

SV 102

Dual Channel Acoustic Dosimeter



SVANTEK



QUICK START GUIDE

(draft)

WWW.



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INTRODUCTION


This quick start guide will help you to get started with SV102 instrument. The SV 102 device is a dual channel dosimeter which enables performing binaural dose measurements and the 1/1 octave analysis simultaneously. SV102 provides Type 2 accuracy. The SV 102 dosimeter is offered with the dedicated SV 25D ceramic microphones with 1/2" housing. It makes the calibration very easy by direct usage of commonly available acoustic calibrators. The device may be carried along in a pocket or on the belt during measurement.



Fig. 1. SV 102 DUAL CHANNEL DOSIMETER

CONTROL PUSH-BUTTONS

 **On/Off** (if held); **ENTER**; **ESCAPE** (if pressed with )

 **SHIFT** - second ("red") functionality of other push-buttons; switching on the **backlight** (if held)

 **LEFT**

 +  **ESCAPE**

 **RIGHT**

 +  **Menu**

 +  **UP**

 +  **Start/Stop**


 +  **DOWN**

 +  **Save**

BEFORE YOU TURN INSTRUMENT ON

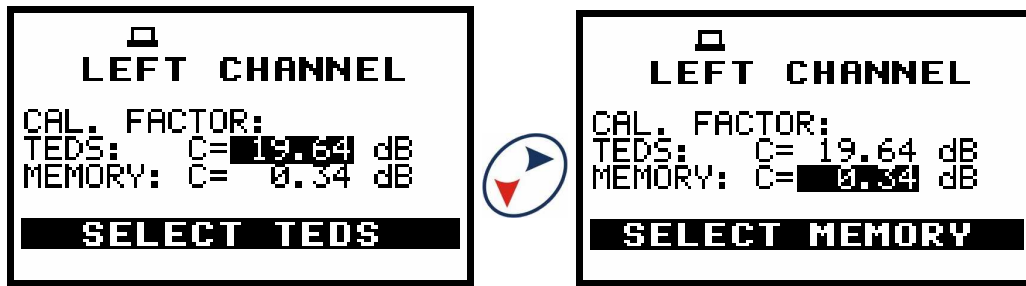
Plug in the microphone(s) before turning on the instrument. In the case of one channel operation please use left microphone input. Plug Lemo connector carefully until it clicks.

TURNING INSTRUMENT ON AND OFF

To turn the instrument on or off, press  and hold for at least five seconds.



Notice: The following view may appear on the display:



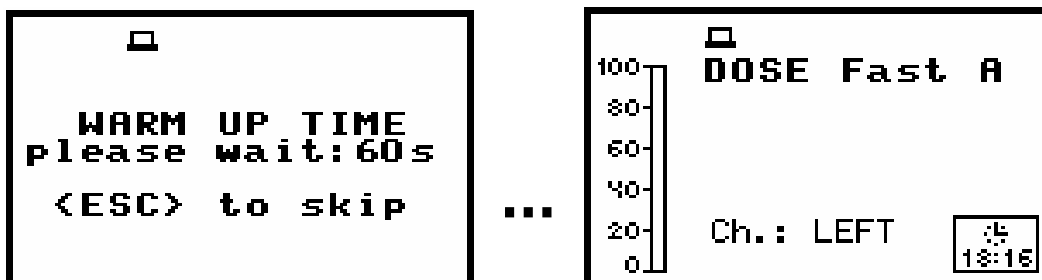
This message appears when the calibrator factor stored in TEDS memory of microphone doesn't match calibrator factor in the instrument's MEMORY. It means that the microphone hasn't been calibrated in the channel it is connected to or it hasn't been used with this instrument. The typical situation when it happens is the exchanging of the connections of the left and right microphone.

If the TEDS or MEMORY factor is correct, select it and press .






If none of the value is correct, select any of them and next calibrate the microphone, using CALIBRATION MENU (MENU > CALIBRATION > BY MEASUREMENT) to obtain correct factor before starting real measurements.

WARM UP TIME

After power on, the instrument should be warmed up for at least 60 seconds before starting measurement. To skip delay, press + .



BATTERY CHECK

Observe the battery icon  in the instrument's icon status line or go to MENU ( + ) > DISPLAY > BATTERY and check the state of the power source. If it is too low, exchange the batteries. Press  +  to exit.

EXCHANGING BATTERIES










Switch the instrument **off** before changing batteries.

