pressing the <◀>, <▶> push-buttons.



The view of the displays with the **SAVE** window opened

The name of the file, in which the measurements or the analysis results are to be saved, is displayed under the **SAVE** or **SAVE NEXT** text. The current date is the default name for a file in the case of the first entering to this window (after power on) and the last saved file's name – in the case of the next entering. It is possible to edit this name in two ways: full and simplified.

The window of the full edition of the file's name (the **FILE NAME**) is opened after pressing the <ENTER> push-button in the case when the **SAVE** function was selected for saving the results of the measurements.

The user can skip the full edition of the file's name pressing once more the <ENTER> push-button. It will result in the passing to the phase of the file's saving described just after the **FILE NAME** window.

The **FILE NAME** window is presented on the Figure below. The displayed inversely character is currently edited. The descriptions: **Ins**, **Del** and **Clear** are attached to the <INPUT>, <DISPLAY> and <FILE> push-buttons - respectively.



The view of the display during the process of setting the character in the edited name

One can select the proper position of the character in the edited text using the <◀>, <▶> push-buttons. The character can be changed using the <◀>, <▶> push-buttons pressed together with the <SHIFT>. The subsequent big and small letters, digits and other ASCII characters appear on the display in the inversely displayed position after each pressing such combination of the push-buttons.

The empty space is created for the introduction of a new character in the edited name (the **Ins** operation is executed) when the <INPUT> push-button is pressed.



The view of the display after pressing the <INPUT> (Ins) push-button

The character, which is displayed inversely, is deleted from the edited name (the **Del** operation is executed) when the <DISPLAY> push-button is pressed.



The view of the display after pressing the <DISPLAY> (Del) push-button

All characters are deleted in the edited name (the **Clear** operation is executed) when the <FILE> push-button is pressed.



The view of the display after pressing the <FILE> (Clear) push-button

The edited name is accepted and the file is saved after pressing the <ENTER> push-button (cf. the description of the **SAVE NEXT** function).

The simplified edition consists in the addition at the end of the file name the natural number. The increase by one of the number is achieved by each pressing the <▶> push-button together with the <SHIFT> one and the decrease – by pressing the <◀> push-button together with the <SHIFT>. The number can be changed from 1 to N, when the only limitation of the N value is the length of the file name, which cannot be longer than 8 characters.

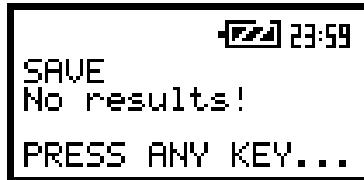


The view of the displays in the simplified edition of the file name

The instrument attempts to save a file after pressing the **<ENTER>** push-button. The saving is not possible in the case when the instrument is measuring the signal or the measurements were stopped after pressing the **<PAUSE>** push-button. The changing message is displayed on the display in this case:

MEASUREMENT / measurement
IN PROGRESS / in progress

The **SAVE** window is displayed once more after about 3 seconds. The presented below message is displayed after pressing the **<ENTER>** push-button in the case when no measurements were performed and there are no results to be saved. The instrument then waits for the reaction of the user (any push-button should be pressed except the **<SHIFT>** one) and after pressing a push-button it returns to the **SAVE** window.



The view of the display after the **SAVE** operation when there were no results for storing

The data are saved in the file with the name increased by one in relation to the name displayed after the **SAVE NEXT** text after pressing the **<ENTER>** push-button (if the instrument is not measuring and there are the results to be stored).



Notice: In the **SAVE NEXT** function it is possible to save a file (pressing the **<ENTER>** push-button) skipping the full or simplified edition of the file's name.

The following message containing the name of the file and the operation performed is displayed during the file's saving:

RES13
Saving. . .

Another message is displayed after successful saving of the file in the memory and then the instrument waits for the reaction of the user (any push-button should be pressed except the **<SHIFT>**) and after pressing a push-button it returns to the **FILE** window. The assumptive file's name is displayed after repeated enter to the **SAVE** window of the **FILE** window (after pressing the **<ENTER>** push-button).



a)



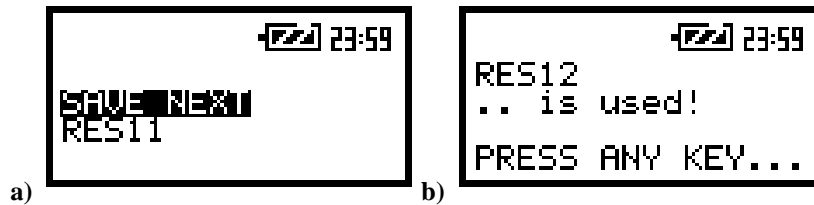
b)



c)

The displays with the **SAVE NEXT** function (a); after saving the file with the increased name (b) and after repeated enter to the **SAVE NEXT** function (c)

It is not possible to store the data in the file, which already exists, when the **REPLACE** position is not active ([]). The presented below message is displayed after pressing the **<ENTER>** push-button in the case when during the name edition process the user selected the name which was used before. The instrument then waits for the reaction of the user (any push-button should be pressed except the **<SHIFT>** one) and after pressing a push-button it returns to the **FILE** window.



