7 SAVING THE MEASUREMENT RESULTS - FILE

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 memory of the instrument or on the USB memory stick.

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

1. **Saving files with the main results and setup settings using the FILE list.**
2. **Saving data in the logger's file.**

Notice: The instrument's logger memory is independent from the results and setup memory. *The capacity of the available memory is equal to 16 MB and is divided between logger (8257280 bytes), results and setup settings (7208736 bytes).*

Notice: *All of the options (except **DEFRAGMENTATION**) from the **FILE** list can be used for the USB memory stick if the instrument has the USB host controller option.*

Saving files

In the case of the SVAN 953 instrument there are files containing data:

- from **S**ound **LEVEL METER** mode (available in the **FILE** list);
- from **DOSE METER** mode (available in the **FILE** list);
- from **1/1 OCTAVE** mode (available in the FILE list)
- stored in the instrument's logger (accessible in the **DISPLAY** / **LOGGER VIEW** window).

Notice: The logger files are created automatically *(the usage of the **SAVE** 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**, **DOSE METER**, **1/1 OCTAVE**, logger) and on the setting of **SAVE STATISTICS** (*path: MENU / FILE / SAVE OPTIONS / SAVE STATISTICS*).

These elements are as follows:

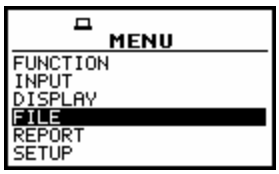
- the main results from **LEVEL METER** mode;
- the results coming from **DOSE METER** mode;
- the results coming from **1/1 OCTAVE** analysis mode;
- the statistical levels;
- the header of the statistical analysis;
- the results of the statistical analysis;

- the settings of the instrument saved in the setup file;
- the header of the file from the logger;
- the data stored during the measurements in the logger's file.

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

Storing the sound measurement results as files in the instrument's FLASH DISC can be done by means of the **FILE** list. In order to open, the **FILE** list the user has to:

- press the **<MENU>** push-button,
- select from the main list, using the **<▲>**, **<▼>** (or **<◄>**, **<►>**) push-buttons, the **FILE** text (highlight it inversely),
- press the **<ENTER>** push-button.

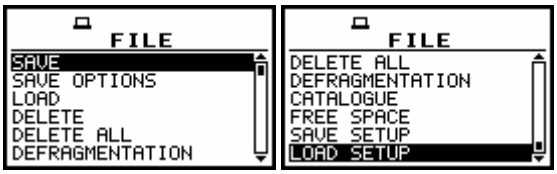


Main list; the FILE text highlighted (displayed inversely)

The **FILE** list contains the following items:

SAVE	enables one to save the measurement results as a file in the instrument's memory;
SAVE OPTIONS	enables one to set the options of the measurement result savings;
LOAD	enables one to load to the working space of the instrument's memory the measurement results saved in a file;
DELETE	enables one to delete a selected file from the instrument's memory;
DELETE ALL	enables one to delete all files from the instrument's memory;
DEFRAGMENTATION	enables one to consolidate the flash memory after deleting some files from it;
CATALOGUE	enables one to overview the catalogue of the files saved in the instrument's memory;
FREE SPACE	informs the user about the capacity of the instrument's memory still available for storing the measurement results;
SAVE SETUP	enables one to save the setup as a file in the instrument memory;
LOAD SETUP	enables one to load to the working space of the instrument's memory the selected setup saved in a file;
DIRECTORY	this position appears on the display when the **USB Memory Stick** is connected to the instrument, it informs the user about connected device (free space, directory number, directory name)
COPY FILES TO USB	this position appears on the display when the **USB Memory Stick** is connected to the instrument, it enables the user to copy files from internal memory of the instrument to the external **USB Memory Stick**
MOVE FILES TO USB	this position appears on the display when the **USB Memory Stick** is connected to the instrument, it enables the user to move files from internal memory of the instrument to the external **USB Memory Stick**

Pressing the **<SHIFT>** and **<▲>** (or **<SHIFT>** and **<◄>**) results in a movement to the first position of the opened list and pressing the **<SHIFT>** and **<▼>** (or **<SHIFT>** and **<►>**) results in a movement to the last position of the opened list.



FILE list of the instrument

In each available position 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 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 Saving files in the instrument's memory - SAVE and SAVE NEXT

The **SAVE** is used for storing data in the internal non-volatile (FLASH DISC) memory (files are always written at the beginning of a free continuous space) as a file (see Appendix B for the file formats).

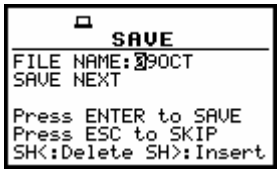
In order to enter the window the user has to select the **SAVE** text in the **FILE** list, using the **<▲>** (or **<◄>**) push-button and press the **<ENTER>** push-button. There are two available functions: the **SAVE NEXT** – save a file with the name increased by one, and **SAVE** – save a file with the edited name. These functions are available after pressing the **<◄>**, **<►>** push-buttons.

SAVE window in the FILE list

The name of the file, in which the measurements results are to be saved, is displayed above the **SAVE** or **SAVE NEXT** text. The default name for a file is displayed in the case of the first entering to this position (after power on). The default name consists of the day and the month's abbreviation. The line of the file's name edition (**FILE NAME**) is opened after pressing the **<▲>** push-button.

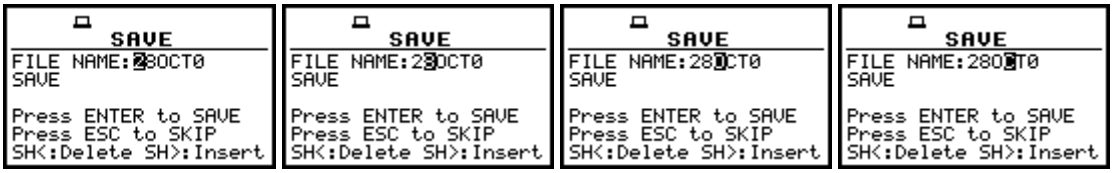
The user can skip the file's name edition and start saving file pressing the **<ENTER>** push-button or return to the **FILE** list pressing the **<ESC>** one.

The edition process is presented on the Figure below. The displayed inversely character is currently edited. The **<◄>**, **<►>**, **<▲>**, **<▼>** and **<SHIFT>** push-buttons are used for editing the name which cannot exceed eight characters.



Display during the process of setting the character in the edited name

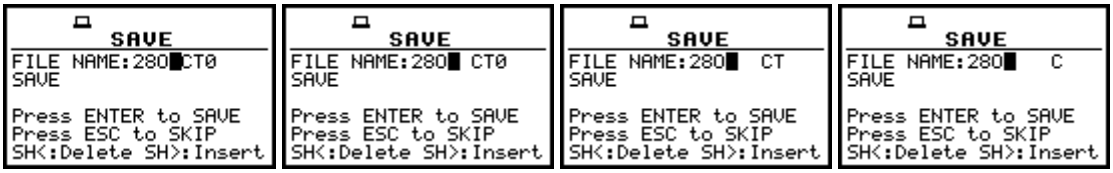
One can select the proper position of the character in the edited text using the **<◄>**, **<►>** push-buttons.



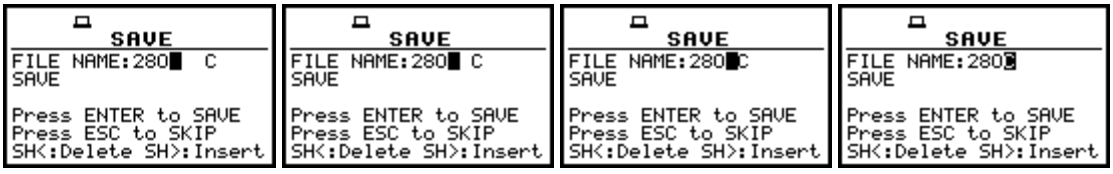
Display during the selection of the character's position to be edited

The available ASCII characters can be changed using the **<▲>** (or **<▼>**) push-button pressed together with the **<SHIFT>** one. The subsequent digits, underline, big letters and space appear on the display in the inversely displayed position after each pressing of the mentioned above push-buttons.

Display during the selection of the character



Displays in the FILE NAME edition after pressing the <SHIFT> and <►> push-buttons

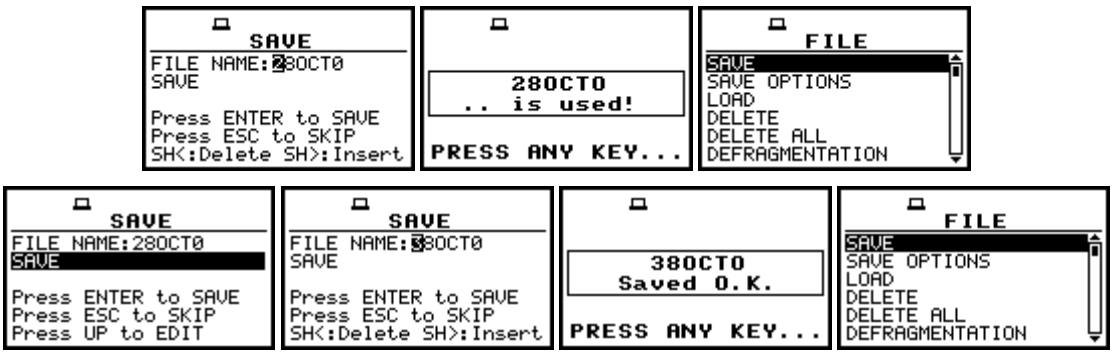


Displays in the FILE NAME edition after pressing the <SHIFT> and <◄> push-buttons

The edited name is accepted and the file is saved after pressing the **<ENTER>** push-button. The special warning is displayed in the case the file with the edited name already exists in the memory. The instrument waits then for a reaction of the user (any push-button should be pressed except the **<SHIFT>** or the **<ALT>** one).

All changes introduced to the file name during the edition are ignored after pressing the **<ESC>** push-button. This pressing causes the return to the list from which the **SAVE** option was entered.

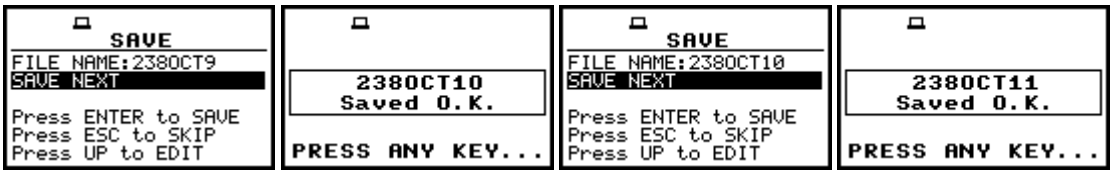
The return after the edition to the line with the **SAVE** or **SAVE NEXT** text is possible after pressing the **<▼>** push-button.



Displays during the attempt of overwriting the existing file, changing the name and saving data

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 made automatically. After the saving operation execution the new file name is displayed and the instrument waits then for a reaction of the user (any push-button should be pressed except the **<SHIFT>** or the **<ALT>** one).

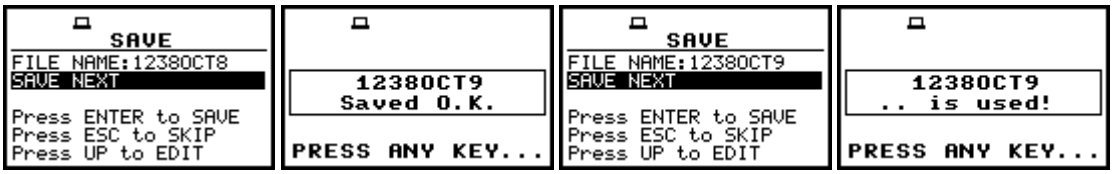
In the next attempt of saving data, the new name is displayed in the **FILE NAME** line and that name is increased by one during the saving operation.



Displays in the simplified edition of the file name and saving operation execution

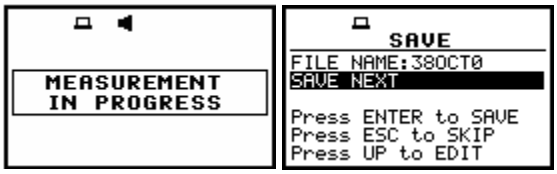
The number can be changed from 0 to N. The only limitation of the N value is the length of the file name, which cannot be longer than eight characters. In the case, when such limitation is achieved and the instrument can not change automatically the file's name the only possibility is to edit new base file name.

Notice: *The files can be overwritten (the use of the same file name)* ***without any warning*** *if the* ***REPLACE*** *option is switched on (path: MENU / FILE / SAVE OPTIONS / REPLACE).*



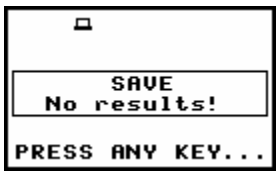
Displays in the simplified edition of the file name, saving and the "saturation" of that operation

As it was already written, 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. The special message is displayed for about 3 seconds in this case and the instrument returns to the **SAVE** window.



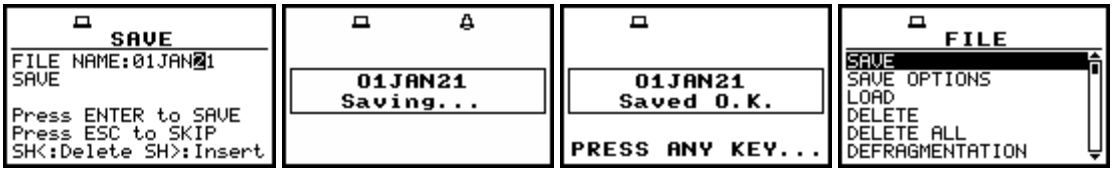
Displays after the attempt to perform unavailable saving operation and the return to the SAVE NEXT

The presented below message is displayed after trying to execute the save operation 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>** or the **<ALT>** one) and after pressing a push-button it returns to the **SAVE** window.



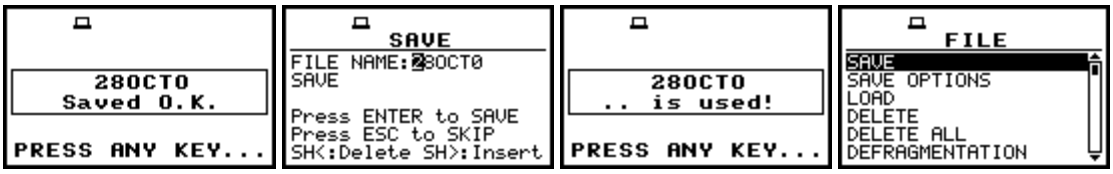
Display after the SAVE operation when there were no results for storing

Notice: *During the execution of the **SAVE** or **SAVE NEXT** function an additional window is displayed informing about the operation performed. In the case of short files, this window can be unnoticed by the user.*



Displays during and after the execution of the SAVE operation

As it was already written it is not possible to store the data in the file, which already exists, when the **REPLACE** is not active (**[ ]**) (*path: MENU / FILE / SAVE OPTIONS / REPLACE*). The presented below sequence of displays illustrates the situation when during the name edition process the user selected the name, which was used before. The instrument displays a special message and waits for the reaction of the user (any push-button should be pressed except the **<SHIFT>** or the **<ALT>** one) and after pressing a push-button it returns to the **FILE** list.



