

## 2. MANUAL CONTROL OF THE INSTRUMENT

The control of the instrument is developed in the fully "conversational" way. The user can "programme" the operation of the instrument selecting the proper option from the MENU. Thanks to it the number of the control push-buttons of the instrument is reduced to 8.

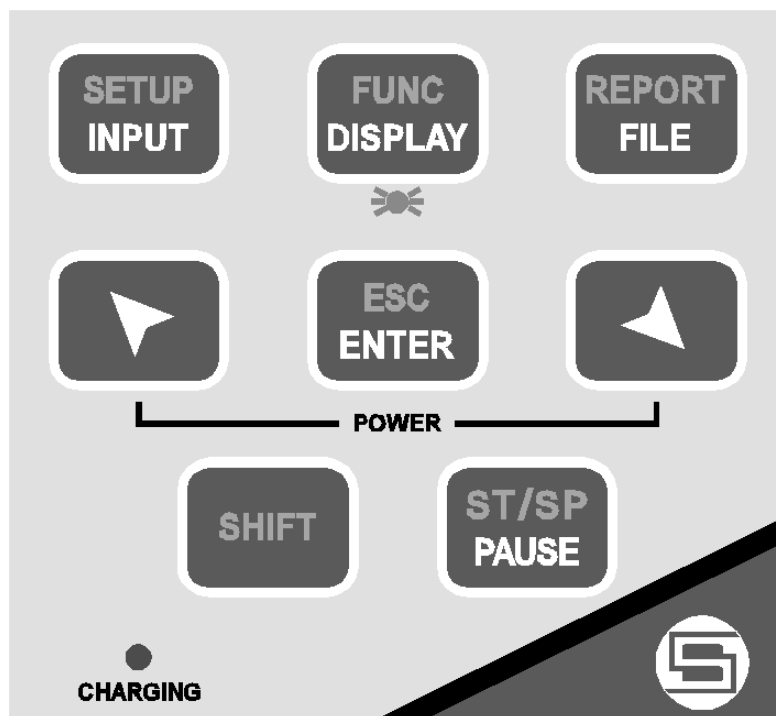
### 2.1. CONTROL PUSH-BUTTONS ON THE FRONT PANEL

On the front panel of the instrument there are located the following control push-buttons:

1. <SHIFT>,
2. <PAUSE>, (<ST/SP>),
3. <ENTER>, (<ESC>),
4. <◀>, (<◀>),
5. <▶>, (<▶>),
6. <DISPLAY>, (<FUNC>), [<LIGHT>],
7. <INPUT>, (<SETUP>),
8. <FILE>, (<REPORT>).

The name given in brackets (...) denotes the second push-button function which is available after pressing in conjunction (or in sequence) the <SHIFT> push-button. To switch on/off the backlight [<LIGHT>] the <DISPLAY> push button **has to be pressed for about 2 seconds**.

The push-buttons placed in the upper line of the keyboard play the role of the function keys. After each pressing of such push-button a window is opened on the instrument's display. There are six main windows named from the push-buttons: *SETUP*, *INPUT*, *FUNCTION*, *DISPLAY*, *REPORT* and *FILE*. Each main window contains sub-windows or options. The sub-window can contain another sub-window or option. Each option has some values which can be set or selected from the available items.



The view of the control push-buttons of the SVAN 943 instrument

**<SHIFT>**

The second function of a push-button (written on a key in red colour) can be used when the **<SHIFT>** push-button is pressed. This push-button can be used in two different ways:

- as **SHIFT** in the keyboard; both push-buttons **must be pressed in parallel**;
- as **2nd Fun**; this push-button must **be pressed and released before pressing the second one**.



**Notice:** The operation of this push-button can be set as the “Shift” mode or the “2nd Fun.” mode in the **SHIFT MODE** sub-window of the **SETUP** window (see Chapter 5 for the **SETUP** window description).

**<PAUSE>**

This push-button enables one to break temporary the measurement process. The subsequent pressing of the **<PAUSE>** push-button deletes the last second measurement result. Up to fifteen last seconds of the measurement can be cancelled in this way.

**(<ST/SP> START/STOP**

This push-button (the **<PAUSE>** in conjunction with the **<SHIFT>**) enables one to start and stop the measurement process.

**<ENTER>**

This push-button enables one to enter the selected operation mode or to confirm control options. The user, pressing the **<ENTER>** push-button, causes additionally:

- the change of the displayed contents (One Profile, **3 PROFILES**, **1/1 OCTAVE** or **1/3 OCTAVE SPECTRUM**, **PLOT** and Statistical Levels graphs - **STATISTICS**),
- the confirmation of the selection in an option (i.e. the introduced text in the **FILE NAME** menu, the selected file in the **CATALOGUE** menu, etc.)

Some additional functions of this push-button will be described in the following chapters.