The displays after the file's name selection (a) and with the message if the REPLACE position is not active (b)

Controlling the data storing in the instrument's memory – SAVE OPTIONS window

The **SAVE OPTIONS** window is used for the selection of the options of data storing in the **FLASH DISC** memory of the instrument. The window is opened after pressing the **<ENTER>** push-button when the **SAVE OPTIONS** text in the **FILE** window is displayed inversely.

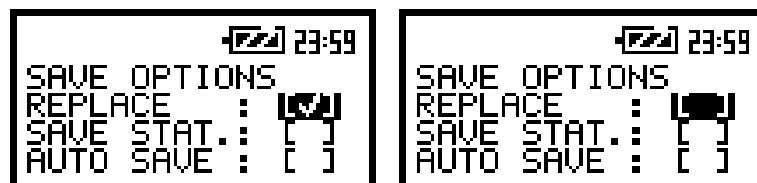


The view of the display in the **FILE** window with the **SAVE OPTIONS** window selected

It is possible to replace the file existing in the memory by the new with the same name (the **REPLACE** option), to add to the results the statistics of the measurements (the **SAVE STAT.** option) and to save automatically the results of the measurements (the **AUTO SAVE** option).

Replacement of the existing files by the new ones – REPLACE

The result of the attempt to save the file with the name which already exists in the memory depends on the setting of the **REPLACE** option. It is possible to erase the old file and to save the new one with the same name if the position is active ([✓]). The message is displayed that such operation is not available in the case when this position is not active ([]) – cf. the description of the **SAVE** window. The activation or deactivation of the **REPLACE** option is done by pressing the **<◀>**, **<▶>** push-buttons. The next position from the **SAVE OPTIONS** window becomes available after pressing the **<ENTER>** push-button.



The displays during the execution of the **SAVE OPTIONS** – the selection of the **REPLACE** parameters

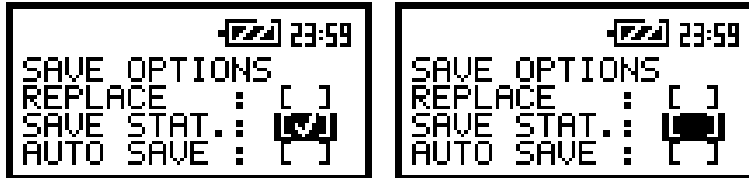
Controlling of the measurement statistics savings – SAVE STAT.

The **SAVE STAT.** option is used to set self saving, together with the measurement results, the statistics of the measurements ([✓]) or to switch off ([]) this possibility. Together with the measurements 100-class statistical analysis is performed (the values named from **L01** to **L99**). The activation or

deactivation of the **SAVE STAT.** option is done by pressing the <◀>, <▶> push-buttons. The next option from the **SAVE OPTIONS** window becomes available after pressing the <ENTER> push-button.



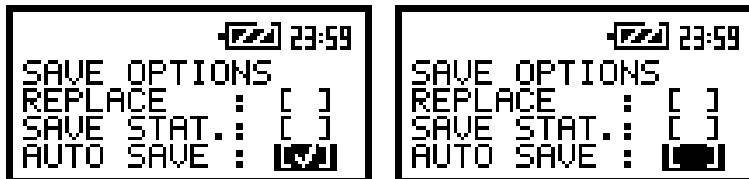
Notice: This position was created to save the memory of the instrument in the case when the knowledge of the statistics is not necessary. **Each registration of the statistics requires 600 bytes of the memory!**



The displays during the execution of the **SAVE OPTIONS** – the selection of the **SAVE STAT.** parameters

Controlling of the measurement results savings – AUTO SAVE

Using the **AUTO SAVE** option one can set the self saving of the measurement results ([√]) or to switch off ([]) this possibility. The activation or deactivation of the **AUTO SAVE** option is done by pressing the <◀>, <▶> push-buttons. This option was also established in order not to waist too much memory of the instruments when the self saving is not necessary. The window for the edition of the base name for the self saved files is opened (the **FILE NAME**) after pressing the <ENTER> push-button in the case when the **AUTO SAVE** position is activated. The return to the **FILE** window is performed after pressing the <ENTER> push-button in the opposite case.



The displays during the execution of the **SAVE OPTIONS** – the selection of the **AUTO SAVE** parameters

Loading the files with the measurement results – LOAD window

The **LOAD** window is used for loading data file from the FLASH DISC (e.g. for the verification or comparison). The window is opened after pressing the <ENTER> push-button when the **LOAD** text in the **FILE** window is displayed inversely.



Notice: It is not possible to load the file during the execution of the measurements. On such attempt the message: „measurement in progress / MEASUREMENT IN PROGRESS” is displayed for about 2 seconds.



The view of the displays during the execution of the **LOAD** operation

The current number of the file and the total number of the saved files is displayed in the first line. The name of the file is displayed inversely in the second line (its current number is presented in the first line). The number of the buffer's file in which the same data are stored is displayed at the end of this line. The type of the current file (**LEVEL METER**, **DOSE METER**, **1/1 OCTAVE** or **1/3 OCTAVE**) is given in the third line. The date and the time of the **SAVE** operation is displayed in the fourth line. The change of the current file with the unit step can be done after pressing the <◀>, <▶> push-buttons. The longer step is available after pressing the <◀>, <▶> push-buttons in conjunction (or in sequence) with the <SHIFT>.