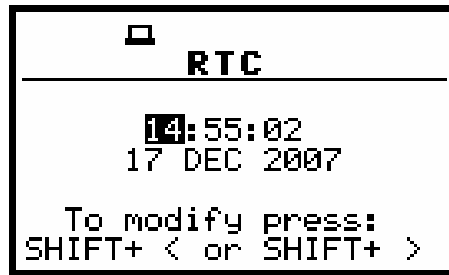
- Unscrew black bottom cover of the instrument (e.g. using a coin)
- Change the batteries (follow polarity as illustrated on the back side of the instrument)
- Install the bottom cover



Fig. 2. SV 102 BOTTOM COVER

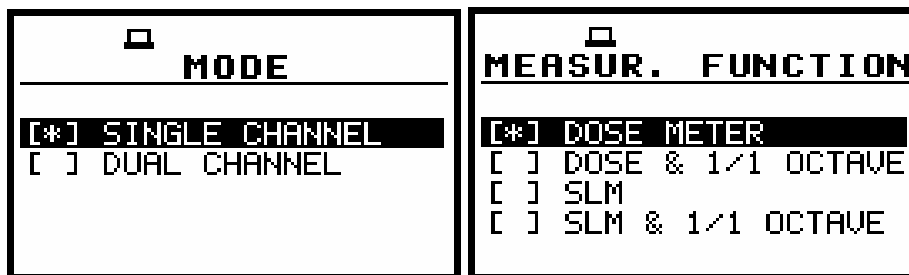
SETTING DATE AND TIME

- Go to MENU ( + ) > SETUP > RTC and set proper DATE and TIME using  + ,  + ,  and  push-buttons. Press  to exit.



MEASUREMENT SETUP

- Go to MENU (⬅️ + ⬆️) > FUNCTION and select proper MODE and MEASUREMENT FUNCTION.

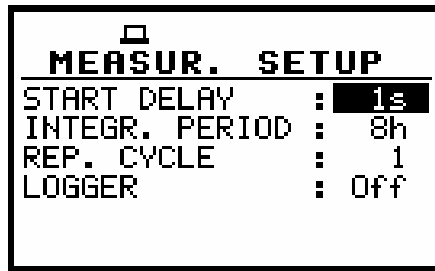


- Go to MENU (⬅️ + ⬆️) > INPUT > MEASUREMENT SETUP and configure (using ⬅️ and ⬆️ push-buttons) following parameters:

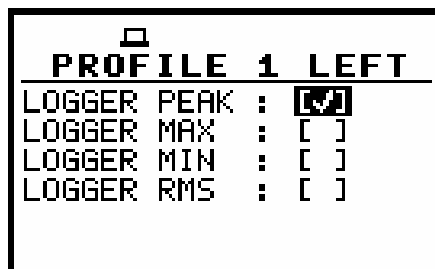
- START DELAY - period between pressing START (⬅️ + ⬆️) and the beginning of measurement

Press ⬆️ + ⬅️ (down) to go to next position

- INTEGR. PERIOD - integration period of measurement
- REP. CYCLE - number of measurement cycles
- LOGGER - enabling/disabling time history logging function, LOGGER STEP - logging time step, LOGGER NAME- name of logger's file



- If LOGGER is switched on, go to MENU > INPUT > LEFT (RIGHT) CHANNEL > PROFILE 1 (2, 3) and select results to be logged: PEAK, MAX, MIN or/and RMS.

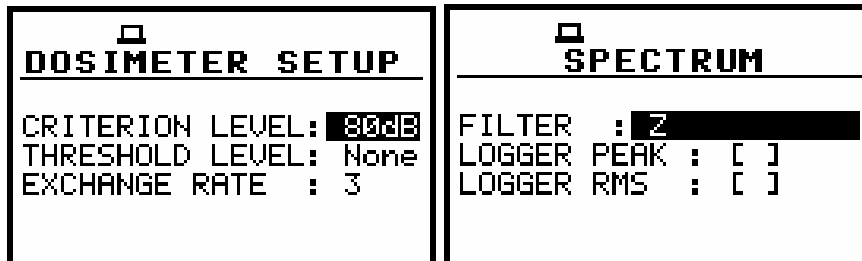



- Go to MENU (⬆️ + ⬇️) > INPUT > PROFILE 1 (2, 3) and select detector time constant (FAST/SLOW/IMPULSE). Availability of filter selection (A/C/Z) depends on chosen MEASUREMENT FUNCTION (for dosimeter modes filter settings in profiles are fixed; for sound modes the setting of detector time constant, filter and logged results are possible and they are accessible in MENU > INPUT > LEFT (RIGHT) CHANNEL > PROFILE 1 (2, 3) window).