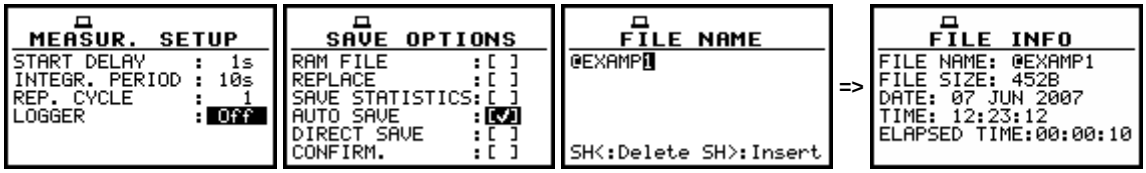
Displays after the attempt to overwrite a file if the REPLACE is not active

Notice: *The direct access to the **SAVE** / **SAVE NEXT** function is possible after pressing simultaneously the **<ENTER>** and **<ALT>** push-buttons if the **DIRECT SAVE** option is switched off (path: MENU / FILE / SAVE OPTIONS / DIRECT SAVE). In another case (**DIRECT SAVE** option is switched on) the results are saved, after pressing these push-buttons, in the file with the automatically incremented name.*

Notice: *After the usage of the* ***<ENTER>*** *and* ***<ALT>*** *push-buttons (if the* ***DIRECT SAVE*** *option is switched on) the measurement results are saved only once. The following pressing will not cause any instrument's reaction unless next measurement is performed. The same result can be saved in the multiply number of files only using the* ***SAVE*** */* ***SAVE NEXT*** *function.*

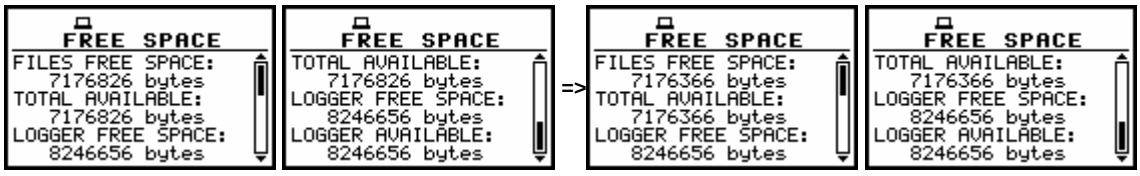
Finally, let us present some examples showing the occupation of the result files memory and the logger files memory after the execution of the saving operation.

Example 1. Let us assume the settings presented below where one measurement is performed with the integration period equal to 10 seconds, nothing is saved in the logger and the statistics are not stored. The measurement results are saved in the file named @EXAMP1.



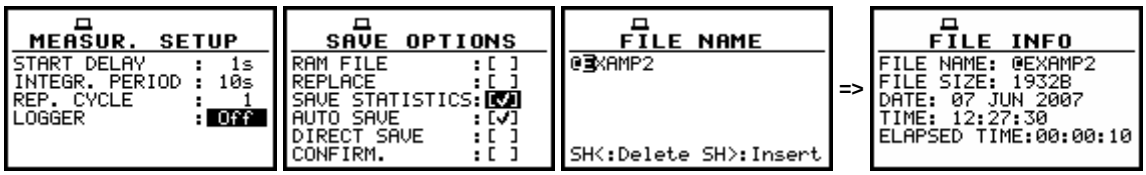
Settings and the FILE INFO after the performed measurements

The size of the file is equal to 452 bytes and it is visible in the **FILE INFO** window. The detailed description of the level-meter file structure is given in App. B. The @EXAMP1 file saved in the result files memory decreases the amount of the **FREE SPACE** and **TOTAL AVAILABLE** memory by the value of the file size (452 bytes) plus 4 bytes containing the addresses of the previous file and 4 bytes containing the address of the next file (all together 460 bytes). The size of the logger files memory (the **LOGGER FREE SPACE** and **LOGGER AVAILABLE**) is not changed as the **LOGGER** (*path: MENU / INPUT / MEASUREMENT SETUP*) was not activated.



FREE SPACE window before and after saving the @EXAMP1 file

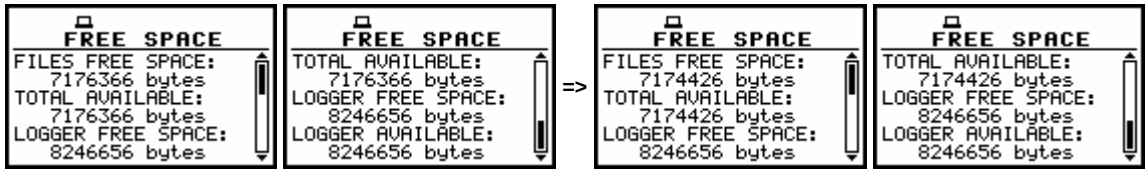
Example 2. Let us assume the settings presented below where one measurement is performed with the integration period equal to 10 seconds, nothing is saved in the logger but this time the statistics are also stored. The measurement results are saved in the file named @EXAMP2.



Settings and the FILE INFO after the performed measurements

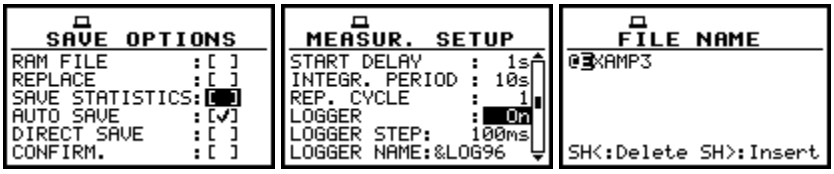
The size of the file is now equal to 1932 bytes and it is visible in the **FILE INFO** window. The detailed description of the level-meter file structure is given in App. B. The @EXAMP2 file saved in the result files memory decreases the amount of the **FREE SPACE** and **TOTAL AVAILABLE** memory by the value of the file size (1932 bytes) plus 4 bytes containing the addresses of the previous file and 4 bytes containing the address of the next file (all together 1940 bytes). The size of the logger files

memory (the **LOGGER FREE SPACE** and **LOGGER AVAILABLE**) is not changed as the **LOGGER** (*path: MENU / INPUT / MEASUREMENT SETUP*) was not activated.



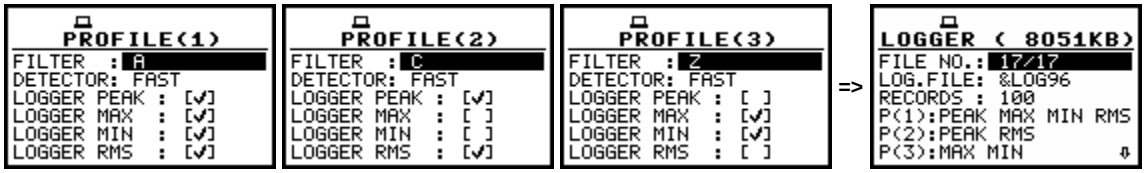
FREE SPACE window before and after saving the @EXAMP2 file

Example 3. Let us assume the settings presented below where one measurement is performed with the integration period equal to 10 seconds, the statistics are not saved but this time the **LOGGER** is activated (**On**). The measurement results are saved in the file named @EXAMP3.



Settings before the execution of the measurements

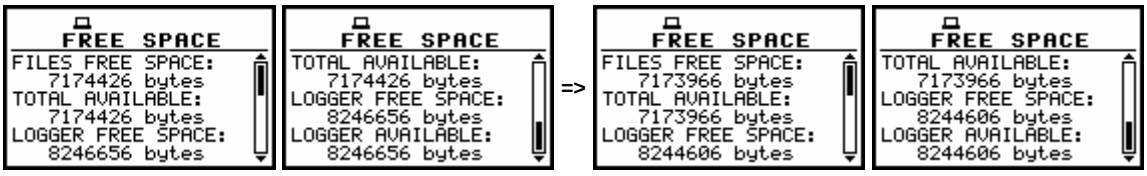
All together eight different results coming from **PROFILE 1** (**PEAK**, **MAX**, **MIN** and **RMS**), **PROFILE 2** (**PEAK** and **RMS**) and **PROFILE 3** (**MAX** and **MIN**) (*path: MENU / INPUT / PROFILE x*) are saved every 100 milliseconds. Therefore, during 10 seconds integration period it gives 10*10=100 **RECORDS** (*path: MENU / DISPLAY / LOGGER VIEW*), each containing eight values (each two-bytes long). All results are saved in the logger's file named &LOG96. The exact size of the &LOG96 is not displayed, only the approximate value (2 kilobytes) can be visible in the logger files delete window (*path: MENU / FILE / DELETE / LOGGER FILES*).



Settings for the current measurements

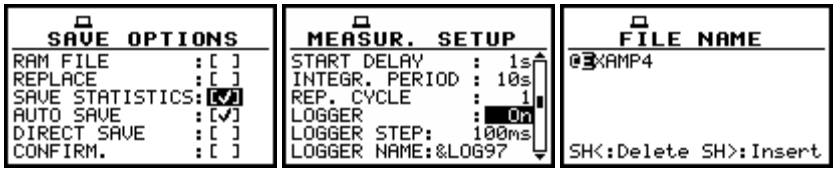
FILE INFO during and after the measurements

The size of the file is equal to 452 bytes and it is visible in the **FILE INFO** window. The detailed description of the level-meter file structure is given in App. B. The @EXAMP3 file saved in the result files memory decreases the amount of the **FREE SPACE** and **TOTAL AVAILABLE** memory by the value of the file size (452 bytes) plus 4 bytes containing the addresses of the previous file and 4 bytes containing the address of the next file (all together 460 bytes). The size of the logger files memory (the **LOGGER FREE SPACE** and **LOGGER AVAILABLE**) is also decreased by the value of 2050 bytes.



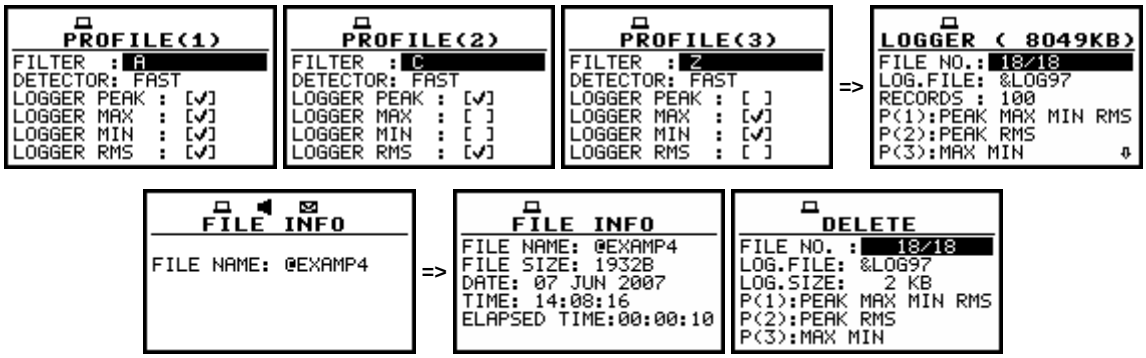
FREE SPACE window before and after saving the @EXAMP3 and &LOG96 files

Example 4. Let us assume the settings presented below where one measurement is performed with the integration period equal to 10 seconds, the statistics are saved and the **LOGGER** is activated (**On**). The measurement results are saved in the file named @EXAMP4.



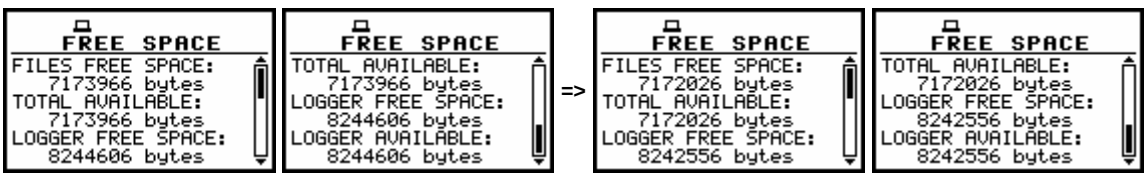
Settings before the execution of the measurements

All together eight different results coming from **PROFILE 1** (**PEAK**, **MAX**, **MIN** and **RMS**), **PROFILE 2** (**PEAK** and **RMS**) and **PROFILE 3** (**MAX** and **MIN**) (*path: MENU / INPUT / PROFILE x*) are saved every 100 milliseconds. So, during 10 seconds integration period it gives 10*10=100 **RECORDS** (*path: MENU / DISPLAY / LOGGER VIEW*), each containing eight values (each two-bytes long). All results are saved in the logger's file named &LOG97. The exact size of the &LOG97 is not displayed, only the approximate value (2 kilobytes) can be visible in the logger files delete window (*path: MENU / FILE / DELETE / LOGGER FILES*).



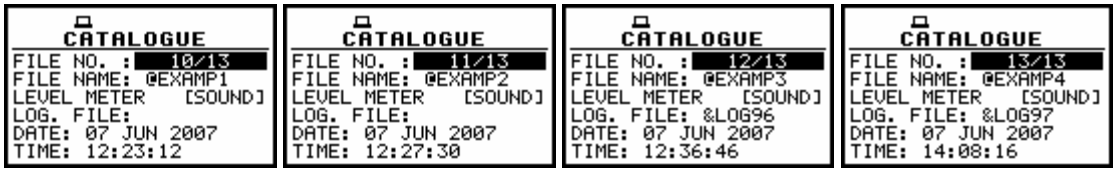
Settings and the FILE INFO during and after the measurements

The size of the file is equal to 1932 bytes and it is visible in the **FILE INFO** window. The detailed description of the level-meter file structure is given in App. B. The @EXAMP1 file saved in the result files memory decreases the amount of the **FILES FREE SPACE** and **TOTAL AVAILABLE** memory by the value of the file size (1932 bytes) plus 4 bytes containing the addresses of the previous file and 4 bytes containing the address of the next file (all together 1940 bytes). The size of the logger files memory (the **LOGGER FREE SPACE** and **LOGGER AVAILABLE**) is also decreased by the value of 2050 bytes.



FREE SPACE window before and after saving the @EXAMP4 and &LOG97 files

All four result files: @EXAMP1, @EXAMP2, @EXAMP3 and @EXAMP4 and two logger files: &LOG96 and &LOG97 described in the examples, are visible in the **CATALOGUE** window (*path: MENU / FILE / CATALOGUE*).



CATALOGUE window with the files described in the examples

7.2 Controlling the data storing in the instrument's memory - SAVE OPTIONS

The **SAVE OPTIONS** sub-list is used for the selection of the options of data storing in the **FLASH DISC** memory of the instrument. The sub-list is opened after pressing the **<ENTER>** push-button when the **SAVE OPTIONS** text in the **FILE** list is displayed inversely (selected using the **<▲>**, **<▼>** (or **<◄>**, **<►>**) push-buttons). The return to the **FILE** list is possible after pressing the **<ESC>** push-button.

FILE list with the SAVE OPTIONS text highlighted (displayed inversely)

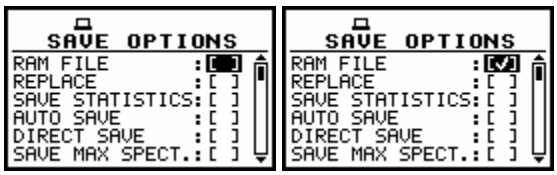
It is possible to write data into the same part of the memory starting all the time with the same address (**RAM FILE**), to replace the existing in the memory file by the new with the same name (**REPLACE**), to add to the results the statistics of the measurements (**SAVE STATISTICS**), to save automatically the results of the measurements (**AUTO SAVE**). The position of the sub-list is changed after pressing the **<▲>**, **<▼>** push-buttons. In order to confirm the selection the **<ENTER>** push-button has to be pressed. Such pressing closes also the opened sub-list.

7.2.1 Saving data starting from the same address - RAM FILE

The measurement data usually are saved in the different files in the flash memory of the instrument. There is also possibility to save data in RAM file starting from the same address. It means that each time the data are saved the previous file is overwritten.

This option is useful for the permanent monitoring and remote reading data from the instrument by means of any available interface with the proper period. In order to read data saved in a RAM file one has to use **#4,3** function described in details in App. A.

The **RAM FILE** is switched on after placing the special character (**[√]**) in the inversely displayed position in the line with the **RAM FILE** text. The activation or deactivation of the **RAM FILE** is done by pressing the **<◄>**, **<►>** push-buttons.



SAVE OPTIONS sub-list; the selection of the RAM FILE in LEVEL METER

After pressing the **<ENTER>** push-button the selections made in any position of the sub-list (in particular also in the **RAM FILE**) are confirmed and the sub-list is closed.