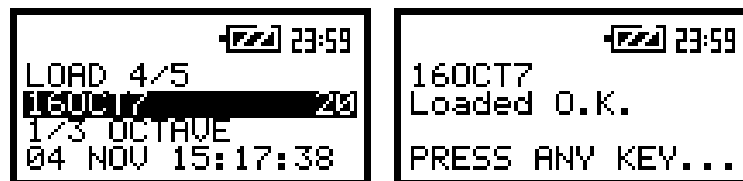


The view of the displays during the overview of the file window

The name of the file is accepted and the file is loaded after pressing the <ENTER> push-button. The message is displayed with the name of the selected file during the execution of the operation i.e.:

16OCT7
Loading. . .

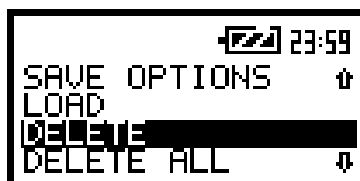
The next message is displayed after successful end of loading operation. The instrument waits for the reaction of the user (any push-button should be pressed except the <SHIFT> one) and after pressing a push-button it returns to the *FILE* window.



The view of the displays after the execution of the LOAD operation

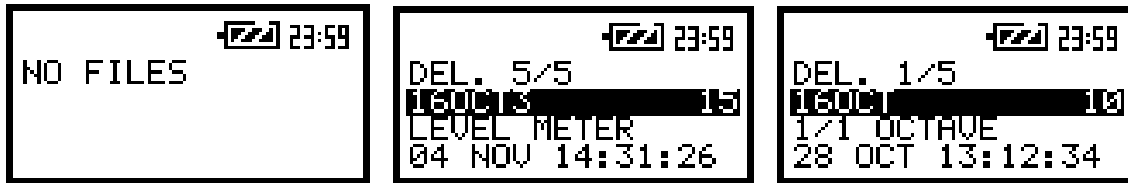
Removing a file with the measurement results from memory – DELETE window

The **DELETE** window is used to remove a file from memory. The window is opened after pressing the <ENTER> push-button when the **DELETE** text in the *FILE* window is displayed inversely.



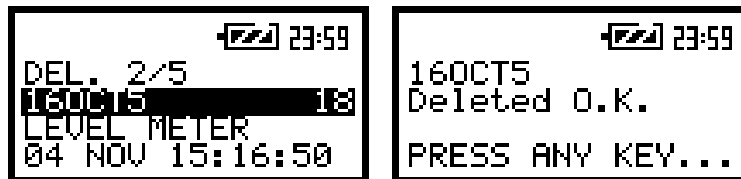
The view of the display in the *FILE* window with the **DELETE** window selected

The same data about the existing in the instrument files as in the **LOAD** window are displayed on the display after opening the **DELETE** window. The change of the current file with the unit step can be done pressing the <◀>, <▶> push-buttons. The longer step is available after pressing the <◀>, <▶> push-buttons in conjunction (or in sequence) with the <SHIFT> one.



The view of the displays during the execution of the DELETED operation

The name of the file is accepted and the file is deleted after pressing the <ENTER> push-button. The message is displayed after the successful end of the operation. The instrument waits for the reaction of the user (any push-button should be pressed except the <SHIFT> one) and after pressing a push-button it returns to the *FILE* window.



The view of the displays after the execution of the DELETED operation

Removing all files with measurement results from memory – DELETED ALL window

The **DELETED ALL** window is used to remove all files from memory. The window is opened after pressing the <ENTER> push-button when the **DELETED** text in the *FILE* window is displayed inversely.



The view of the display in the *FILE* window with the **DELETED ALL** window selected

The instrument requests the confirmation of the operation after entering this window. The next pressing of the <ENTER> push-button, when the **NO** option is selected, causes the closing of the window and the return to the *FILE* window. The selection of the **NO** or **YES** option is possible using the <◀>, <▶> push-buttons.



The view of the displays during the execution of the **DELETED ALL** operation

The pressing of the <ENTER> push-button, when the **YES** option is selected, deletes all existing files. The message is displayed after the successful execution of the operation. The instrument waits for the reaction of the user (any push-button should be pressed except the <SHIFT> one) and after pressing a push-button it returns to the *FILE* window.



The view of the display after the DELETE ALL operation

Removing all files with results from buffer's memory – CLEAR BUFFER window

The **CLEAR BUFFER** window is used to delete the whole contents of the buffer's memory of the instrument (all files are erased). The window is opened after pressing the <ENTER> push-button when the **CLEAR BUFFER** text in the *FILE* window is displayed inversely.



The view of the display in the *FILE* window with the CLEAR BUFFER window selected

It is not possible to leave any data in the buffer. The instrument requests the confirmation of the operation after entering this window (after pressing the <ENTER> push-button). The next pressing of the <ENTER> push-button, when the **NO** option is selected, causes the closing of the window and the return to the *FILE* window. The selection of the **NO** or **YES** option is possible using the <◀>, <▶> push-buttons.



The view of the displays during the execution of the CLEAR BUFFER operation

The instrument returns to the *FILE* window after the successful execution of the **CLEAR BUFFER** operation.