**(<ESC>)**

This push-button closes the control windows (**INPUT**, **FUNCTION**, **FILE** etc.) and the sub-windows. It acts in opposite to the **<ENTER>** push-button. When the window is closed pressing the **<ESC>** push-button, any changes made in it are (in almost all cases) ignored. Additionally, the **<ESC>** push-button is used for switching between **PROFILES** in all display modes for the presentation of the results.

**<◀ >, <▶ >**

These push-buttons enable one to:

- select the an item in an active option in the "horizontal direction" (e.g. filter: **LIN**, **A** or **C**, RS232 Baud Rate: ..., **9600**, **19200**, **38400**, ... etc.),
- select the measurement result to be displayed (e.g. **PEAK**, **MAX**, **MIN**, etc.) in One Profile and **3 PROFILES** modes of result's presentation),
- control the cursor in **SPECTRUM**, **PLOT** and **STATISTICS** modes of result's presentation,
- select the position of the character in the text edition (i.e. in the **FILE NAME** menu).



**Notice:** Simultaneous pressing of the **<◀ >**, **<▶ >** push-buttons switches power On/Off.

**(<◀, ▶>)**

The <◀, ▶> push-buttons pressed in conjunction (or in sequence) with the <SHIFT> enable one to:

- change the statistics class (the number displayed after the letter **L**) in One Profile and **3 PROFILES** modes of result's presentation,
- change the relation between the Y-axis and X-axis of all plots presented on the display,
- change the available characters in the text edition modes (**FILE NAME, TITLE, TIME**, etc.),
- programme the Real Time Clock (**RTC**),
- to speed up the changing of the numerical values of the parameters (i.e. the step is increased from 1 to 10 in the setting of **START DELAY**).

**<INPUT>**

This push-button enables one to open the *INPUT* control window. The next pressing of this push-button closes the window. In the text edition modes (**FILE NAME, TITLE, TIME**, etc.) it is used as the **Insert** key. Additionally, it enables the user to change the presented spectrum of **1/1 OCTAVE** or **1/3 OCTAVE** analysis registered in the buffer's file (see the description of the **BUFFER VIEW** sub-window in the *DISPLAY* window). This push-button enables one to see the spectra which were earlier saved in the buffer's file in the relation to the currently presented one.

**<SETUP>**

This push-button (the <INPUT> in conjunction with the <SHIFT>) enables one to open the *SETUP* control window. The next pressing of this push-button closes the window.

**<DISPLAY>**

This push-button enables one to open the *DISPLAY* control window. The next pressing of this push-button closes the window. In the text edition modes (**FILE NAME, TITLE, TIME**, etc.) it is used as the **Delete** key.

**<FUNC>**

This push-button (the <DISPLAY> in conjunction with the <SHIFT>) enables one to open the *FUNCTION* control window. The next pressing of this push-button closes the window.

**[<LIGHT>]**

To switch on/off the backlight [**<LIGHT>**] the <DISPLAY> push-button has to be pressed for about 2 seconds.