In the case when the **AUTO SAVE** was active (**[√]**), after pressing the **<ENTER>** push-button the **FILE NAME** window is opened for editing the names for the **AUTO SAVE** files.

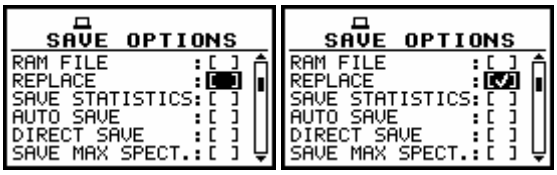
The **SAVE OPTION** is closed ignoring all settings made in it after pressing the **<ESC>** push-button.

The **RAM FILE** functionality is available only in the **LEVEL METER** and **1/1 OCTAVE** analysis mode. In the **DOSE METER** mode the line with the **RAM FILE** text does not appear on the display after entering the **SAVE OPTIONS** sub-list.

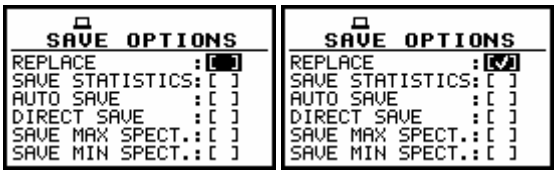
7.2.2 Replacement of the existing files by the new ones - REPLACE

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**.

It is possible to erase the old file and to save the new one with the same name if the position is active (**[√]**). The activation or deactivation of the **REPLACE** is done by pressing the **<◄>**, **<►>** push-buttons.

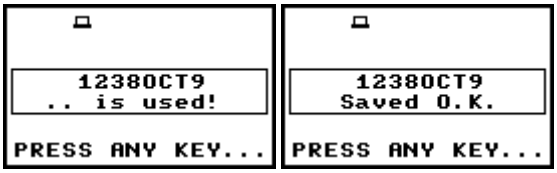


SAVE OPTIONS sub-list; the selection of the REPLACE in LEVEL METER and 1/1 OCTAVE analyser



SAVE OPTIONS sub-list; the selection of the REPLACE in DOSE METER

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**. In the other case, the existing file is overwritten.



Displays during the file saving when the REPLACE is switched off and on

After pressing the **<ENTER>** push-button the selections made in any position of the sub-list (in particular also in the **REPLACE**) are confirmed and the sub-list is closed.

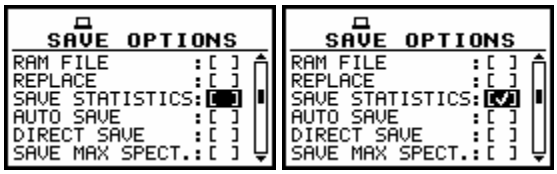
In the case when the **AUTO SAVE** was active (**[√]**), after pressing the **<ENTER>** push-button the **FILE NAME** window is opened for editing the names for the **AUTO SAVE** files.

The **SAVE OPTION** sub-list is closed ignoring all settings made in it after pressing the **<ESC>** push-button.

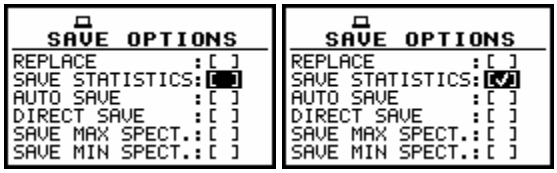
7.2.3 Controlling the measurement statistics savings - SAVE STATISTICS

The **SAVE STATISTICS** 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 statistics are calculated (the values named from **L01** to **L99**). The activation or deactivation of the **SAVE STATISTICS** is done by pressing the **<◄>**, **<►>** push-buttons.

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! Ten selected statistic levels are always saved with the main results.***



SAVE OPTIONS sub-list; the selection of the SAVE STATISTICS in LEVEL METER and in 1/1 OCTAVE analysis mode



SAVE OPTIONS sub-list; the selection of the SAVE STATISTICS in DOSE METER

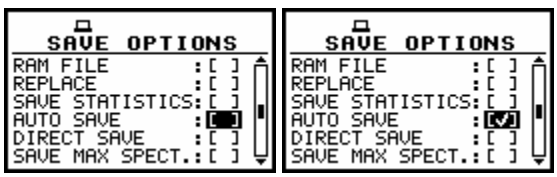
After pressing the **<ENTER>** push-button the selections made in any position of the sub-list (in particular also in the **SAVE STATISTICS**) are confirmed and the sub-list is closed.

In the case when the **AUTO SAVE** was active (**[√]**), after pressing the **<ENTER>** push-button the **FILE NAME** window is opened for editing the names for the **AUTO SAVE** files.

The **SAVE OPTION** sub-list is closed ignoring all settings made in it after pressing the **<ESC>** push-button.

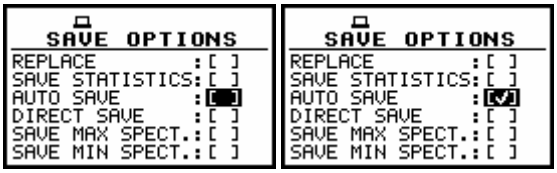
7.2.4 Controlling the measurement results savings - AUTO SAVE

Using the **AUTO SAVE** one can set the self-saving of the measurement results (**[√]**) or to switch off (**[ ]**) this possibility. The activation or deactivation of the **AUTO SAVE** is done by pressing the **<◄>**, **<►>** push-buttons. This position was also established in order not to waste too much memory of the instruments when the self-saving is not necessary.



SAVE OPTIONS sub-list; the selection of the AUTO SAVE in LEVEL METER and in 1/1 OCTAVE modes

Notice: *The **AUTO SAVE** function can be performed only in the case when the **INTEGR. PERIOD** (path: MENU / INPUT / MEASUREMENT SETUP) is not less than 10 seconds. If it is less than 10 seconds, the measurement results are not saved without any indication of that fact! There is only one exception - when the **REP. CYCLE** (path: MENU / INPUT / MEASUREMENT SETUP) is equal to one, the **AUTO SAVE** function is executed disregarding the value of the integration period.*



SAVE OPTIONS sub-list; the selection of the AUTO SAVE in DOSE METER

The **FILE NAME** window is opened after switching on the **AUTO SAVE** function and pressing the **<ENTER>** push-button. This window is closed and the **SAVE OPTION** sub-list is displayed once more, but with the **AUTO SAVE** function switched off, after pressing the **<ESC>** push-button.

Displays during the execution of the AUTO SAVE switching on; the FILE NAME skipping and return to the SAVE OPTION sub-list

When the integration period is too short for setting the **AUTO SAVE** option the following message appears on the display:

Display after attempt of setting AUTO SAVE option with too short INT. PERIOD

The **FILE NAME** window is closed after pressing the **<ENTER>** push-button with the confirmation of the **AUTO SAVE** function switched on and the user interface returns to the **FILE** list.

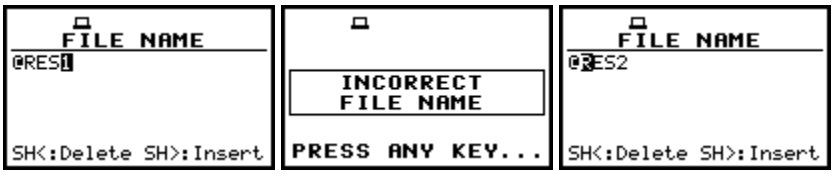
Displays during the execution of the AUTO SAVE switching on; the FILE NAME confirmation and return to the FILE list

The edition of the file name in the **FILE NAME** window is performed almost in the same way as it was described in the case of the **SAVE** / **SAVE NEXT** function. The displayed inversely character is currently edited. The **<◄>**, **<►>**, **<▲>**, **<▼>** and **<SHIFT>** push-buttons are used for editing the name which cannot exceed eight characters including the starting special character @ which cannot be edited. One can select the proper position of the character in the edited text using the **<◄>**, **<►>** push-buttons.

The available ASCII characters can be changed using the **<▲>** (or **<▼>**) push-button pressed together with the **<SHIFT>** one. Additionally, the character can be also changed using the **<▲>** (or **<▼>**) push-button (this functionality is not available in the **SAVE** / **SAVE NEXT** function). The subsequent digits, underline, big letters and space appear on the display in the inversely displayed position after each pressing of the mentioned above push-buttons.

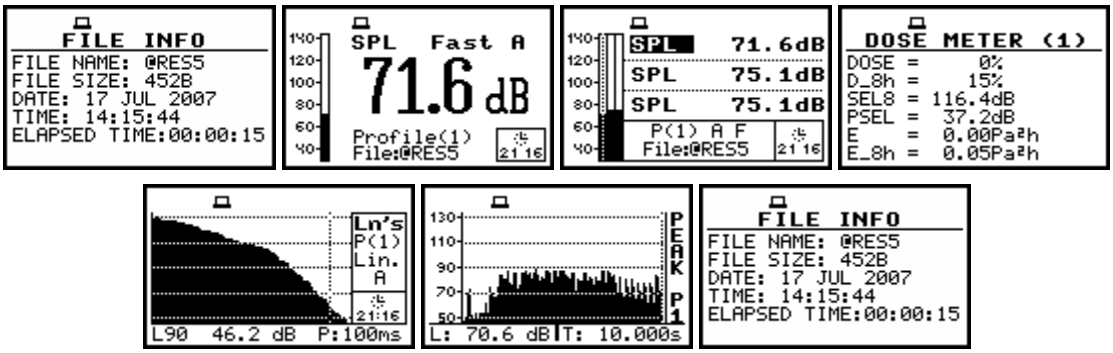
The edition is finished after pressing the **<ENTER>** push-button. The edited name is compared with the file names existing in the catalogue.

In the case when the file with the same name already exists, the special message is displayed and after pressing any character except the **<SHIFT>** or **<ALT>** one, the instrument returns once more to the **FILE NAME** window.



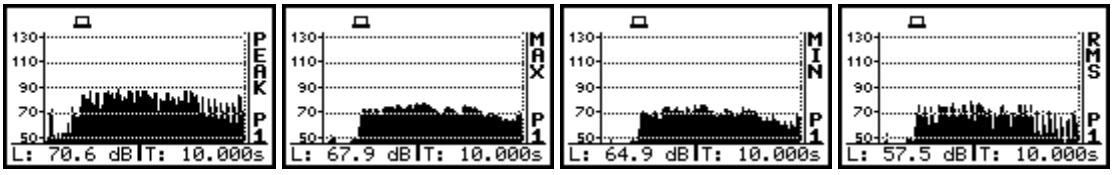
Displays after the incorrect file name edition

When the **AUTO SAVE** option is active (**[√]**), after starting the measurements by pressing the **<START/STOP>** push-button the results are saved in the file with the selected name. Depending on the instrument's mode and selected options the sequence of the displays available after each pressing of the **<▲>** or **<▼>** could be as presented below.



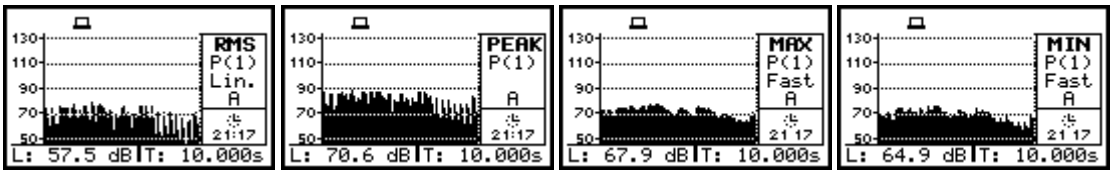
Measurement results presented after pressing the <▲> or <▼> push-buttons

In the case when from a profile more than one result was saved in the logger's file, the other results are presented after pressing the **<◄>**, **<►>** push-buttons together with the **<ALT>** one.



Results saved from a profile presented after pressing the <◄> or <►> and <ALT> push-buttons

After pressing the **<▲>** or **<▼>** and **<ALT>** push-buttons the **VIEW** is changed (*path: MENU / DISPLAY / DISPLAY SETUP / LOGGER VIEW / VIEW*). So, after pressing these push-buttons and then repeating the previous sequence (the **<◄>**, **<►>** push-buttons together with the **<ALT>** one) the user can observe the displays presented below.

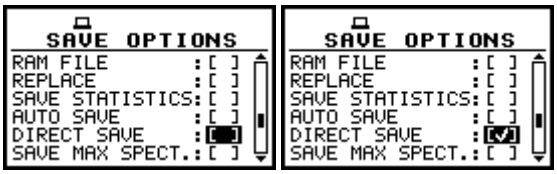


Results saved from a profile presented after pressing the <◄> or <►> and <ALT> push-buttons

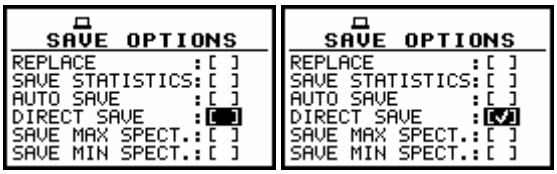
Another measurement is started after next pressing of the **<START/STOP>** push-button. The measurement is stopped after the selected **INTEGR. PERIOD** (*path: MENU / INPUT / MEASUREMENT SETUP / INTEGR. PERIOD*) names of the next saved files are automatically incremented by one. The same remarks are valid in this case as it was already stated in the description of the **SAVE NEXT** function.

7.2.5 Direct access to the SAVE / SAVE NEXT function - DIRECT SAVE

The **DIRECT SAVE** enables one to select the instrument's reaction on the simultaneous pressing of the **<ENTER>** and **<ALT>** push-buttons. If this option is not active (**[ ]**), after pressing these push-buttons the **SAVE** window is accessed (if the measurements are not performed). If the option is active (**[√]**), after pressing the **<ENTER>** and **<ALT>** push-buttons the results are saved in the file with the automatically incremented name and the proper message is displayed for a few seconds. The proper setting of the **DIRECT SAVE** is done by pressing the **<◄>**, **<►>** push-buttons.



SAVE OPTIONS sub-list; the selection of the DIRECT SAVE in LEVEL METER



SAVE OPTIONS sub-list; the selection of the DIRECT SAVE in DOSE METER

After pressing the **<ENTER>** push-button the selections made in any position of the sub-list (in particular also in the **DIRECT SAVE**) are confirmed and the sub-list is closed.

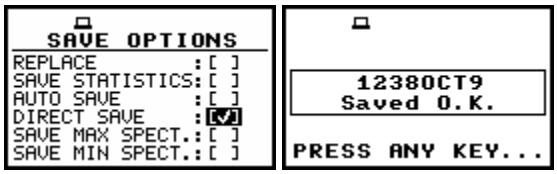
In the case when the **AUTO SAVE** was active (**[√]**), after pressing the **<ENTER>** push-button the **FILE NAME** window is opened for editing the names for the **AUTO SAVE** files. The **SAVE OPTION** sub-list is closed ignoring all settings made in it after pressing the **<ESC>** push-button.

During the execution of the measurements pressing the **<ENTER>** and **<ALT>** push-buttons causes, disregarding the option set in the **DIRECT SAVE**, that the message presented below is displayed.

Display after the attempt to perform an unavailable operation during measurement in progress

The presented below displays illustrates the difference in the user interface execution after pressing the **<ENTER>** and **<ALT>** push-buttons in the case when the measurements are not performed and the **DIRECT SAVE** is not active (**[ ]**) and active (**[√]**).

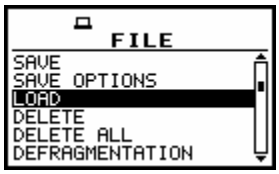
Exemplary executions of the software with the DIRECT SAVE not active



Exemplary executions of the software with the DIRECT SAVE active

7.3 Loading the files with the measurement results - LOAD

The **LOAD** is used for loading data file from the FLASH DISC (e.g. for the verification or comparison). The position is opened after pressing the **<ENTER>** push-button when the **LOAD** text in the **FILE** list is displayed inversely (selected using the **<▲>**, **<▼>** (or **<◀>**, **<▶>**) push-buttons). The return to the **FILE** list is possible after pressing the **<ESC>** push-button.