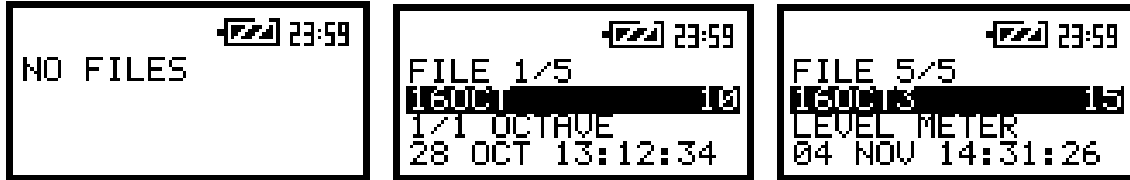
Checking the contents of the memory – CATALOGUE window

The **CATALOGUE** window is used for checking the contents of the memory. The window is opened after pressing the <ENTER> push-button when the **CATALOGUE** text in the *FILE* window is displayed inversely.



The view of the display in the *FILE* window with the CATALOGUE window selected

The same data about the existing in the instrument files as in the **LOAD** window are displayed on the display after opening **CATALOGUE** window (by pressing the **<ENTER>** push-button). The change of the current file with the unit step can be done after pressing the **<◀>**, **<▶>** push-buttons. The longer step is available after pressing the **<◀>**, **<▶>** push-buttons in conjunction (or in sequence) with the **<SHIFT>** one. The window is closed and the instrument returns to the **FILE** window after pressing the **<ENTER>** push-button.



The view of the displays during the execution of the **CATALOGUE** operation

Checking the free space in the memory – **FREE SPACE** window

The **FREE SPACE** window is used to read out the free space in the FLASH DISC memory of the instrument. The window is opened after pressing the **<ENTER>** push-button when the **FREE SPACE** text in the **FILE** window is displayed inversely.



The view of the display in the **FILE** window with the **FREE SPACE** window selected

The window is closed and the instrument returns to the **FILE** window after once more pressing the **<ENTER>** push-button.



The view of the display during the execution of the **FREE SPACE** operation

BUFFER Operations in buffer

The buffer is the selected part of the instrument's memory dedicated for storing the huge number of the measurement results. Its capacity is ca 1.4 Mbytes. The buffer operation is strongly dependent on the operation mode of the instrument (the selected function) and the setting of the **AUTO REPEAT** function.



Notice: The new file in the buffer is created after each start of the new measurement. The contents of the buffer (all registered files) are erased after execution the **CLEAR BUFFER** operation from the **FILE** window. It is not possible to erase only one or few selected files from the buffer!

1. In the **Sound Level Meter** mode one selected result from each of three profiles can be logged in the buffer's file with the time step defined in the **BUF. STEP** position. If the value set in this position is equal to 1 sec, thus for three profile results logging the buffer is fulfilled after 168 hours (or 7 days) of the continuous work. If the results from only one profile are saved the buffer will be filled after 500 hours (21 days) of work!

EXAMPLE 1.

Assuming that the following settings are selected:

MEASURE SETUP window **INT. TIME: 10 m,**
REP. CYCLE: 1,
BUF. STEP: 1 s,
PROFILES SETUP window **PROFILE 1: BUFFER: PEAK,**
PROFILE 2: BUFFER: RMS,
PROFILE 3: BUFFER: None.

Then after 10 minutes (the value set in **INT. TIME** position) and after one measurement cycle (the value set in the **REP. CYCLE** position) the current file in the buffer will contain 600 **PEAK** values from the profile 1 and 600 one second **RMS** values (one second set in the **BUF. STEP** position) from the profile 2.

EXAMPLE 2.

Assuming that the instrument set-up is as follows:

MEASURE SETUP window **INT. TIME: 1 m,**
REP. CYCLE: 1,
BUF. STEP: 7 s,
PROFILES SETUP window **PROFILE 1: BUFFER: PEAK,**
PROFILE 2: BUFFER: RMS,
PROFILE 3: BUFFER: None.

Then after the end of the measurement the current file in the buffer will contain 8 **PEAK** values (for each 7-seconds period set in the **BUF. STEP** position) from the profile 1 and 8 **RMS** values from the profile 2.



Notice: The setting in a profile **BUFFER: None** will result in bypassing the registration of the measurement results from this profile in the current file in the buffer. In the same time it will create more space in the buffer for the results from other profiles (independent instruments)!

2. In **1/1 OCTAVE** or **1/3 OCTAVE** analysis one selected result from each of three profiles together with the spectra can be logged in the current file of the buffer with the step selected in the **BUF. STEP** position.

EXAMPLE 3.

To force the every second spectra logging in a file of the buffer without the results measured in three profiles the user has to set:

MEASURE SETUP window **INT. TIME: <any value>**,
REP. CYCLE: <any value>,
BUF. STEP: 1 s,
PROFILES SETUP window **PROFILE 1: BUFFER: None**,
PROFILE 2: BUFFER: None,
PROFILE 3: BUFFER: None,
SPECTRUM: BUFFER: RMS,
FILE window **SAVE OPTIONS: AUTO SAVE [√]**.

5.4. PRINTING REPORTS

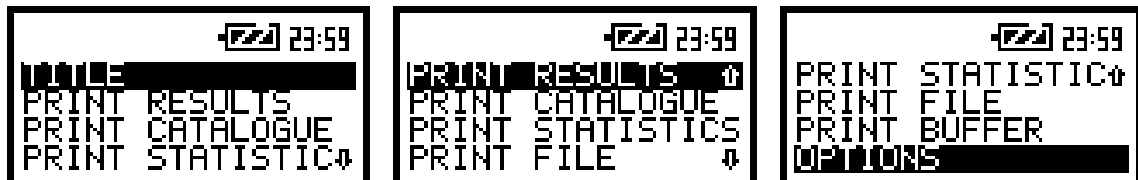
The printed reports of the sound measurement results in the predefined format can be obtained by means of the **REPORT** window after pressing the <REPORT> push-button (the <FILE> and the <SHIFT> pressed in conjunction or in a sequence).