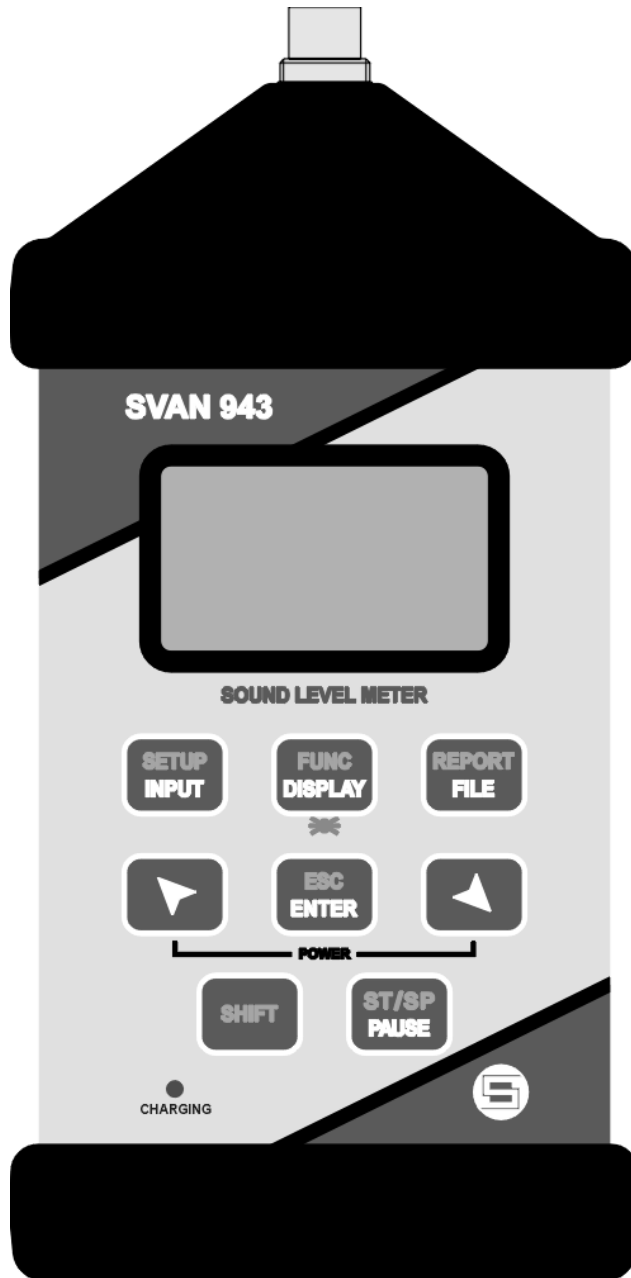
**<FILE>**

This push-button enables one to open the *FILE* control window. The next pressing of this push-button closes the window. In the text edition modes (**FILE NAME, TITLE, TIME**, etc.) it is used as the **Clear** key. Additionally, it enables the user to change the presented spectrum of **1/1 OCTAVE** or **1/3 OCTAVE** analysis registered in the buffer's file (see the description of the **BUFFER VIEW** sub-window in the *DISPLAY* window). This push-button enables one to see the spectra which were later saved in the buffer's file in the relation to the currently presented one.

**<REPORT>**

This push-button (the <FILE> in conjunction with the <SHIFT>) enables one to open the *REPORT* control window and to print the measurement result in the predefined format. The next pressing of this push-button closes the opened window.

## 2.2. INPUT AND OUTPUT SOCKETS OF THE INSTRUMENT

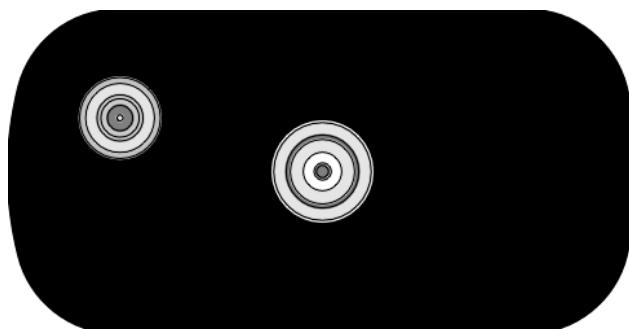


The view of the front panel of SVAN 943 instrument in 1:1 scale

The measurement input, called **Aux. Mic.**, is placed in the centre of the top cover of the instrument. It is one pin TNC socket. The microphone preamplifier has the proper TNC connector. After the plug in of the preamplifier to the measurement input the screw of the TNC connector should be twisted to the light resistance. The full description of the signals connected to the sockets is given in the Appendix C.



The view of the rear panel of SVAN 943 instrument in 1:1 scale

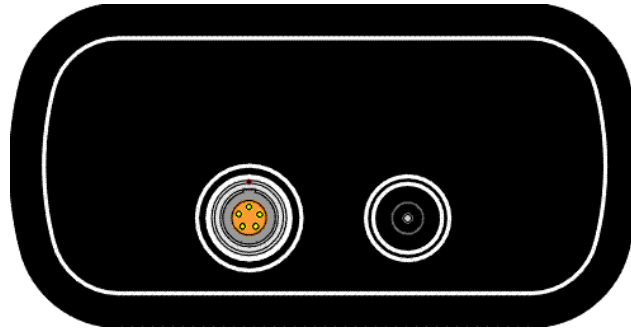


The view of the top cover of SVAN 943 instrument in 1:1 scale

In the top cover of the instrument there is an additional output socket called **AC out**. It is one pin LEMO compatible socket type ERN.00.250 (the left one in the figure above). The signal from the input of the analogue / digital converter (before the correction) is available on this input. This signal can be registered using magnetic recorder or observed on the oscilloscope.

In the bottom cover two sockets exist: **RS 232** (the left one in the figure below) and **Power** (the right one in the same figure).

The RS 232 interface conforms to the EIA Standard RS 232C. It enables the user to programme remotely all instrument's functions and to transmit data to and from the analyser with the speed up to 115 200 Bauds (bits / s). The default RS 232 interface transmission rate is equal to 9600 Bauds. More detailed description of 5-pins socket of RS 232 interface (LEMO compatible connector type ENG.0B.305) and 9-pins connector of the SC 07 cable (DB 09 F - pin female) is given in the Appendix C.



The view of the bottom cover of SVAN 943 instrument in 1:1 scale

The **Power** socket is located on the bottom cover of the instrument (the right one in the figure above). This socket is dedicated for the connector type 3.0 / 2.1 mm. The user can connect here the external power (110 V / 220 V mains) adapter. This adapter is also used for the recharging of the internal battery.



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