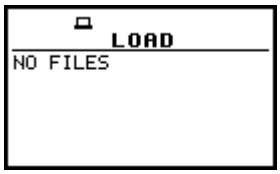
FILE list with the LOAD text highlighted (displayed inversely)

Notice: It is not possible to load the file during the execution of the measurements. *On such attempt the message:* ***MEASUREMENT IN PROGRESS*** *is displayed for about 3 seconds.*

After pressing the **<ENTER>** push-button the instrument checks its current state. In the case when the measurements are performed, the file loading is impossible and the message is displayed.

Display after the attempt to perform an unavailable operation during measurement in progress

In the case when the instrument memory is empty (no file is stored), after entering the **LOAD** window the **NO FILES** text is displayed and the instrument waits for the reaction of the user. The user should press then the **<ESC>**, **<ENTER>** (the instrument returns to the **FILE** list) or **<START / STOP>** push-button (the instrument starts the measurement).



Display 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 of the **LOAD** window. The name of the file is displayed in the second line (its current number is presented in the first line). The name of the file suggests the operation the file was created-in.

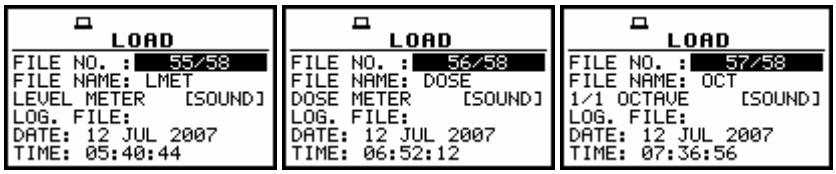
The names in which the first character is @ are coming from the **AUTO SAVE** function.

The file with the default name @Timer@ is coming from the **AUTO SAVE** function executed in the **TIMER** operation. The other names suggest the **SAVE** / **SAVE NEXT** function. The type of the current file (**LEVEL METER**, **1/1 OCTAVE** or **DOSE METER**) is given in the third line.

If during the measurements which results are saved in the file, the logger file was also created its name is displayed in the fourth line.

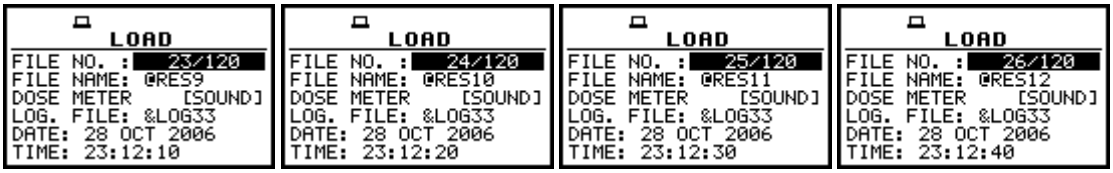
Notice: *The logger file can be deleted from the instrument's memory in the **FILE** / **DELETE** / **LOGGER FILES** window and this deleting operation does not modify the contents of the fourth line of the **LOAD** window.*

The date and time of the **SAVE** operation are displayed in the fifth and sixth line respectively. The change of the current file with the unit step can be done after pressing the **<◄>**, **<►>** push-buttons. The first file is available after pressing the **<◄>** with **<SHIFT>** push-button (or **<▼>** with **<SHIFT>**) and the last one is displayed after pressing the **<►>** with **<SHIFT>** push-button (or **<▲>** with **<SHIFT>**).



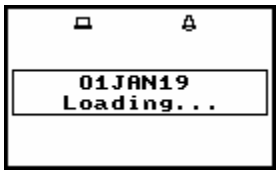
Exemplary contents of the LOAD window

Notice: *Many result files can be associated with one logger file, i.e. during the execution of the **AUTO SAVE** function.*



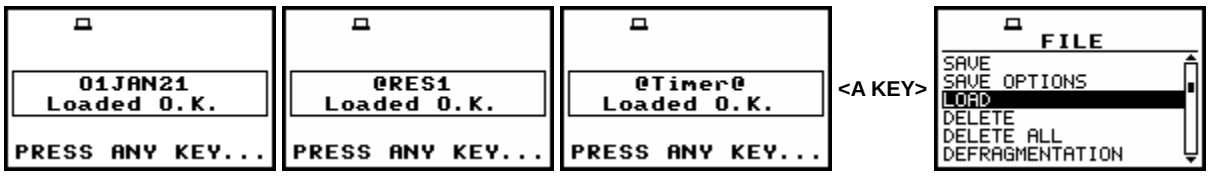
Exemplary result files associated with the same logger file (&LOG33)

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



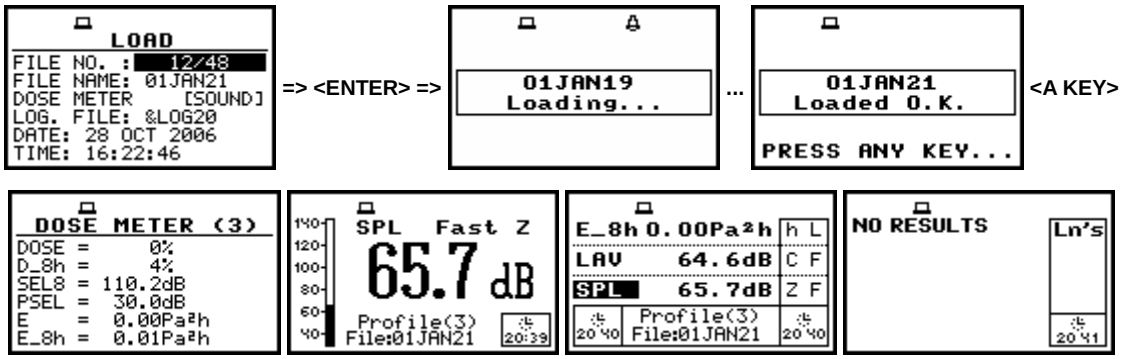
Display during the execution of the loading function

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>** or **<ALT>** one) and after pressing a push-button it returns to the **FILE** list.



Displays after the execution of the LOAD operation

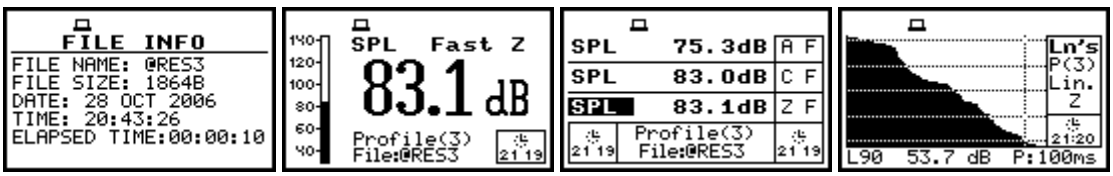
The contents of the loaded file is displayed in the available result presentation modes (after pressing the **<▲>**, **<▼>** push-buttons) depending on the current settings of the instrument.



Exemplary displays during the loading and checking the contents of a DOSE METER file

In the case when in the **DISPLAY MODES** sub-list the **STATISTICS** are activated and in the loaded file the statistic analysis was not included the display with **NO RESULT** message is presented in the graphical presentation of the statistical levels as it is given above.

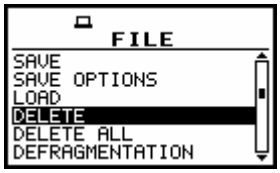
Exemplary displays during a LEVEL METER file loading



Exemplary displays during contents checking of a LEVEL METER file

7.4 Removing a file with the measurement results from memory - DELETE

The **DELETE** is used to remove a file from memory. In order to enter the window the user has to select the **DELETE** text (to display it inversely) using the **<▲>**, **<▼>** push-buttons and then press the **<ENTER>** one.



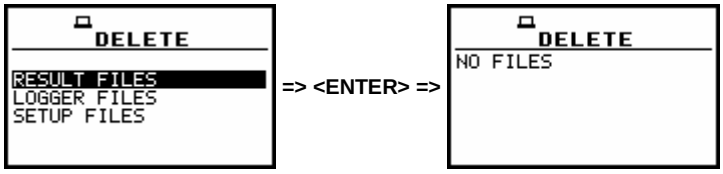
FILE list with the DELETE text highlighted (displayed inversely)

In the **DELETE** window, there are three elements: **RESULT FILES**, **LOGGER FILES** and **SETUP FILES**. In order to enter the selected sub-list the user has to select the proper text (to display it inversely) using the **<▲>**, **<▼>** (or **<◄>**, **<►>**) push-buttons and then press the **<ENTER>** one. The **DELETE** window is closed and the instrument returns to the **FILE** list after pressing the **<ESC>** one.

7.4.1 Deleting files with the main results - RESULT FILES

In order to enter the window one has to press the **<ENTER>** push-button on the inversely displayed **RESULT FILES** text of the **DELETE** sub-list using the **<▲>**, **<▼>** push-buttons. The **DELETE** sub-list is closed and the instrument returns to the **FILE** list after pressing the **<ESC>** push-button.

In order to enter the list of the saved result files in the flash memory one has to press the **<ENTER>** push-button. In the case when the result files were not saved in the memory, the special message is displayed and the instrument waits for the reaction of the user. The user should press any push-button except the **<SHIFT>** and **<ALT>**.



RESULT FILES selected to be deleted and the flash memory does not contain any file

After pressing the **<ENTER>** push-button the instrument checks its current state. In the case when the measurements are performed, the **RESULT FILES** entering is impossible. In such case, the message is displayed and the instrument returns after few seconds to the **DELETE** sub-list.

Display after the attempt to perform an unavailable operation during measurement in progress

The same data about the existing in the instrument files as in the **FILE / LOAD** window are displayed after successful opening the **FILE / DELETE / RESULT FILES** one (pressing the **<ENTER>** push-button). The current number of the file and the total number of the saved files is displayed in the first line of the window. The name of the file is displayed in the second line (its current number is presented in the first line). The name of the file suggests the operation the file was created-in.

The names in which the first character is @ are coming from the **AUTO SAVE** function.

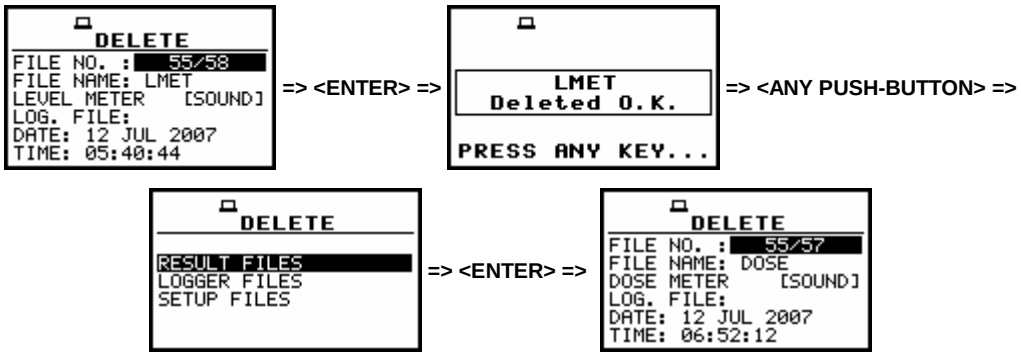
The file with the default name @Timer@ is coming from the **AUTO SAVE** function executed in the **TIMER** operation. The other names suggest the **SAVE** / **SAVE NEXT** function. The type of the current file (**LEVEL METER**, **1/1 OCTAVE** or **DOSE METER**) is given in the third line. If during the measurements which results are saved in the file, the logger file was also created its name is displayed in the fourth line.

Notice: *The logger file can be deleted from the instrument's memory in the* ***FILE*** */* ***DELETE*** */* ***LOGGER FILES*** *window and this deleting operation does not modify the contents of the fourth line of the* ***DELETE*** *window.*

The date and time of the **SAVE** operation are displayed in the fifth and sixth line, respectively. The change of the current file with the unit step can be done after pressing the **<◄>**, **<►>** push-buttons. The first file is available after pressing the **<◄>** with **<SHIFT>** push-button (or **<▼>** with **<SHIFT>**) and the last one is displayed after pressing the **<►>** with **<SHIFT>** push-button (or **<▲>** with **<SHIFT>**).

Selection of the RESULT FILES to be deleted

The selected 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>** and **<ALT>** one) and after pressing a push-button it returns to the **DELETE** sub-list.

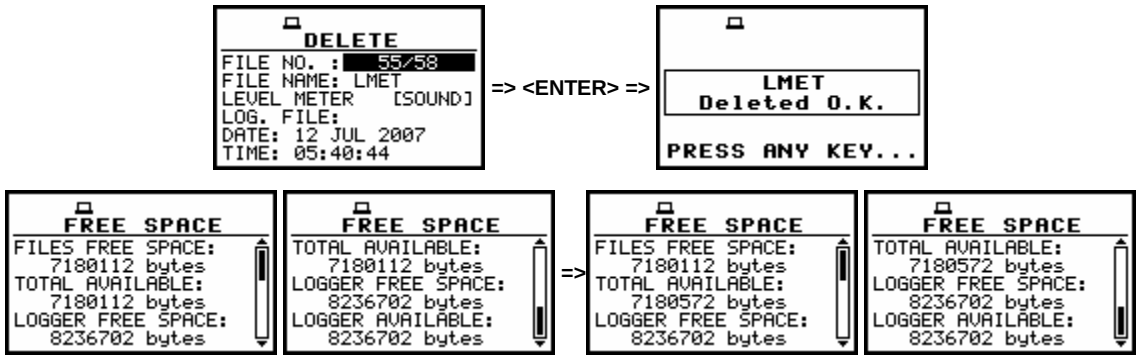


Execution of the RESULT FILES deletion

After the execution of the result files removing from the memory usually the **FREE SPACE** memory (*path: MENU / FILE / FREE SPACE*) rests the same as before the deletion but **TOTAL AVAILABLE** memory is increased. It is because erased file was somewhere in the file's space.

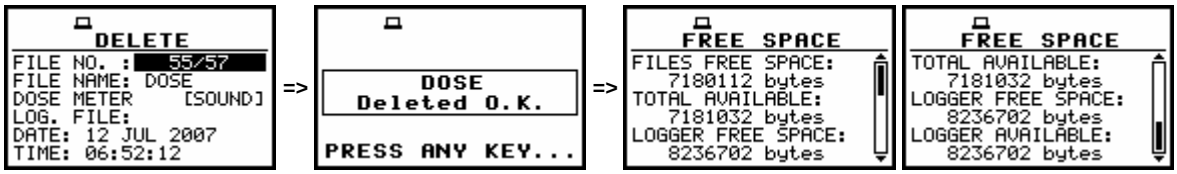
The file is no longer accessible but the recuperated memory is still unused for the next saving. This memory becomes available after the defragmentation process (*path: MENU / FILE / DEFRAGMENTATION)* in which all files are moved to the continuous space. In order to illustrate it let us consider the result file named @EXAMP2, which is 1878 bytes long.

After removing LMET file from the memory, only the **TOTAL AVAILABLE** is increased (*path: MENU / FILE / FREE SPACE*).



Execution of the file deletion and the influence of this process on the memory space

The displays below illustrates the erasing from the flash memory another file named @EXAMP3 which was also 460 bytes long; the **FILES FREE SPACE**, **LOGGER FREE SPACE** and **LOGGER AVAILABLE** remain unchanged while the **TOTAL AVAILABLE** is increased.



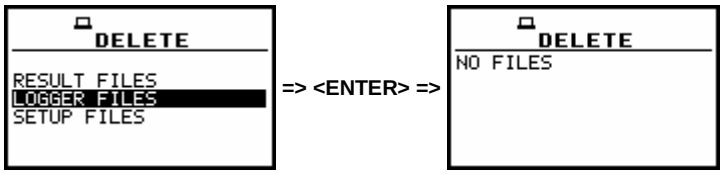
Execution of the @EXAMP3 file deletion and the influence of this process on the memory space

7.4.2 Deleting logger files - LOGGER FILES

In order to enter the window one has to press the **<ENTER>** push-button on the inversely displayed **LOGGER FILES** text of the **DELETE** sub-list using the **<▲>**, **<▼>** push-buttons. The **DELETE** sub-list is closed and the instrument returns to the **FILE** list after pressing the **<ESC>** push-button.