In order to obtain the report the user has to **connect the instrument to the printer's RS 232 port** using the proper cable **or**, in the case when the printer has no such port, **connect the parallel output of the printer with the SV 52 parallel-serial interface and** using the SC 07 cable **connect the instrument with the interface**. The exemplary listings of the reports are given in the Appendix F.



Notice: Switch the power off before connecting the instrument to any external device (e.g. a printer or a Personal Computer).

Selection of the options and functions for printing out the results – REPORT window



The view of the displays in the **REPORT** window

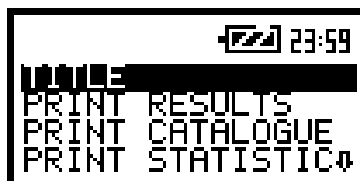
The **REPORT** window contains the elements, which enable the user to give the header to the printed report (the **TITLE** window), to print out the measurement results on the default printer (the **PRINT RESULTS** window), to print out the catalogue of the files (the **PRINT CATALOGUE** window), to print out the statistics of the measurement results (the **PRINT STATISTICS** window), to print out the contents of the selected file (the **PRINT FILE** window), to print out the contents of the selected file from the buffer (the **PRINT BUFFER** window) as well as to determine the options of the report (the **OPTIONS** window).



Notice: All reports are printed in the character format using ASCII set.

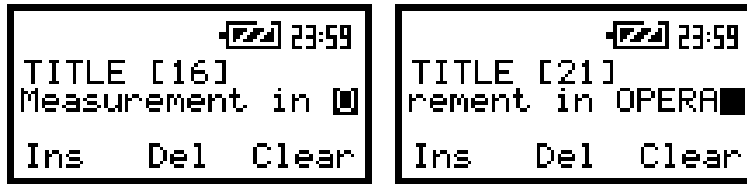
Edition of the user's text to be added to the reports – TITLE window

The **TITLE** window enables the user to edit the text added to the file and to the report to be printed out. This operation is performed in the same way as it was described in the case of the **FILE NAME** window. The window is opened after pressing the <ENTER> push-button when the **TITLE** text in the **REPORT** window is displayed inversely.



The view of the display in the **REPORT** window with the **TITLE** window selected

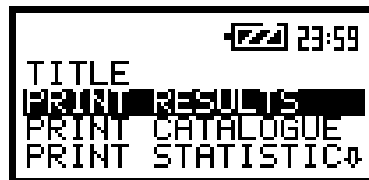
In the first line of the display, in the brackets the number (counted from the beginning of the text) of the edited character is displayed. The window is closed and the instrument returns to the **REPORT** window after pressing the <ENTER> push-button.



The view of the displays during the edition of the report's header

Printing of the measurement results – PRINT RESULTS window

The **PRINT RESULTS** window enables the user to print the report on the attached printer. In order to enter this window the user has to select the **PRINT RESULT** text in the **REPORT** window (using the <◀>, <▶> push-buttons) and press the <ENTER>.



The view of the display in the **REPORT** window, the **PRINT RESULT** text highlighted (displayed inversely)

After pressing the <ENTER> push-button, in the case when a measurement was already performed and a result is available, the message is displayed:

PRINT RESULTS
printing. . .

When the message is on the display the data are transferred from the instrument to the attached printer. The instrument returns to the **REPORT** window after transferring all data.

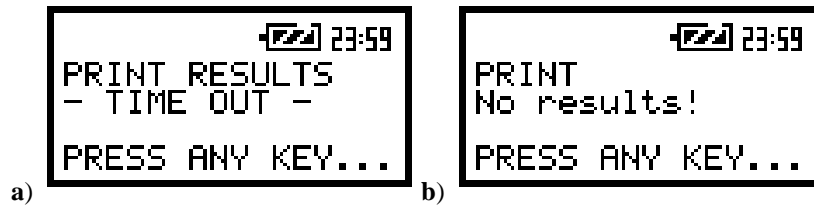
The following message is displayed on the display after the printing if the **Prompt** parameter was selected in the **EJECT P.** window of the **OPTIONS** window. The user has to answer in this case if the paper in the printer has to be ejected to the new page. The change of the available answers is possible after pressing the <◀>, <▶> push-buttons. The return to the **REPORT** window is performed after pressing the <ENTER> push-button with the possible ejection of the paper to the new page.



The view of the displays after printing with the confirmation request of the paper ejection

The similar message is displayed after printing the catalogue of the files, the statistics of the results, the contents of the selected file and the contents of the selected file in the buffer (**PRINT CATALOGUE**, **PRINT STATISTICS**, **PRINT FILE** and **PRINT BUFFER**).

The message about the time limit is displayed in the case when the printer is not connected or there is any other reason that it does not receive the data. The instrument waits for the reaction of the user (any push-button should be pressed except the <SHIFT>) and after pressing a push-button it returns to the **REPORT** window. Another message is presented and the instrument waits for the reaction of the user in the case when there is no data to be printed.



