

## 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 ½" 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