In order to enter the list of the saved logger files in the memory one has to press the **<ENTER>** push-button.

In the case when the logger files were not saved in the memory, the special message is displayed and the instrument waits for the reaction of the user. The user should press any push-button except the **<SHIFT>** and **<ALT>**.



LOGGER FILES selected to be deleted and the memory does not contain any file

After pressing the **<ENTER>** push-button the instrument checks its current state. In the case when the measurements are performed, the **LOGGER FILES** entering is impossible. In such case, the message is displayed and the instrument returns after few seconds to the **DELETE** sub-list.

Display after the attempt to perform an unavailable operation during measurement in progress

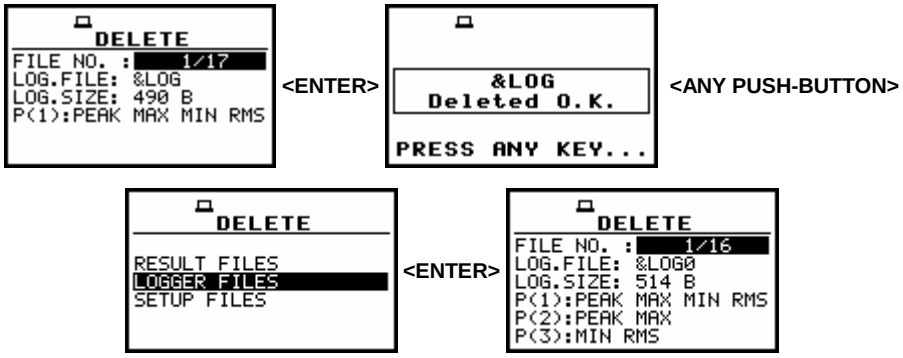
The similar data about the existing in the instrument logger files as in the **DISPLAY / LOGGER VIEW** window are displayed after successful opening the **FILE / DELETE / LOGGER FILES** one (pressing the **<ENTER>** push-button). In the first line, the available still logger's memory is displayed followed 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 size of the logger file which name is displayed in the previous line (**LOG.SIZE:**).
- The results saved (if any are present) in the logger from the first profile (**P(1):**).
- The results saved (if any are present) in the logger from the second profile (**P(2):**).
- The results saved (if any are present) in the logger from the third profile (**P(3):**).

The change of the current file with the unit step can be done after pressing the **<➤>**, **<➤>** push-buttons. The first file is available after pressing the **<➤>** with **<SHIFT>** push-button (or **<➤>** with **<SHIFT>**) and the last one is displayed after pressing the **<➤>** with **<SHIFT>** push-button (or **<➤>** with **<SHIFT>**).

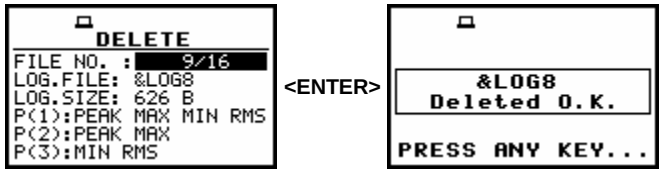
Selection of the LOGGER FILES to be deleted

The selected 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>** and **<ALT>** one) and after pressing a push-button it returns to the **DELETE** sub-list.

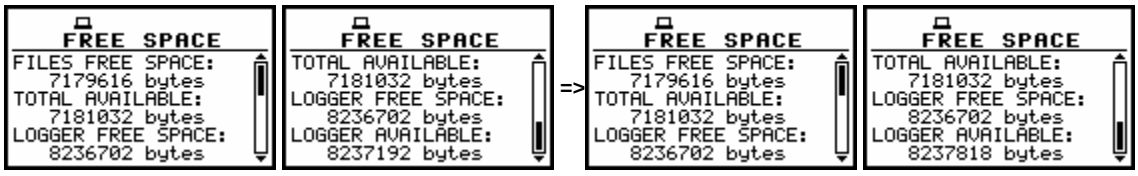


Execution of the LOGGER FILES deletion

After the execution of the logger files deletion from the memory, usually the logger free space rests the same as before the deletion but the total logger available memory is increased. It is because erased file was somewhere in the file's space. The file is no longer accessible but the recuperated memory is still unused for the next saving. This memory becomes available after the defragmentation process (*path: MENU / FILE / DEFRAGMENTATION / LOGGER DEFRAGMENT*.) in which all files are moved to the continuous space. It can be illustrated on the figures below by erasing from the memory logger file named &LOG8 (626 B). The presented there **FREE SPACE** window comes from the **FILE** list.

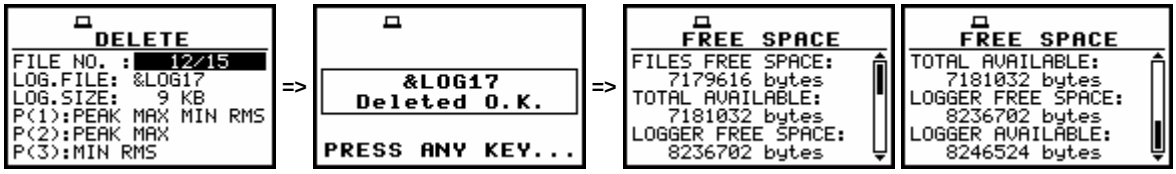


Execution of the &LOG8 file erasing from the logger memory



Increase of the LOGGER AVAILABLE memory after deletion a file from logger memory

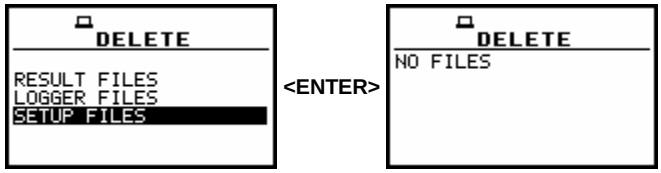
The displays below illustrates the erasing from the logger memory another big file (9 kB) named &LOG17 just after the erasing of the file &LOG8 the **FILES FREE SPACE**, **TOTAL AVAILABLE** and **LOGGER FREE SPACE** remain unchanged while the **LOGGER AVAILABLE** is increased.



Execution of the &LOG17 file deletion and the influence of this process on the memory space

7.4.3 Deleting files with setup settings - SETUP FILES

In order to enter the window one has to press the **<ENTER>** push-button on the inversely displayed **SETUP FILES** text of the **DELETE** sub-list using the **<▲>**, **<▼>** push-buttons. The **DELETE** sub-list is closed and the instrument returns to the **FILE** list after pressing the **<ESC>** push-button. In order to enter the list of the saved setup files in the memory one has to press the **<ENTER>** push-button. In the case when the setup files were not saved in the memory, the special message is displayed and the instrument waits for the reaction of the user. The user should press any push-button except the **<SHIFT>** and **<ALT>**.



SETUP FILES selected to be deleted and the instrument's memory does not contain any file

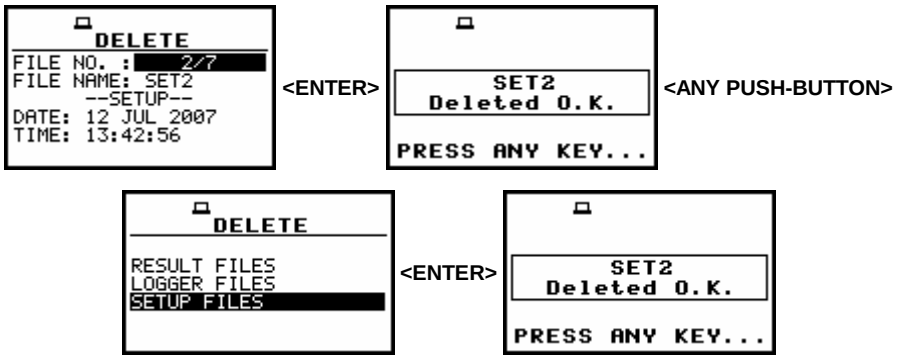
After pressing the **<ENTER>** push-button the instrument checks its current state. In the case when the measurements are performed, the **SETUP FILES** entering is impossible. In such case, the message is displayed and the instrument returns after few seconds to the **DELETE** sub-list.

Display after the attempt to perform an unavailable operation during measurement in progress

The data about the existing in the instrument setup files are displayed after successful opening the **FILE / DELETE / LOGGER FILES** window (pressing the **<ENTER>** push-button). The current number of the file and the total number of the saved setup files is displayed in the first line of the window. The date and time of the **SAVE SETUP** operation is displayed in the last two lines respectively. The change of the current file with the unit step can be done after pressing the **<◄>**, **<►>** push-buttons. The first file is available after pressing the **<◄>** with **<SHIFT>** push-button (or **<▼>** with **<SHIFT>**) and the last one is displayed after pressing the **<►>** with **<SHIFT>** push-button (or **<▲>** with **<SHIFT>**).

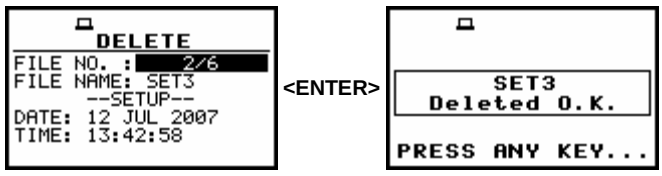
Selection of the SETUP FILES to be deleted

The selected 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>** and **<ALT>** one) and after pressing a push-button it returns to the **DELETE** sub-list.

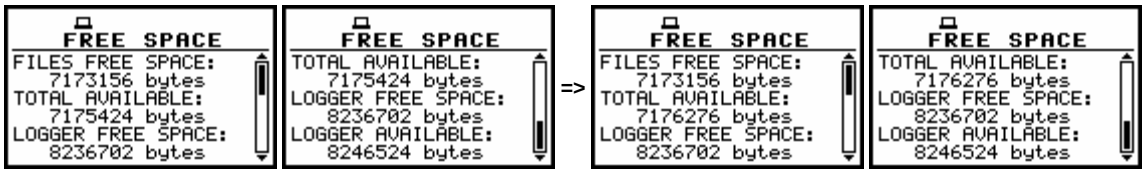


Execution of the RESULT FILES deletion

After the execution of the setup files removing from the memory usually the **FREE SPACE** memory (*path: MENU / FILE / FREE SPACE*) rests the same as before the deletion but **TOTAL AVAILABLE** memory is increased. It is because erased file was somewhere in the file's space. The file is no longer accessible but the recuperated memory is still unused for the next saving. This memory becomes available after the defragmentation process (*path: MENU / FILE / DEFRAGMENTATION / FILES DEFRAGMENT*.) in which all files are moved to the continuous space. In order to illustrate it let us consider the removing from the memory the setup file named @SET7. After this, only the **TOTAL AVAILABLE** is increased (*path: MENU / FILE / FREE SPACE*).

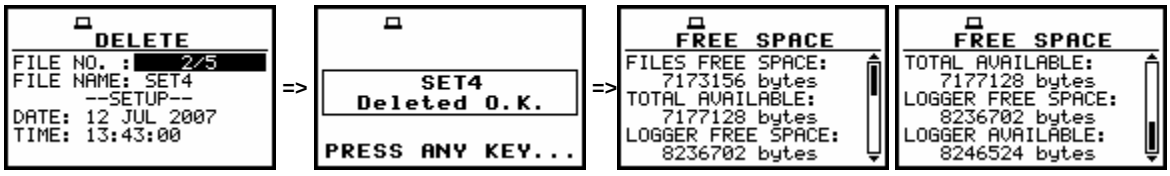


Execution of the @SET7 file deletion



Influence of the execution of the @SET3 file deletion on the memory space

The displays below illustrates the erasing from the flash memory another file named @SET8; the **FILES FREE SPACE**, **LOGGER FREE SPACE** and **LOGGER AVAILABLE** remain unchanged while the **TOTAL AVAILABLE** is increased.



Execution of the @SET4 file deletion and the influence of this process on the memory space

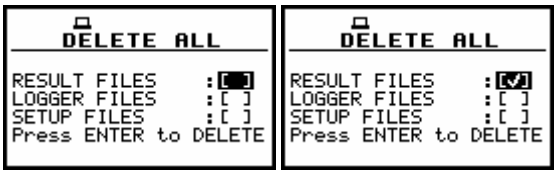
7.5 Removing all files with measurement results from memory - DELETE ALL

The **DELETE ALL** is used to remove all files from memory. In order to enter the position the user has to select the **DELETE ALL** text in the **FILE** list, using the **<▲>**, **<▼>** (or **<◄>**, **<►>**) push-buttons and press the **<ENTER>** one. The **DELETE ALL** sub-list consists of three positions: **RESULT FILES**, **LOGGER FILES** and **SETUP FILES**.

DELETE ALL text highlighted (displayed inversely) in the FILE list

7.5.1 Deleting all result files - RESULT FILES

In order to activate the position the user has to place the special character in the line with the **RESULT FILES** text using the **<►>** push-button. The **DELETE ALL** sub-list is closed and the instrument returns to the **FILE** list after pressing the **<ESC>** push-button. In order to enter the **DELETE ALL** window one has to press the **<ENTER>** push-button.

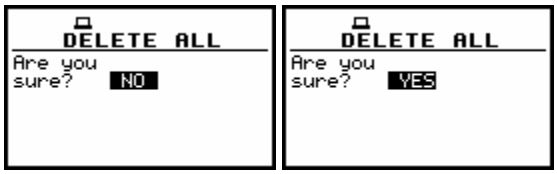


RESULT FILES selected to the execution of the DELETE ALL operation

After pressing the **<ENTER>** push-button the instrument checks its current state. In the case when the measurements are performed, the execution of the **DELETE ALL** operation is not possible. In such case, the message is displayed for few seconds and the instruments returns to the **FILE** list.

Display after the attempt to perform an unavailable operation during measurement in progress

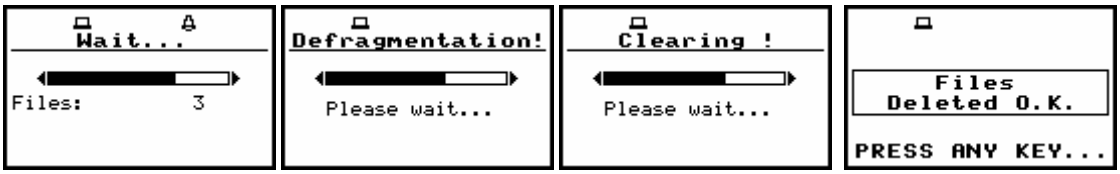
If the measurements are not performed the instrument requests the confirmation of the operation after entering this window (after pressing the **<ENTER>** push-button). After next pressing the **<ENTER>** push-button, when the **NO** option is selected, the window is closed and the instrument returns to the **FILE** list. The selection of the **NO** or **YES** option is possible using the **<◄>**, **<►>** push-buttons. The return to the **FILE** list is also possible after pressing the **<ESC>** push-button.



Displays with the confirmation window during the execution of the DELETE ALL operation

All files from the selected type are deleted after the **<ENTER>** push-button pressing, when the **YES** option is selected. The message is displayed after the successful execution of all stages of the operation.

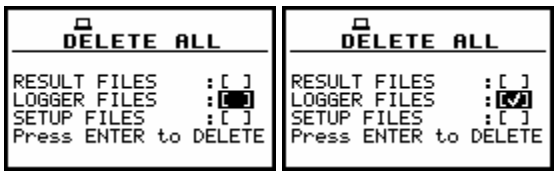
The instrument waits for the reaction of the user (any push-button should be pressed except the **<SHIFT>** and **<ALT>** one) and after pressing a push-button it returns to the **FILE** list.