The view of the displays during the results printing when there is no transfer (a) and no data (b)

Printing of the file's catalogue – PRINT CATALOGUE window

The **PRINT CATALOGUE** window enables the user to print the catalogue of the files stored in the instrument on the attached printer. In order to enter this window the user has to select the **PRINT CATALOGUE** text in the **REPORT** window (using the <◀>, <▶> push-buttons) and press the <ENTER>.



The display in the **REPORT** window, the **PRINT CATALOGUE** text highlighted (displayed inversely)

After pressing the <ENTER> push-button the message is displayed:

PRINT CATALOGUE
printing. . .

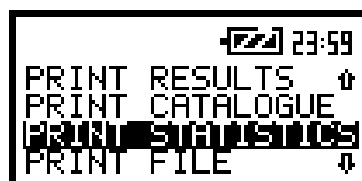
When the message is on the display the data are transferred from the instrument to the attached printer. The instrument returns to the **REPORT** window after transferring all data.



The view of the display during the catalogue printing when there is no data transfer

Printing of the statistics of measurement results – PRINT STATISTICS window

The **PRINT STATISTICS** window enables the user to print the results of the statistics analysis on the attached printer. In order to enter this window the user has to select the **PRINT STATISTICS** text in the **REPORT** window (using the <◀>, <▶> push-buttons) and press the <ENTER>.

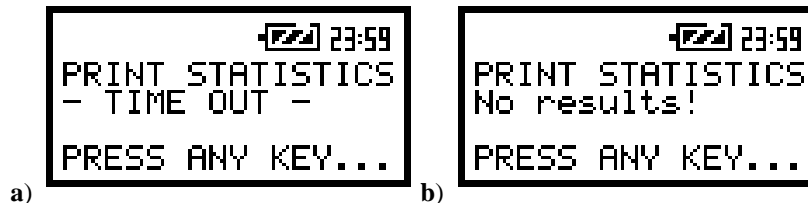


The display in the **REPORT** window, the **PRINT STATISTICS** text highlighted (displayed inversely)

After pressing the **<ENTER>** push-button, in the case when a measurement was already performed and a result is available, the message is displayed:

PRINT STATISTICS
printing. . .

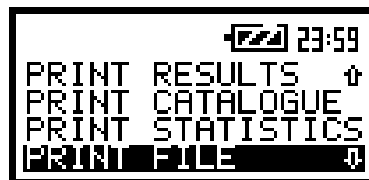
When the message is on the display the data are transferred from the instrument to the attached printer. The instrument returns to the **REPORT** window when all data are transferred. The message about the time limit is displayed in the case when the printer is not connected or there is any other reason that it does not receive the data. The instrument waits for the reaction of the user (any push-button should be pressed except the **<SHIFT>**) and after pressing a push-button it returns to the **REPORT** window. Another message is presented and the instrument waits for the reaction of the user in the case when there is no data to be printed.



The view of the displays during the statistics printing when there is no transfer (a) and no data (b)

Printing of the measurement results from the selected file – PRINT FILE window

The **PRINT FILE** window enables the user to print the contents of the selected file. In order to enter this window the user has to select the **PRINT FILE** text in the **REPORT** window (using the **<◀>**, **<▶>** push-buttons) and press the **<ENTER>**.



The view of the display in the **REPORT** window, the **PRINT FILE** text highlighted (displayed inversely)

If no files were saved in the instrument's memory then after pressing the **<ENTER>** push-button the special message is displayed and the unit waits for the reaction of the user. In this time any push-button should be pressed except the **<SHIFT>** one and after pressing a push-button the instrument returns to the **REPORT** window.



The view of the display in the **REPORT** window, the **PRINT FILE** position when no files were saved

When there are files in the memory which can be printed out the user can change the number of the file pressing the **<◀>**, **<▶>** push-buttons. The selection of the first or the last file in the catalogue is possible after pressing the **<◀>** or **<▶>** push-buttons together with the **<SHIFT>** one - respectively.



The view of the displays during the selection of the file to be printed

The contents of the selected file is printed on the connected printer after pressing the <ENTER> push-button. The following message is displayed on the display during the printing:

```
PRINT FILE
printing. . .
```

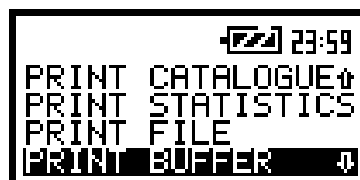
The instrument returns to the *REPORT* window when all data are transferred. The message about the time limit is displayed in the case when the printer is not connected or there is any other reason that it does not receive the data. The instrument waits for the reaction of the user (any push-button should be pressed except the <SHIFT>) and it returns to the *REPORT* window after pressing a push-button.



The view of the display during the file printing when there is no data transfer

Printing of the results from the selected buffer's file – PRINT BUFFER window

The **PRINT BUFFER** window enables the user to print the contents of the selected file in the buffer. In order to enter this window the user has to select the **PRINT BUFFER** text in the *REPORT* window (using the <◀>, <▶> push-buttons) and press the <ENTER>.