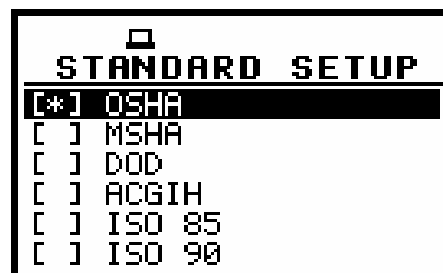
All 3 profiles are used simultaneously during performed measurements.





- Depending on the function being used, adjust other necessary settings i.e. in:
 - DOSIMETER SETUP window (MENU > INPUT > DOSIMETER SETUP)
 - SPECTRUM window (MENU > INPUT > SPECTRUM)












It is also possible to LOAD one of STANDARD SETUPS (OSHA, MSHA, DOD, ACGIH, ISO 85, ISO 95) by selecting proper option in FILE > LOAD SETUP > STANDARD SETUP window and pressing .





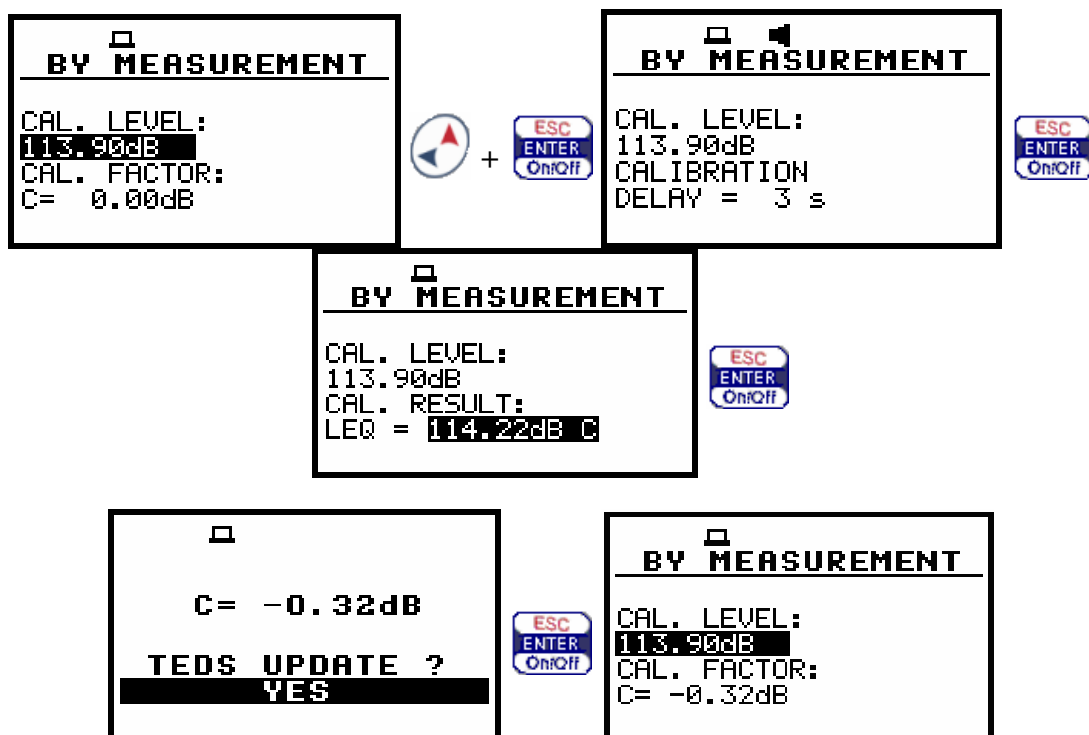
CALIBRATION

- Go to MENU ( + ) > CALIBRATION > LEFT (RIGHT) CHANNEL > BY MEASUREMENT
- Enter the CAL. LEVEL according to the calibrator you use (e.g. 113.9, 93.9)
- Put the calibrated microphone into calibrator and switch the calibrator on (SV 30A calibrator switches on automatically)

- Press  +  to start the calibration measurement
- When the calibration measurement is done, it shows CAL. RESULT e.g. LEQ=114.22 dB
- If you need to restart the calibration, press  +  again
- Press  to accept the calibration result
- Press  to confirm calibration factor and to store it in TEDS memory of the microphone or, if you don't want to accept the calibration factor, press  and  push-buttons to select NO; repeat the calibration

Instrument returns to the calibration window. Press  to return to the calibration menu, and take out the microphone from calibrator. Calibrate second microphone in the similar way.