Execution of the DELETE ALL operation in the case of RESULT FILES selection

7.5.2 Deleting all logger files - LOGGER FILES

In order to activate the position the user has to place the special character in the line with the **LOGGER FILES** text using the **<➢>** push-button. The **DELETE ALL** sub-list is closed and the instrument returns to the **FILE** list after pressing the **<ESC>** push-button. In order to enter the **DELETE ALL** window one has to press the **<ENTER>** push-button.

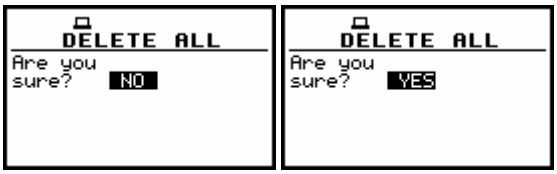


LOGGER FILES selected to the execution of the DELETE ALL operation

After pressing the **<ENTER>** push-button the instrument checks its current state. In the case when the measurements are performed, the execution of the **DELETE ALL** operation is not possible. In such case, the message is displayed for few seconds and the instruments returns to the **FILE** list.

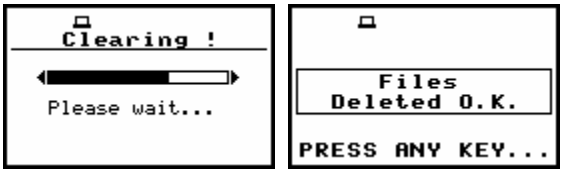
Display after the attempt to perform an unavailable operation during measurement in progress

If the measurements are not performed the instrument requests the confirmation of the operation after entering this window (after pressing the **<ENTER>** push-button). After next pressing the **<ENTER>** push-button, when the **NO** option is selected, the window is closed and the instrument returns to the **FILE** list. The selection of the **NO** or **YES** option is possible using the **<➢>**, **<➢>** push-buttons. The return to the **FILE** list is also possible after pressing the **<ESC>** push-button.



Displays with the confirmation window during the execution of the DELETE ALL operation

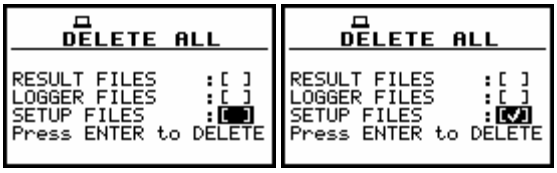
All files from the selected type are deleted after the **<ENTER>** push-button pressing, when the **YES** option is selected. The message is displayed after the successful execution of all stages of the operation. The instrument waits for the reaction of the user (any push-button should be pressed except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



Execution of the DELETE ALL operation in the case of LOGGER FILES selected

7.5.3 Deleting all setup files - SETUP FILES

In order to activate the position the user has to place the special character in the line with the **SETUP FILES** text using the **<➤>** push-button. The **DELETE ALL** sub-list is closed and the instrument returns to the **FILE** list after pressing the **<ESC>** push-button. In order to enter the **DELETE ALL** window one has to press the **<ENTER>** push-button.

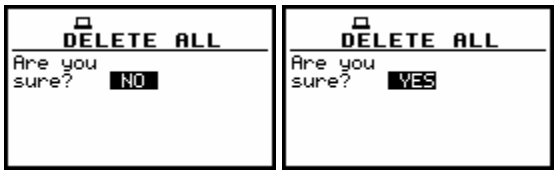


SETUP FILES selected to the execution of the DELETE ALL operation

After pressing the **<ENTER>** push-button the instrument checks its current state. In the case when the measurements are performed, the execution of the **DELETE ALL** operation is not possible. In such case, the message is displayed for few seconds and the instruments returns to the **FILE** list.

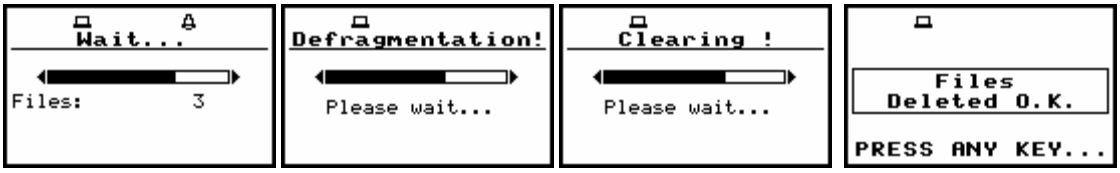
Display after the attempt to perform an unavailable operation during measurement in progress

If the measurements are not performed the instrument requests the confirmation of the operation after entering this window (after pressing the **<ENTER>** push-button). After next pressing the **<ENTER>** push-button, when the **NO** option is selected, the window is closed and the instrument returns to the **FILE** list. The selection of the **NO** or **YES** option is possible using the **<➤>**, **<➤>** push-buttons. The return to the **FILE** list is also possible after pressing the **<ESC>** push-button.



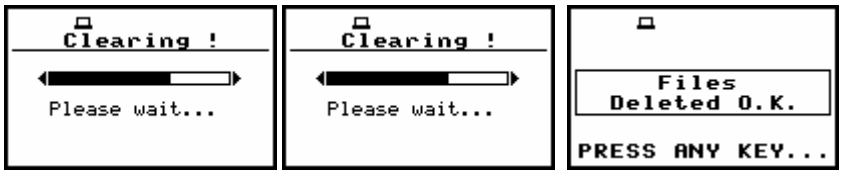
Displays with the confirmation window during the execution of the DELETE ALL operation

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



Execution of the DELETE ALL operation in the case of SETUP FILES selection

Notice: *The execution of the **DELETE ALL** function described above takes place in the case when only one type of the files is selected in the **DELETE ALL** sub-list. If all types are selected simultaneously and the logger, result and setup are saved, only **Clearing** operation is performed but two times – one time in logger files memory and one time in result and setup files memory. After clearing all memory, the defragmentation is not done. The memory merging is done only in the case of setup and results memory, as these two different types of files are saved together in the same space.*



Execution of the DELETE ALL operation for all type files simultaneously

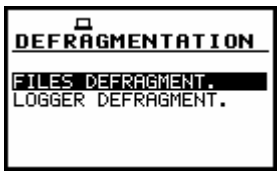
7.6 Merging file space - DEFRAGMENTATION

The **DEFRAGMENTATION** is used to make the file memory continuous. All new files are saved starting from the beginning of the free memory space. The memory occupied by the deleted file, assuming that the file was not the last one, remains unused for the next files saving. After the removing a file the files memory becomes discontinuous, with unused parts, which cannot be utilized in the future. The situation is changed after the process called defragmentation. During this process, the files saved in the files memory are moved in order to obtain the continuous occupied space. The files' merging is performed separately for two parts of the instrument's memory: the **FILES DEFRAGMENT.** is used to join the result and setup files and **LOGGER DEFRAGMENT.** is used in the case of the logger. Before the defragmentation the **FILES FREE SPACE** and **TOTAL AVAILABLE**, characterizing the result memory (*path: MENU / FILE / FREE SPACE*), usually differ between each other. After this operation, these two parts are equal. The same situation is in the case of the **LOGGER FREE SPACE** and **TOTAL AVAILABLE** characterizing the logger file. In order to enter the **DEFRAGMENTATION** sub-list the user has to select the **DEFRAGMENTATION** text in the **FILE** list, using the **<▲>**, **<▼>** (or **<◄>**, **<►>**) push-buttons and press the **<ENTER>**.

DEFRAGMENTATION text highlighted (displayed inversely) in the FILE list

7.6.1 Merging result and setup files memory - FILES DEFRAGMENT.

The **FILES DEFRAGMENT.** is used to join the result and setup files memory. In order to select this, the user has to display inversely the **FILES DEFRAGMENT.** text in the **DEFRAGMENTATION** sub-list using the **<▲>** (or **<◄>**) push-button.



FILES DEFRAGMENT. selected to the execution of the DEFRAGMENTATION operation

The **DEFRAGMENTATION** sub-list is closed and the instrument returns to the **FILE** list after pressing the **<ESC>** push-button. In order to continue the execution of the function one has to press the **<ENTER>** push-button. The instrument requests the confirmation of the operation. 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 **DEFRAGMENTATION** sub-list. The selection of the **NO** or **YES** option is possible using the **<◄>**, **<►>** push-buttons. The return to the **DEFRAGMENTATION** sub-list is also possible after pressing the **<ESC>** push-button.

Confirmation windows during the execution of the FILES DEFRAGMENTATION operation

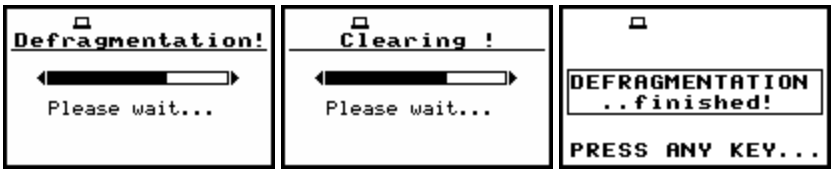
After pressing the **<ENTER>** push-button the instrument checks its current state. In the case when the measurements are performed, the execution of the **DEFRAGMENTATION** operation is not possible. In such case, the message is displayed and after few seconds instrument returns to the **DEFRAGMENTATION** sub-list.

Display after the attempt to perform an unavailable operation during measurement in progress

If the measurements are not performed, after pressing the **<ENTER>** push-button on the active **YES** option, the instrument checks whether the used result and setup files memory is continuous or not. If this memory is continuous, the **DEFRAGMENTATION** operation is not executed and the special message is displayed. The instrument waits for the reaction of the user (any push-button should be pressed except the **<SHIFT>** and **<ALT>** one) and after pressing a push-button it returns to the **DEFRAGMENTATION** sub-list.

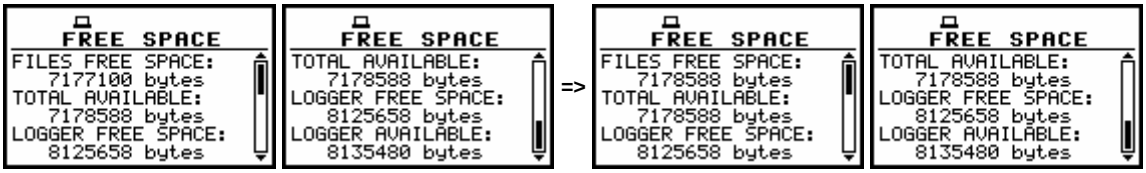
Message in the case when the execution of the DEFRAGMENTATION operation is unnecessary

If there are conditions to execute the **DEFRAGMENTATION** operation, it is done and the current progress is shown on the display. After the successful execution, the special message is displayed and the instrument waits for the reaction of the user. Any push-button should be then pressed except the **<SHIFT>** and **<ALT>** one. After pressing a push-button, the instrument returns to the **DEFRAGMENTATION** sub-list.



Execution of the DEFRAGMENTATION operation

The displays below illustrate the results of the **FILES DEFRAGMENT**. – after the execution, the **FILES FREE SPACE** and **TOTAL AVAILABLE** become equal while the **LOGGER FREE SPACE** and **LOGGER AVAILABLE** remain unchanged.



Result of the FILES DEFRAGMENTATION operation

7.6.2 Merging logger files memory - LOGGER DEFRAGMENT.

The **LOGGER DEFRAGMENT.** is used to join the logger files memory. In order to select this, the user has to display inversely the **LOGGER DEFRAGMENT.** text in the **DEFRAGMENTATION** sub-list using the **<▲>** (or **<◄>**) push-button.

LOGGER DEFRAGMENT. selected to the execution of the DEFRAGMENTATION operation

The **DEFRAGMENTATION** sub-list is closed and the instrument returns to the **FILE** list after pressing the **<ESC>** push-button. In order to continue the execution of the function one has to press the **<ENTER>** push-button. The instrument requests the confirmation of the operation. 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 **DEFRAGMENTATION** sub-list. The selection of the **NO** or **YES** option is possible using the **<◄>**, **<►>** push-buttons. The return to the **DEFRAGMENTATION** sub-list is also possible after pressing the **<ESC>** push-button.

Confirmation windows during the execution of the LOGGER DEFRAGMENTATION operation

After pressing the **<ENTER>** push-button the instrument checks its current state. In the case when the measurements are performed, the execution of the **DEFRAGMENTATION** operation is not possible. In such case, the message is displayed and after few seconds instrument returns to the **DEFRAGMENTATION** sub-list.

Display after the attempt to perform an unavailable operation during measurement in progress

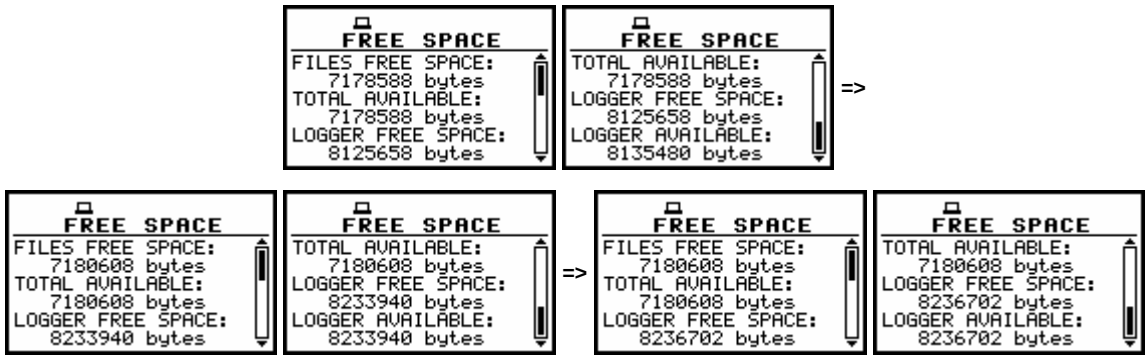
If the measurements are not performed, after pressing the **<ENTER>** push-button on the active **YES** option, the instrument checks whether the used logger files memory is continuous or not. If this memory is continuous, the **DEFRAGMENTATION** operation is not executed and the special message is displayed. The instrument waits for the reaction of the user (any push-button should be pressed except the **<SHIFT>** and **<ALT>** one) and after pressing a push-button it returns to the **DEFRAGMENTATION** sub-list.

Message in the case when the execution of the DEFRAGMENTATION operation is unnecessary

If there are conditions to execute the **DEFRAGMENTATION** operation, it is done and the current progress is shown on the display. After the successful execution, the special message is displayed and the instrument waits for the reaction of the user. Any push-button should be then pressed except the **<SHIFT>** and **<ALT>** one. After pressing a push-button the instrument returns to the **DEFRAGMENTATION** sub-list.

Execution of the DEFRAGMENTATION operation

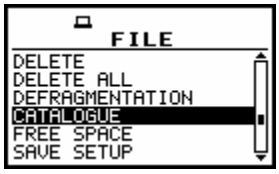
The displays below illustrate the results of the **LOGGER DEFRAGMENT**. – after the execution the **LOGGER FREE SPACE** and **LOGGER AVAILABLE** become equal while the **FILES FREE SPACE** and **TOTAL AVAILABLE** remain unchanged.



Result of the LOGGER DEFRAGMENTATION operation

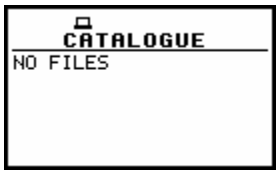
7.7 Checking the contents of the memory - CATALOGUE

The **CATALOGUE** is used for checking the contents of the memory (the list of the result and setup files). In order to enter the window the user has to select the **CATALOGUE** text in the **FILE** list, using the **<▲>**, **<▼>** (or **<◀>**, **<▶>**) push-buttons and press the **<ENTER>** one.



CATALOGUE text highlighted (displayed inversely) in the FILE list

In the case when the instrument memory is empty (no file is stored), after entering the **CATALOGUE** the **NO FILES** text is displayed and the instrument waits for the reaction of the user. The user should press then the **<ESC>**, **<ENTER>** (the instrument returns to the **FILE** list) or **<START / STOP>** push-button (the instrument starts the measurement).