The view of the display in the *REPORT* window, the PRINT BUFFER text highlighted (displayed inversely)

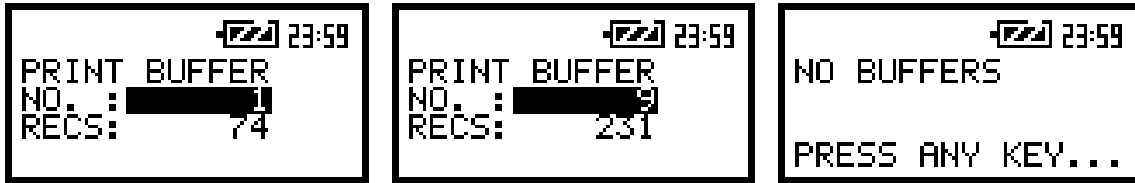
If no files were saved in the instrument's buffer then after pressing the <ENTER> push-button the special message is displayed and the unit waits for the reaction of the user. In this time any push-button should be pressed except the <SHIFT> one and after pressing a push-button the instrument returns to the *REPORT* window.



The view of the display in the *REPORT* window, the PRINT BUFFER position when no files were saved

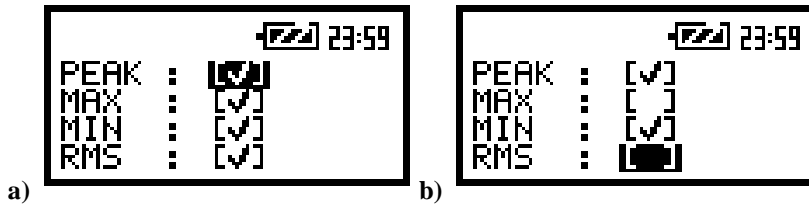
If in the instrument's buffer there are the results the user can change the number of the file in the buffer pressing the <◀>, <▶> push-buttons. The selection of the first or the last file in the buffer is

possible after pressing the <◀> or <▶> push-buttons together with the <SHIFT> one – respectively. The special message is displayed when there is no file in the buffer. The instrument waits in this case for the reaction of the user (any push-button should be pressed except the <SHIFT>) and after pressing a push-button it returns to the *REPORT* window.



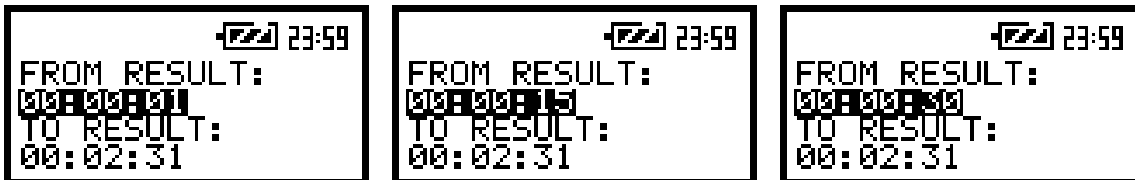
The displays during the selection of the buffer's file for printing

The user can select which results from the existed file in the buffer has to be printed after pressing the <ENTER> push-button. For example from the figure presented below one can deduct that in the **first profile** the **PEAK** value was stored in the buffer and it **has to be printed**, in the **second profile** the **MAX** value was stored in the buffer and it **has not to be printed** and in the **third profile** the **MIN** value was stored in the buffer and it **has to be printed** and stored in **1/1 OCTAVE** or **1/3 OCTAVE** analysis the **RMS** values **has not to be printed**.



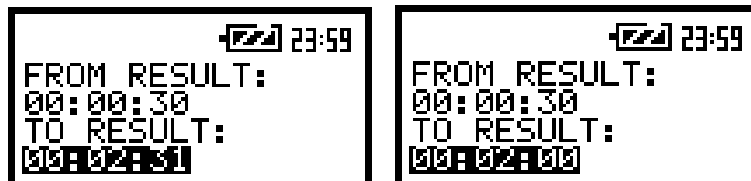
The displays after entering the selection of the results to be printed (a) and before leaving this window (b)

The user can select which part of the results stored in the selected file from the buffer should be printed out after pressing once more the <ENTER> push-button and setting the start time and the end time.



The displays during the setting of the start time of the results stored in the buffer's file for printing

The setting of the start time (**FROM RESULT**) and the end time (**TO RESULT**) is performed by pressing the <◀>, <▶> push-buttons.



The displays during the setting of the end time of the results stored in the buffer's file for printing

The contents of the selected results from the buffer's file is printed on the connected printer after pressing the <ENTER> push-button. The following message is displayed on the display during the printing:

**PRINT BUFFER
printing. . .**

The instrument returns to the **REPORT** window when all data are transferred. The message about the time limit is displayed in the case when the printer is not connected or there is any other reason that it does not receive the data. The instrument waits for the reaction of the user (any push-button should be pressed except the <SHIFT>) and after pressing a push-button it returns to the **REPORT** window.



```

  23:59
PRINT BUFFER
- TIME OUT -
PRESS ANY KEY...
  
```

The view of the display during the printing of the file from the buffer when there is no data transfer

Selection of the printing options – OPTIONS window

Using the **OPTIONS** window the user can select the format of the listing (the **FORMAT** option), can control the way the paper is ejected in the printer (the **EJECT P.** option) and select the language of the printed report (the **LANGUAGE** option). In order to enter this window the user has to select the **OPTIONS** text in the **REPORT** window (using the <◀>, <▶> push-buttons) and press the <ENTER>.