Now your SV 102 is ready to perform the measurements. Press  +  push-buttons to see main view of display.









MAKING A SIMPLE MEASUREMENT & USING DISPLAY OPTIONS


Press  +  push-buttons till you see main view.

If the logger function is used, make sure you have enough free memory to save measurement results.

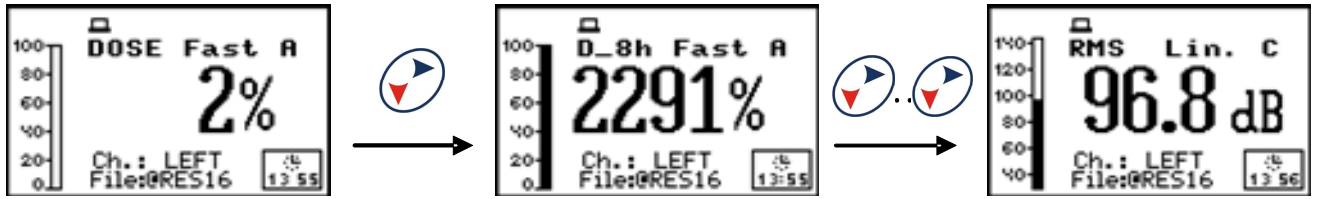
Press  +  to Start and to Stop a measurement.

During the measurement you cannot change the settings. The set of results you may obtain in dosimeter mode is as follows: **DOSE** (%), **D_8h** (%), **LEPd** (dB), **LAV** (dB), **LEQ** (dB), **PEAK** (dB), **MAX** (dB), **E** (Pa²h), **SEL** (dB), **E_8h** (Pa²h), **SEL8** (dB), **PSEL** (dB), **PCTC** (-), **PCTP** (%), **RMS** (dB) (for SLM the following results are available **SPL**, **LEQ**, **SEL**, **Lden**, **LEPd**, **Ltm3**, **Ltm5**, **Lxx**, **OVL**, **PEAK**, **MAX**, **MIN**).

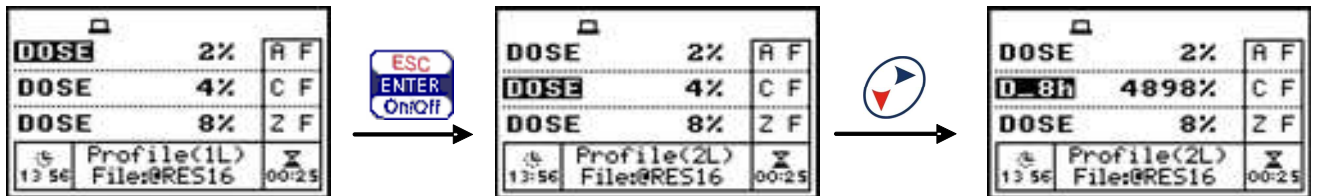
You can see main measurement results by pressing right  and left  push-buttons. You can switch between views of available measurement results (measurement function and mode dependently: main results from left channel, main results from right channel, 3-profiles view from left channel, 3-profiles view from right channel, dosimeter results, statistics for left channel, statistics for right channel, 1/1 OCTAVE spectrum for left and for right channel) by pressing  +  (UP) or  +  (DOWN) push-buttons.

In 3-profiles view, active profile is changed after pressing . Display options in simplified version (for SINGLE CHANNEL mode, DOSIMETER & 1/1 OCTAVE function) are presented below.