CATALOGUE window when the memory is empty

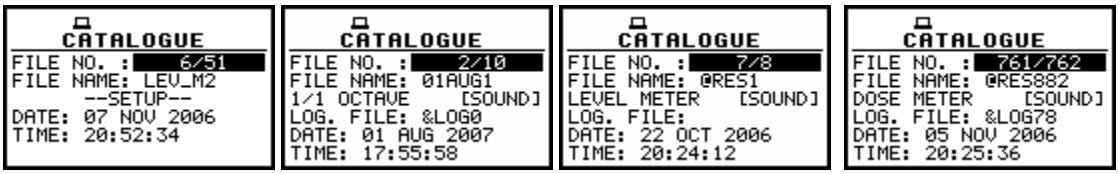
In the case when the result and setup files memory in the instrument is not empty (some files are stored) another window is displayed in which the same data about the existing in the instrument files as in the **FILE / LOAD** window are presented. The current number of the file and the total number of the saved result and setup files is displayed in the first line of the window. The name of the file is displayed in the second line (its current number is presented in the first line). The name of the file suggests the operation the file was created-in.

The names in which the first character is @ are coming from the **AUTO SAVE** function.

The file with the default name @Timer@ is coming from the **AUTO SAVE** function executed in the **TIMER** operation. The other names suggest the **SAVE** / **SAVE NEXT** function. The type of the current file (**LEVEL METER**, **1/1 OCTAVE** or **DOSE METER**) is given in the third line. If during the measurements which results are saved in the file, the logger file was also created its name is displayed in the fourth line.

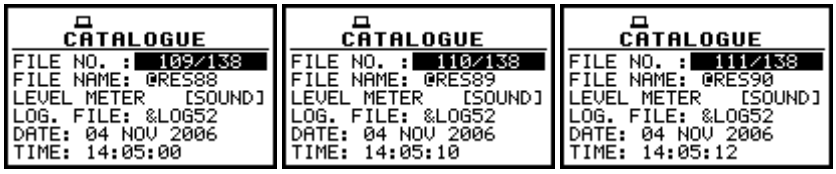
Notice: *The logger file can be deleted from the instrument's memory in the* ***FILE*** */* ***DELETE*** */* ***LOGGER FILES*** *window and this deleting operation does not modify the contents of the fourth line of the* ***CATALOGUE*** *window.*

The date and time of the **SAVE** operation are displayed in the fifth and sixth line, respectively. The change of the current file with the unit step can be done after pressing the **<◄>**, **<►>** push-buttons. The first file is available after pressing the **<◄>** with **<SHIFT>** push-button (or **<▼>** with **<SHIFT>**) and the last one is displayed after pressing the **<►>** with **<SHIFT>** push-button (or **<▲>** with **<SHIFT>**). The setup file is indicated by the **SETUP** text displayed in the third line instead of the **LEVEL METER** / **1/1 OCTAVE** / **DOSE METER** text.



Contents of the CATALOGUE window

Notice: *Many result files can be associated with one logger file, i.e. during the execution of the* ***AUTO SAVE*** *function.*



Exemplary result files associated with the same logger file (&LOG52) in the CATALOGUE window

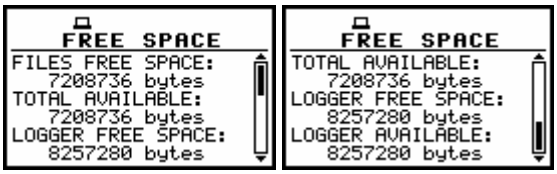
7.8 Checking the free space in the memory - FREE SPACE

The **FREE SPACE** is used to read out the free space in the FLASH DISC memory of the instrument. In order to enter the window the user has to select the **FREE SPACE** text in the **FILE** list, using the **<▲>**, **<▼>** (or **<◄>**, **<►>**) push-buttons and press the **<ENTER>** one.

FREE SPACE text highlighted (displayed inversely) in the FILE list

The files memory in the instrument is divided into two separate parts. One part is dedicated for saving the result and setup files and its size is equal to 7208736 bytes. The second part is used for saving the logger files and its size is equal to 8257280 bytes.

The **FREE SPACE** window in the instrument after the execution of the **DELETE ALL** operation is presented below.

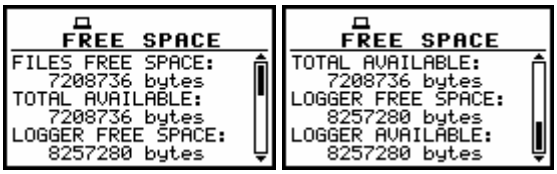


FREE SPACE window after the execution of the DELETE ALL operation

The **FREE SPACE** window contains four numbers. First two, named **FILES FREE SPACE** and **TOTAL AVAILABLE**, characterise the result and setup files memory. The files are always saved starting from the beginning of the continuous memory space. The size in bytes of this space is given in the **FILES FREE SPACE** position.

If the result and setup files were not deleted from the memory the number of bytes displayed in the **TOTAL AVAILABLE** position is the same as in the **FILES FREE SPACE**. However, if some of them were deleted, assuming that they were not the last saved, the memory used by them is empty but it does not increase the continuous space. In such case, the number given in the **TOTAL AVAILABLE** position is greater than that in the **FILES FREE SPACE**.

The **DEFRAGMENTATION** operation, which merges files, should be used to increase the **FREE SPACE**. The next two numbers given in the **FREE SPACE** window, named **LOGGER FREE SPACE** and **LOGGER AVAILABLE** characterize the logger files memory where the saving mechanism is the same. Therefore, the numbers presented in the **FREE SPACE** window depend on the history of the measurements and the operations performed by the user.



FREE SPACE window with the number depending on the measurements and operations performed

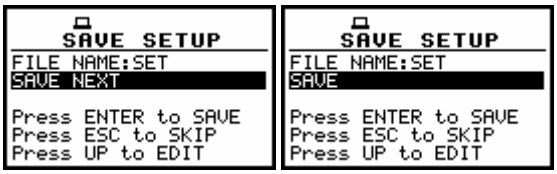
The window is closed and the instrument returns to the **FILE** list after pressing the **<ENTER>** or **<ESC>** push-buttons or it starts the measurements (after pressing the **<START / STOP>** one).

7.9 Saving setup files in the instrument's memory - SAVE SETUP

The **SAVE SETUP** is used for storing setup settings in the internal non-volatile (FLASH DISC) memory (files are always written at the beginning of a free continuous space) as a file (see Appendix B for the file formats). In order to enter the window the user has to select the **SAVE SETUP** text in the **FILE** list, using the **<▲>**, **<▼>** (or **<◄>**, **<►>**) push-button and press the **<ENTER>** one.

SAVE SETUP text highlighted (displayed inversely) in the FILE list

There are two available functions: the **SAVE NEXT** – save a setup file with the name increased by one, and **SAVE** – save a setup file with the edited name. These functions are available after pressing the **<◄>**, **<►>** push-buttons.

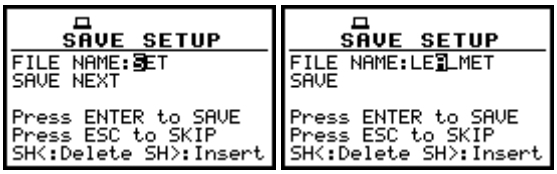


SAVE SETUP window in the FILE list

The name of the file, in which the setup settings are to be saved, is displayed above the **SAVE** or **SAVE NEXT** text. The default name for a setup file is displayed in the case of the first entering to this position (after power on). The default file name for setup settings is SET. The line of the setup file's name edition (**FILE NAME**) is opened after pressing the **<▲>** push-button.

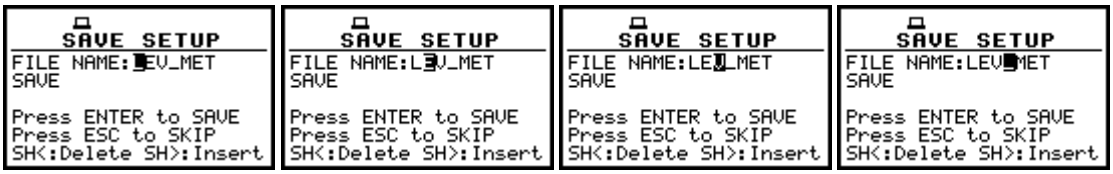
The user can skip the setup file's name edition and start saving file pressing the **<ENTER>** push-button or return to the **FILE** list pressing the **<ESC>** one.

The edition process is presented on the Figure below. The displayed inversely character is currently edited. The **<▲>**, **<▼>**, **<◄>**, **<►>** and **<SHIFT>** push-buttons are used for editing the name which cannot exceed eight characters.



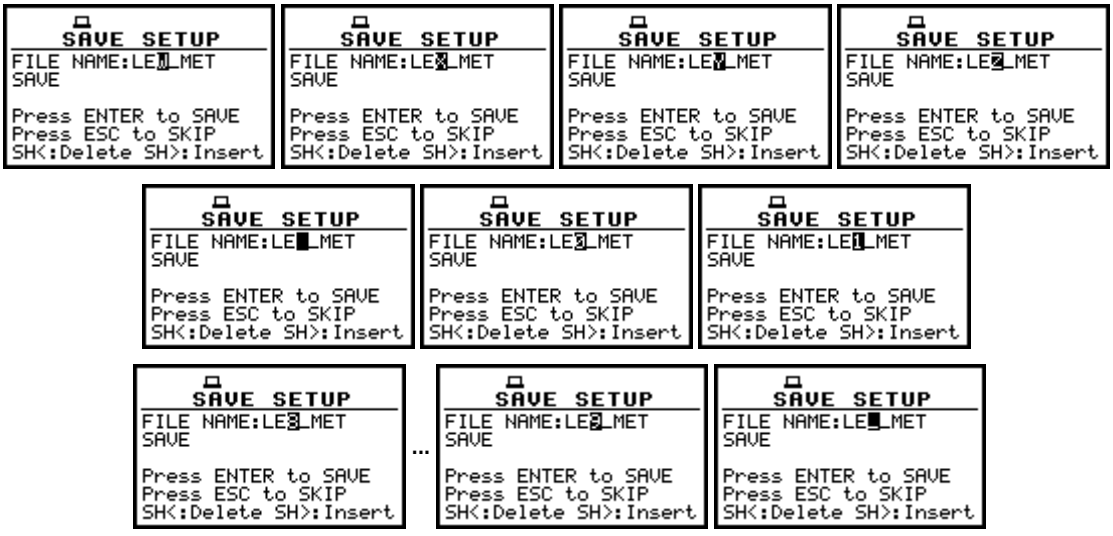
Display during the process of setting the character in the edited name

One can select the proper character's position in the edited text using the **<◄>**, **<►>** push-buttons.

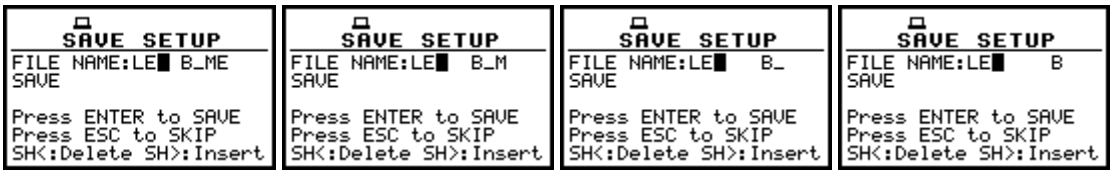


Display during the selection of the character's position to be edited

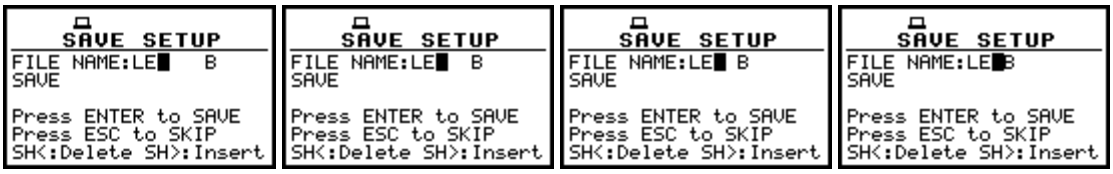
The available ASCII characters can be changed using the **<▲>** (or **<▼>**) push-button pressed together with the **<SHIFT>** one. The subsequent digits, underline, big letters and space appear on the display in the inversely displayed position after each pressing of the mentioned above push-buttons.



Display during the selection of the character

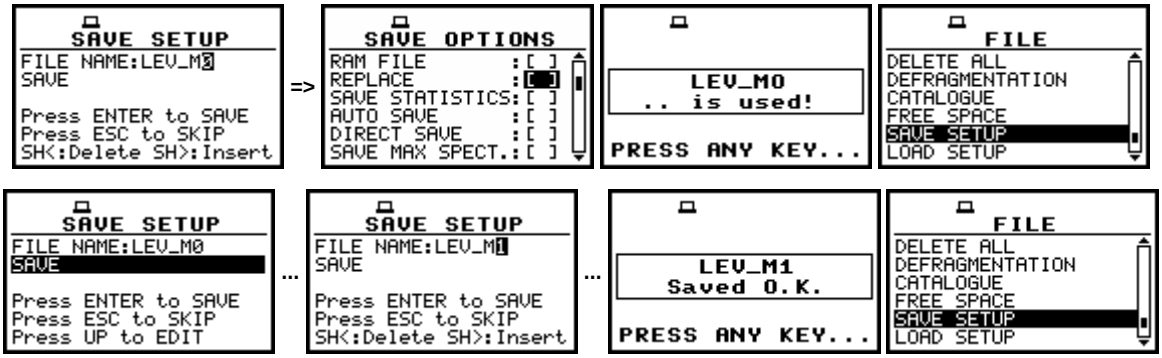


Displays in the FILE NAME edition after pressing the <SHIFT> and <➤> push-buttons



Displays in the FILE NAME edition after pressing the <SHIFT> and <◄> push-buttons

The edited name is accepted and the setup file is saved after pressing the **<ENTER>** push-button. The special warning is displayed in the case the file with the edited name already exists in the memory, if the **REPLACE** position is not activated (*path: MENU / FILE / SAVE OPTIONS*). The instrument waits then for a reaction of the user (any push-button should be pressed except the **<SHIFT>** or the **<ALT>** one).

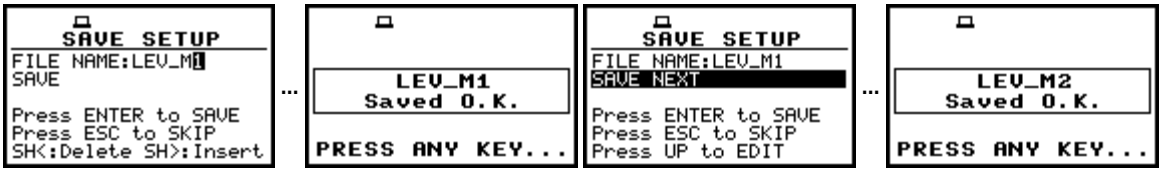


Displays during the attempt of overwriting the existing file, changing the name and saving data

All changes introduced to the setup file name during the edition are ignored after pressing the **<ESC>** push-button. This pressing causes the return to the list from which the **SAVE** option was entered. The return after the edition to the line with the **SAVE** or **SAVE NEXT** text is possible after pressing the **<▼>** push-button.

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 made automatically. After the saving operation execution the new setup file name is displayed and the instrument waits then for a reaction of the user (any push-button should be pressed except the **<SHIFT>** or the **<ALT>** one).

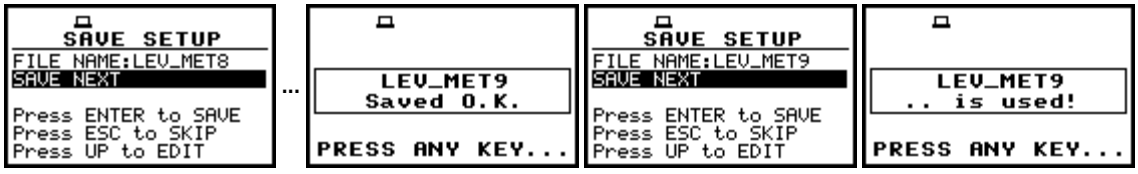
In the next attempt of saving data, the new name is displayed in the **FILE NAME** line and that name is increased by one during the saving operation.