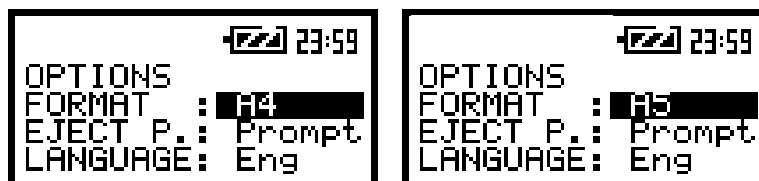
```

  23:59
PRINT STATISTIC↑
PRINT FILE
PRINT BUFFER
OPTIONS
  
```

The view of the display in the **REPORT** window, the **OPTION** text highlighted (displayed inversely)

Selection of the format of the print out – FORMAT

The **FORMAT** option enables the user to select the format of the listing (**A4** and **A5** options are available). In the **FORMAT** option any change is performed by means of the <◀>, <▶> push-buttons. In order to confirm the selection the <ENTER> push-button has to be pressed. After this confirmation the **OPTIONS** window is closed. In order to ignore any changes made in the **OPTIONS** window the user has to press the <ESC> push-button.



```

  23:59
OPTIONS
FORMAT : A4
EJECT P.: Prompt
LANGUAGE: Eng
  
```

```

  23:59
OPTIONS
FORMAT : A5
EJECT P.: Prompt
LANGUAGE: Eng
  
```

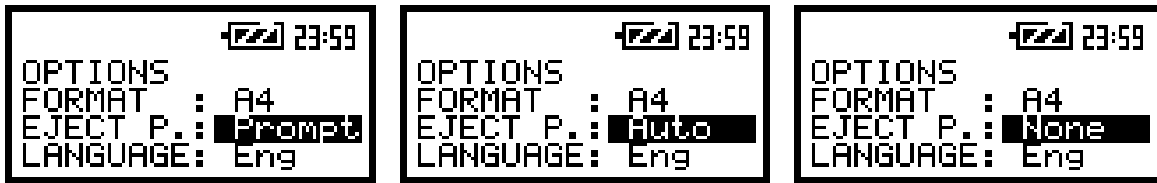
The view of the displays with the **OPTIONS** window opened – the selection of the format

Controlling the paper ejection after print out – EJECT P.

The **EJECT P.** option enables the user to control the ejection of the paper after the listing is done. The following items are available: **Prompt** (the instrument asks whether to eject the page after printing report, catalogue, buffer or statistics), **Auto** (after printing, the paper is ejected) and **None** (the paper is not ejected after printing). In particular, it is possible to have one result after another using the **None** or **Prompt** items.

In the **EJECT P.** option any change is performed by means of the <◀>, <▶> push-buttons. In order to confirm the selection the <ENTER> push-button has to be pressed. After this confirmation the

OPTIONS window is closed. In order to ignore any changes made in the **OPTIONS** window the user has to press the **<ESC>** push-button.



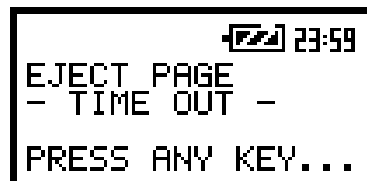
The view of the displays with the **OPTIONS** window opened – the selection of the paper ejection

The request is displayed after the printing of the measurement results, the catalogue of the files, the statistics of the results, the contents of the selected file and the contents of the selected file in the buffer (**PRINT RESULTS**, **PRINT CATALOGUE**, **PRINT STATISTICS**, **PRINT FILE** and **PRINT BUFFER**) if the **Prompt** parameter was selected in the **EJECT P.** option of the **OPTIONS** window. The user has to answer in this case if the paper in the printer has to be ejected to the new page. The change of the available answers is possible after pressing the **<◀>**, **<▶>** push-buttons. The return to the **REPORT** window is performed after pressing the **<ENTER>** push-button with the possible ejection of the paper to the new page.



The view of the displays after a printing with the request for the confirmation of the paper ejection

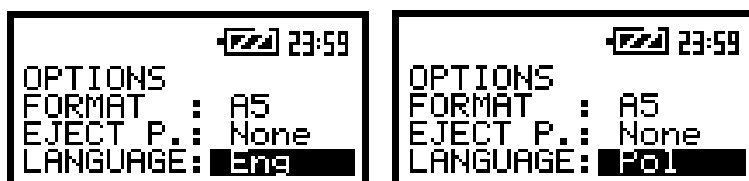
The message about the time limit is displayed in the case when the printer is not connected or there is any other reason that it does not eject a paper. The instrument waits for the reaction of the user (any push-button should be pressed except the **<SHIFT>** one) and after pressing a push-button it returns to the **REPORT** window.



The view of the display after a printing when there is not possible to eject a paper

Selection of the language of the printed report – LANGUAGE

The **LANGUAGE** option enables the user to select the language in which the report has to be printed. Two items are available: English (**Eng**) and Polish (**PoL**). In the **LANGUAGE** option any change is performed by means of the **<◀>**, **<▶>** push-buttons. In order to confirm the selection the **<ENTER>** push-button has to be pressed. After this confirmation the **OPTIONS** window is closed. In order to ignore any changes made in the **OPTIONS** window the user has to press the **<ESC>** push-button.



The view of the displays with the **OPTIONS** window opened – the selection of the language