

1 INTRODUCTION

The **SV 102** is digital, **type 2** dual-channel dosimeter dedicated for occupational health and safety acoustic monitoring task. The binaural dose measurements and the 1/1 octave analysis are simultaneously performed. Octave analysis provides direct data for the design of the ear-protectors. Together with **Audio Events Recording (AER)** option, these functionalities show the new reference standard on the acoustic dose measurement field, now commonly available in compact size instrument.

Dosimeter is offered with one or two dedicated **SV 25D** ceramic microphones in 1/2" housing. It ensures the very easy calibration by direct usage of commonly available acoustic calibrators. Moreover, **SV 25D** smart sensor, with built-in **TEDS (Transducer Electronic Data Sheet)**, offers automatic calibration function. The very robust casing of **SV 25D**, together with the special mounting clip and dedicated headband, make that microphones can be very easy attached in extremely short distance from the human ears.

SV 25S smart sensor with **TEDS**, is dedicated for the measurements under headphones or earmuffs using **MIRE** technique (**Microphone-In-Real-Ear**). With a special adapter, it can be also calibrated with commonly available acoustic calibrators. The **SV 102** together with **SV 25S** are designed for individual real-world test of the earmuffs noise reduction ratio.

The **SV 102** can be also used as a dual-channel type 2 sound level meter and real-time 1/1 octave analyser. Three acoustic profiles per channel allow parallel measurements with independently defined filters and RMS detector time constants. Advanced time-history logging for each profile, together with spectra saving and audio-events recording provide complete information about measured signal, which is saved in non-volatile internal memory with the capacity up to 64 MB. Data files are easily downloaded to any PC using USB interface and SvanPC+ software.

Instrument is powered from two AA standard or rechargeable batteries (separate charger is required) as well as the USB interface.

SV 102 as DOSIMETER / SLM / ANALYSER

- Standards: IEC 61252-1993; ANSI S1.25-1991, Type 2 : IEC 61672:2002
- Acoustic dosimeter mode: **Leq, Spl, Peak, SEL, DOSE, D_8h, LAV, SEL8, PSEL, E, E_8h, "Peaks Counter"** and more
- Measurement simultaneous to the 1/1 octave analysis
- SLM Mode: **Leq, Spl, SEL, LEPd, Lden, Ltm3, Ltm5, Statistics - Ln (L1-L99), LMax, LMin, LPeak**
- Simultaneous measurement in three profiles with independent set of filters and detectors
- Weighting filters: **A, C** and **Z**
- RMS Detector: Digital True RMS detector with Peak detection, resolution 0.1 dB
Time Constants: **Slow, Fast, Impulse**
- Microphone: **SV 25D**, Type 2, ceramic microphone, 1/2" casing with built-in preamplifier & integrated cable
- **SV 25S**, Type 2, ceramic microphone, special version of the **SV 25D** for measurements in real ear - under ear-protectors (option)
- **SV 25D** and **SV 25S** have built-in **TEDS** functionality for the automatic calibration
- Measurement range: **45 dBA RMS ÷ 141 dBA Peak**
- Frequency range: **20 Hz ÷ 8 kHz**, sampling rate 24 kHz
- Dynamic range: **100 dB**
- Data Logger: Time-history logging of **RMS / Max / Min / Peak** results to internal memory with time step down to 1 second, up to 24 measurement results logged simultaneously
- Audio Recorder: Time-domain-signal events recorder (option)
- Dual-channel measurement mode with second microphone **SV 25D** or **SV 25S** (option)
- Dual-channel 1/1 octave real-time analysis and spectra logging, 9 filters with centre frequencies from **31.5 Hz to 8 kHz**, Type 1, IEC 61260 (option)



Notice: The software options can be purchased in any time, as they require for their activation only the introduction of the special code.



SV 102 instrument with the microphones

The current list of SV 102 options and accessories is presented below:

SV 102	Single-Channel Dosimeter
SV 102_1	Dual-Channel Dosimeter (including second SV 25D_RED)
SV 102_LIC_1	1/1 octave analysis for SV 102 or SV 102_1
SV 102_LIC_2	Second channel activation for single-channel SV 102 without SV 25D_R
SV 102_LIC_15	Event recorder option*(under development)
SV 25D_B	Dosimeter microphone with integrated preamplifier, TEDS and cable for SV 102-BLACK
SV 25D_R	Dosimeter microphone with integrated preamplifier, TEDS and cable for SV 102-RED

SV 102 accessories included:

SV 25D_B, SC 56, 2xAA batteries, SvanPC+ version 1.xx for Windows2000/XP software