Displays in the simplified edition of the setup file name and saving operation execution

The number can be changed from 1 to N. The only limitation of the N value is the length of the file name, which cannot be longer than eight characters. In the case when such limitation is achieved and the instrument can not change automatically the file's name the only possibility is to edit new base file name.

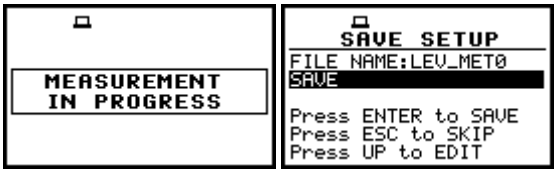
Notice: *The files can be overwritten (the use of the same file name)* ***without any warning*** *if the* ***REPLACE*** *option is switched on (path: MENU / FILE / SAVE OPTIONS / REPLACE).*



Displays in the simplified edition of the file name, saving and the "saturation" of that operation

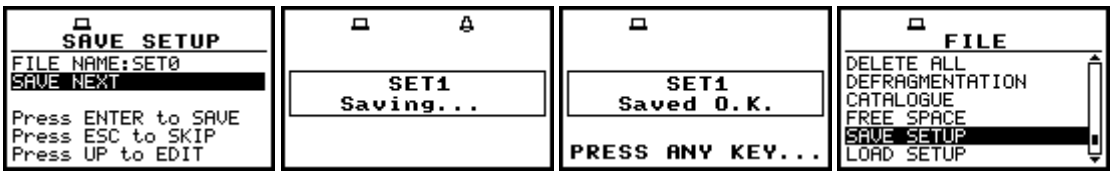
As it was already written, the instrument attempts to save a file after pressing the **<ENTER>** push-button. The saving is not possible in the case when the instrument is measuring the signal.

The special message is displayed for about 3 seconds in this case and the instrument returns to the **SAVE SETUP** window.



Displays after the attempt to perform unavailable saving operation; the return to the SAVE SETUP

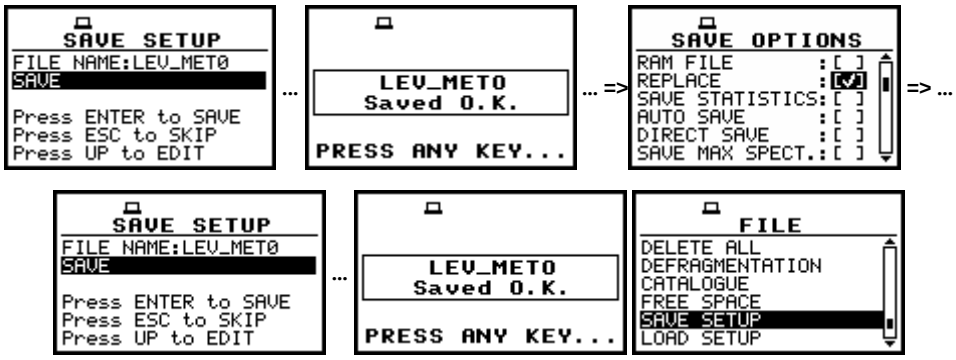
Notice: *During the execution of the* ***SAVE*** *or* ***SAVE NEXT*** *function an additional window is displayed informing about the operation performed. This window can be unnoticed by the user as it appears for the short time.*



Displays during and after the execution of the SAVE operation

As it was already written it is not possible to store the data in the file, which already exists, when the **REPLACE** is not active (**[ ]**) (*path: MENU / FILE / SAVE OPTIONS / REPLACE*).

The presented below sequence of displays illustrates the situation when during the name-edition process, the user selected the name that was used before but this time the **REPLACE** is active. The setup file is overwritten, the instrument displays a special message and waits for the reaction of the user (any push-button should be pressed except the **<SHIFT>** or the **<ALT>** one) and after pressing a push-button it returns to the **FILE** list.



Displays after the attempt to overwrite a file if the REPLACE is active

7.10 Loading the files with the setup settings - LOAD SETUP

The **LOAD SETUP** is used for loading setup setting file from the FLASH DISC (e.g. for performing different type of measurements with different instrument's settings). The position is opened after pressing the **<ENTER>** push-button when the **LOAD SETUP** text in the **FILE** list is displayed inversely (selected using the **<▼>** (or **<➤>**) push-buttons or **<▼>** (or **<➤>**) **with** the **<SHIFT>** one). The return to the **FILE** list is possible after pressing the **<ESC>** push-button.

FILE list with the LOAD SETUP text highlighted (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*** *is displayed for about 3 seconds.*

After pressing the **<ENTER>** push-button the instrument checks its current state. In the case when the measurements are performed, the file loading is impossible and the message is displayed.

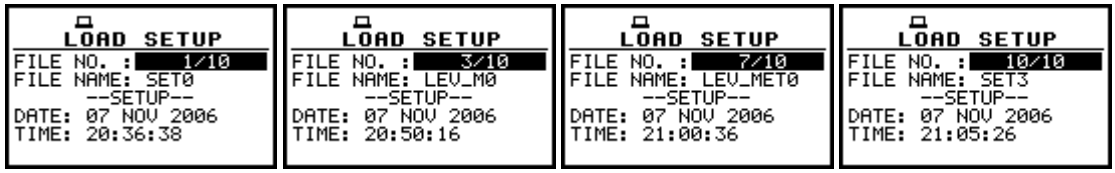
Display after the attempt to perform an unavailable operation during measurement in progress

In the case when the setup files were not saved, after entering the **LOAD SETUP** window, the **NO FILES** text is displayed and the instrument waits for the reaction of the user. The user should press then the **<ESC>**, **<ENTER>** (the instrument returns to the **FILE** list) or **<START / STOP>** push-button (the instrument starts the measurement).

Display during the execution of the LOAD SETUP operation

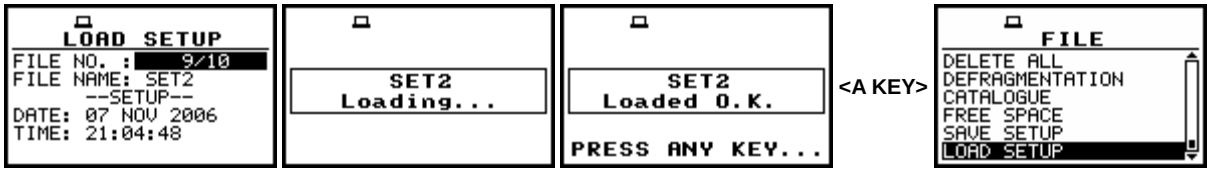
The current number of the setup file and the total number of the saved setup files is displayed in the first line of the **LOAD SETUP** window. The name of the file is displayed in the second line (its current number is presented in the first line).

The date and time of the **SAVE SETUP** operation is displayed in the fourth and fifth line respectively. The change of the current file with the unit step can be done after pressing the **<◄>**, **<►>** push-buttons. The first file is available after pressing the **<◄>** with **<SHIFT>** push-button (or **<▼>** with **<SHIFT>**) and the last one is displayed after pressing the **<►>** with **<SHIFT>** push-button (or **<▲>** with **<SHIFT>**).



Exemplary contents of the LOAD SETUP window

The name of the file is accepted and the file is loaded after pressing the **<ENTER>** push-button. The message with the name of the selected file is displayed during the execution of the loading operation. 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>** or **<ALT>** one) and after pressing a push-button it returns to the **FILE** list.

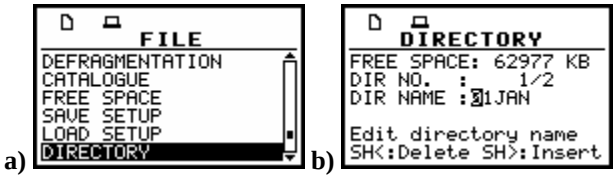


Displays after the execution of the LOAD SETUP operation

7.11 Connecting the external USB memory stick- DIRECTORY

The **DIRECTORY** text appears in the **FILE** list when the USB memory stick is connected to the device (the **USB DISK** option has to be selected in **USB-HOST PORT** window in **SETUP** list).

In order to enter the window the user has to select the **DIRECTORY** text in the **FILE** list, using the **<▲>**, **<▼>** (or **<◄>**, **<►>**) push-buttons and press the **<ENTER>** one. The return to the **FILE** list is possible after pressing the **<ESC>** push-button.



FILE list with the DIRECTORY text selected (a) and the DIRECTORY window opened (b)

The **FREE SPACE** denotes the available free memory on the connected disk. The **DIR NO.** shows the number of the selected directory (the 1st number) and the number of the existing directories (the 2nd number). In the case the directories do not exist, these numbers are equal to zero. The **DIR NAME** enables one to edit the directory name (the 1st number) or displays its name. The help lines are placed at the display's bottom.

There are two ways of the current directory selection:

- the name edition in the **DIR NAME** line. The default name consists of the day number and the month abbreviation. The not existing directory will be created.

- the selection of the existing directory by means of the **<➤>**, **<➤>** push-buttons pressed in the line with the **DIR NO.** text. The name of the selected directory is displayed in the **DIR NAME** line.

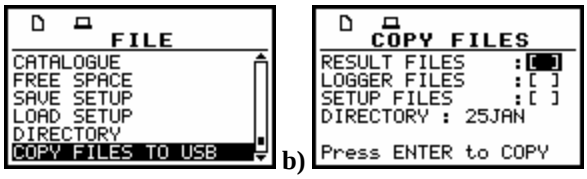
The selection is confirmed after pressing the **<ENTER>** push-button which closes the window and returns to the **FILE** list. The return to this list is also possible after pressing the **<ESC>** push-button but the selection is not confirmed. The selection of the directory is obligatory during the initialisation process. In this case also the **<ESC>** push-button confirms the settings.

FILE list, the DIRECTORY window

Notice: *After connecting a USB memory stick to the device the **paper sheet** icon appears in the top of the display.*

7.12 Copying files to the external USB memory stick - COPY FILES TO USB

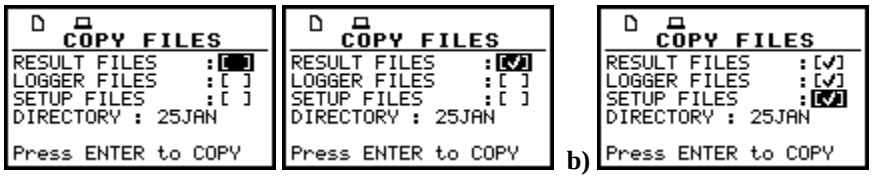
The **COPY FILES TO USB** is used for copying files to the external USB memory stick. The position is opened after pressing the **<ENTER>** push-button when the **COPY FILES TO USB** text in the **FILE** list is displayed inversely. The return to the **FILE** list is possible after pressing the **<ESC>** push-button.



FILE list with the COPY FILES TO USB text selected (a) and the COPY FILES window opened (b)

The **COPY FILES TO USB** sub-list consists of three positions to be selected: **RESULT FILES**, **LOGGER FILES** and **SETUP FILES** and **DIRECTORY** position with the name of the directory in which the files from the internal memory of the instrument will be stored.

In order to copy required type of the files the user has to place the special character in the line with the **RESULT FILES**, **LOGGER FILES** or **SETUP FILES** text using the **<➤>** or **<▼>** push-button. After next pressing the **<ENTER>** push-button, when no option is selected, the window is closed and the instrument returns to the **FILE** list. The return to the **FILE** list is also possible after pressing the **<ESC>** push-button.

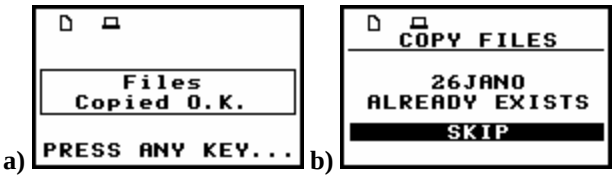


RESULT FILES selection to the execution of the COPY FILES TO USB operation (a); the RESULT, LOGGER and SETUP files selected to the execution of the COPY FILES TO USB operation (b)

After pressing the **<ENTER>** push-button the instrument checks its current state. When the measurements are performed, the execution of the **COPY FILES TO USB** operation is not allowed. In such case, the message is displayed for few seconds and the instrument returns to the **FILE** list.

Display after the attempt to perform an unavailable operation during measurement in progress

If the measurements are not performed, the instrument starts the operation. After the operation **Files Copied O.K.** message is presented on the display. If a file has been already copied to the USB stick, a message **ALREADY EXIST** is presented on the display as well as the name of the file.

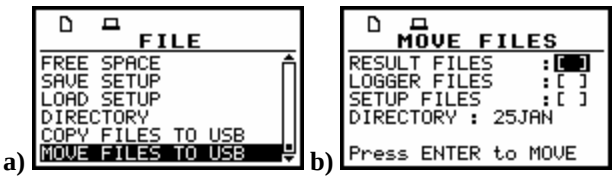


a) b)

Display after the execution of COPY FILES TO USB operation (a) and when the file exists already (b)

7.13 Moving files to the USB memory stick- MOVE FILES TO USB

The **MOVE FILES TO USB** is used for moving files from internal instrument's memory to the USB memory stick. The position is opened after pressing the **<ENTER>** push-button when the **MOVE FILES TO USB** text in the **FILE** list is displayed inversely. The return to the **FILE** list is possible after pressing the **<ESC>** push-button.

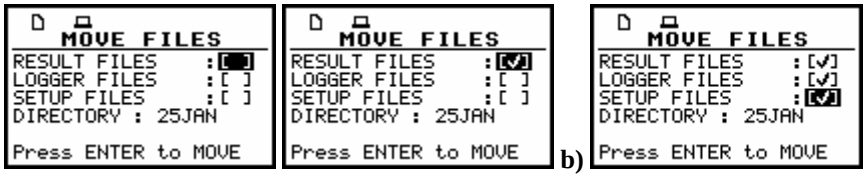


a) b)

FILE list with the MOVE FILES TO USB text selected (a) and the MOVE FILES window opened (b)

The **MOVE FILES TO USB** sub-list consist of three positions to choose: **RESULT FILES**, **LOGGER FILES** and **SETUP FILES** and **DIRECTORY** position with the name of the file in which the files from the internal memory of the instrument will be stored.

In order to activate required position the user has to place the special character in the line with the **RESULT FILES**, **LOGGER FILES** or **SETUP FILES** text using the **<➢>** or **<▼>** push-button. After next pressing the **<ENTER>** push-button, when no option is selected, the window is closed and the instrument returns to the **FILE** list. The return to the **FILE** list is also possible after pressing the **<ESC>** push-button.



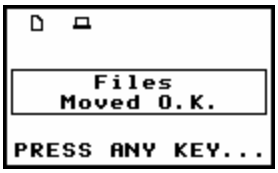
a) b)

RESULT FILES selection to the execution of the MOVE FILES TO USB operation (a) the RESULT, LOGGER and SETUP files selected to the execution of the MOVE FILES TO USB operation (b)

After pressing the **<ENTER>** push-button the instrument checks its current state. In the case when the measurements are performed, the execution of the **MOVE FILES TO USB** operation is not possible. In such case, the message is displayed for few seconds and the instruments returns to the **FILE** list.

Display after the attempt to perform an unavailable operation during measurement in progress

If the measurements are not performed, the instrument starts the operation. After the operation **Files Moved O.K**. message is presented on the display. If the file already exist in the USB memory stick the message with the name of the file and **ALREADY EXIST** text is presented on the display.

a) 

b) 

Display after the execution of MOVE FILES TO USB operation (a) and when the file already exists in the USB memory (b)

Notice: *After the execution of the* ***MOVE FILES TO USB*** *operation, files, which have been moved, do not exist in the internal instrument's memory any more.*