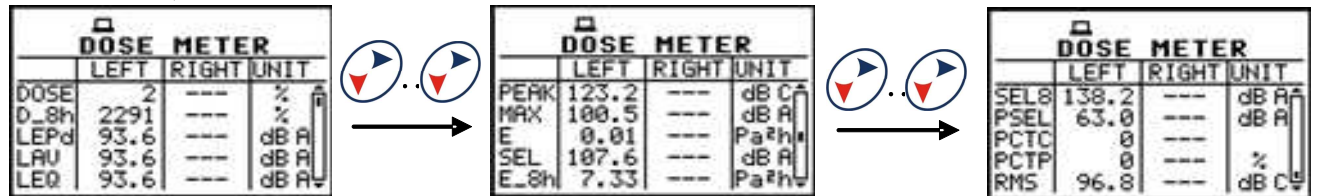
main results



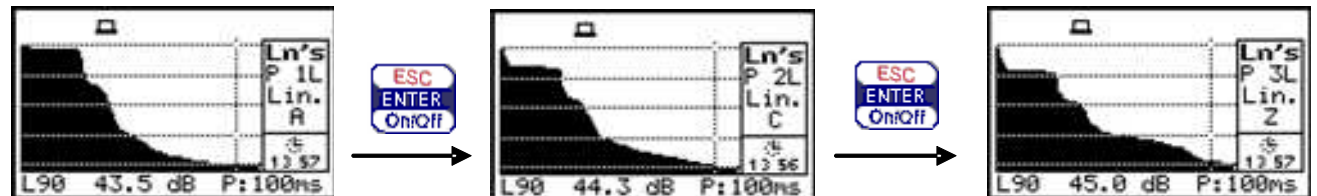
3 profile view



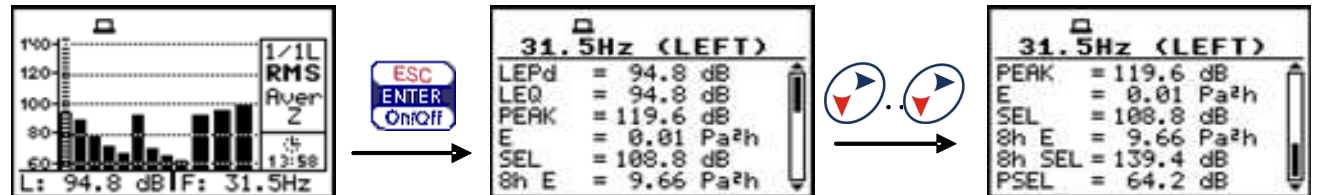
dosimeter results



statistics









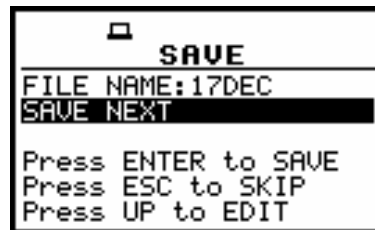
1/1 octave spectrum





SAVING MEASUREMENT RESULTS

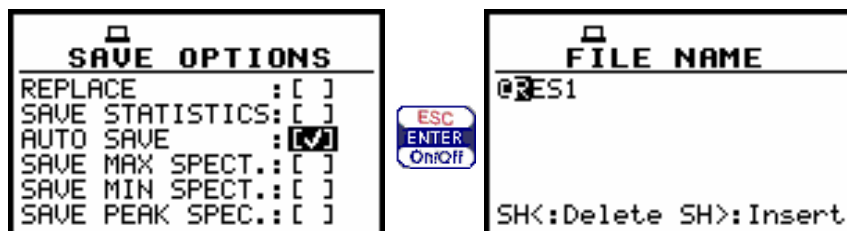
Two types of files for storing measurement results are available - RESULTS FILES and LOGGER FILES.

- Logger files are saved automatically
- To save results, the measurement has to be stopped
- Press  +  push-buttons (or go to MENU > FILE > SAVE)
- You can edit the name of the file (press  +  to edit name) and press . You can use SAVE NEXT option - the last digit of the file's name will be automatically incremented every time you save the file (e.g. 7JAN0, 7JAN1, 7JAN2). Press  to save.




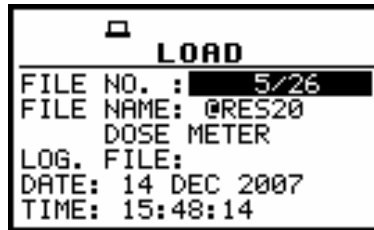
AUTO SAVE OPTION

It is also possible to switch on AUTO SAVE option. Go to MENU > FILE > SAVE OPTIONS, pick the AUTO SAVE, press  and edit the name of the first file. The number of the file name will be automatically incremented (e.g. @RES1, @RES2, @RES3). Press  to accept the edited name.





LOADING MEASUREMENT RESULTS

- To view saved measurement results, go to MENU (⬅️ + ⬆️) > FILE > LOAD, select file you wish to load and press .



DELETING MEASUREMENT RESULTS

- To delete result or setup file one by one, go to MENU (⬅️ + ⬇️) > FILE > DELETE, select file you wish to delete and press .
- To delete all RESULT FILES, all LOGGER FILES or all SETUP FILES, go to FILE > DELETE ALL and use the ⬅️ + ⬇️, pick RESULT FILES, LOGGER FILES or SETUP FILES and press  to delete selected files