

SV102A+

Class 1

Dual-Channel Noise Dosimeter

The SV 102A+ Class 1 Dual Channel Dosimeter is a state-of-the-art instrument designed for the precise measurement of occupational noise exposure, adhering to international standards such as IEC, ISO, OSHA, and NIOSH. Its dual-channel functionality enables simultaneous monitoring of noise from multiple directions within the occupational environment. This capability is enhanced by advanced features like audio recording and frequency analysis, which support detailed post-measurement analysis of noise sources.

Utilizing the Microphone in Real Ear (MIRE) measurement technique allows for noise dose assessment in environments where traditional dosimetry methods are inadequate, such as in aviation and call centers. By measuring noise exposure directly at the ear, the SV 102A+ offers a more accurate evaluation of the auditory risks faced by workers.





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MIRE Measurement Technique

Microphone in Real Ear Measurements

The SV 102A+ employs the ISO 11904-1 MIRE (Microphone in Real Ear) measurement technique, utilizing a specialized microphone probe, the SV 25S, positioned at the entrance of the ear canal. This method is essential for conducting one-third octave band analysis directly within the ear, offering precise noise exposure assessments in environments where traditional dosimetry is ineffective, such as call centers with headphone-based audio. MIRE measurement is particularly suited for analyzing noise exposure from close-proximity sources, requiring the SV 25S MIRE microphone and 1/3 octave analysis capability.



Class 1 Accuracy

Integrating Noise Dosimeter and Class 1 Sound Level Meter

The SV 102A+ adheres to the Class 1 specifications of IEC 61672, ensuring high-precision measurements across a broad frequency range from 20 Hz to 20 kHz. This capability is crucial for accurate noise assessment in environments with high-frequency noise sources or in conditions of very low temperatures (down to -10°C). The device's 48 kHz sampling rate is in line with ISO 9612 recommendations for capturing the full spectrum of workplace noise, thereby providing reliable data for effective noise management and hearing protection.



Dual-Channel Input

Simultaneous Measurements with Two Microphones

Featuring two input channels, the SV 102A+ allows for the concurrent use of dual microphones. This dual-channel approach facilitates comprehensive noise exposure evaluation by enabling measurements on both sides of the head or a combination of one microphone placed on the shoulder and another inside the ear canal. Such configurations are invaluable for assessing the attenuation efficiency of hearing protectors or the acoustic performance of headsets, including those used in military aviation. This feature underscores the versatility of the SV 102A+ in adapting to various measurement scenarios, enhancing its utility in occupational noise assessment.

Key Functions



Class 1
Accuracy

The meter complies with Class 1 requirements of IEC 61672, ensuring accurate measurements in environments with very low temperatures (from -10 °C) or where noise is dominated by high frequencies, as recommended by ISO 9612.



Noise at Work

Designed for workplace noise assessments, the meter aligns with standards such as ISO 9612, OSHA, MSHA, and ACGIH. It also supports hearing protector selection in accordance with ISO 4869-2.



Real-time
Frequency Analysis

Features include 1/1 octave analysis for selecting hearing protectors and 1/3 octave analysis for determining noise dose using the MIRE technique. These functions can be activated at any time with an activation code.



Triggered
Audio Recording

Audio recording, synchronized with noise time-history, can be played back in PC software for noise source identification. Recording can be triggered based on threshold or time and activated with an activation code.



Time-history
Logging

Logs results such as Noise Dose, Leq, Max, Min, and Peak with two simultaneous logging steps, stored on an 32 GB microSD card.



Low Power
Consumption

The device is power-efficient, capable of running up to 16 hours on a single set of two AA batteries.

PC software



Supervisor: A comprehensive software package designed for health and safety specialists. This software supports all Svantek instruments tailored for the health and safety market. It facilitates data download and instrument configuration, offering a robust suite of tools for the accurate determination of occupational noise exposure. Utilizing noise level measurements, Supervisor software complies with all relevant standards, including TWA and DOSE calculations as per OSHA, ACGIH, MSHA, and ISO 9612 guidelines.

Optional accessories



SV 25S
MIRE
dosimeter microphone



SV 15
Dosimeter preamplifier
with TEDS



SV 7052 ACO
Condenser
Microphone



SV 33B
Class 1 Acoustic Calibrator
114 dB at 1 kHz



SA 131
MIRE
calibration adapter



SF 102A+_30CT
License of 1/1 & 1/3 octave



SF 102A+_REC
License of audio recording



Technical Specifications

Standards	IEC 61252; ANSI S1.25-1991; Class 1: IEC 61672-1:2013, ISO 11904-1	
Acoustic Dosimeter Mode	Lav/Leq, SPL, Lmax, Lmin, SEL, SEL8, PSEL, LEPd, Dose (%), TWA, E, E_8h, Peak, Run Time, Upper Limit Time (ULT), L(C-A), Projected Dose (D_8h)	
Sound Level Meter 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	ACO SV 7052E, prepolarised, 1/2" housing (one piece included) SV 25S, special microphone with dedicated probe for Microphone-In-Real-Ear technique (optional)	
Preamplifier	SV 15 with integrated cable	
Measurement Range	45 dBA RMS ÷ 141 dBA Peak (with ACO SV 7052E microphone)	
Typical Noise Floor	less than 35 dBA (with SV 7052E microphone)	
Frequency Range	20 Hz ÷ 20 kHz, sampling rate 48 kHz (with ACO SV 7052E microphone)	
Dynamic Range	100 dB	
Data Logger ¹	Time-history logging of Leq/Lmax/Lmin/Peak/Lav results to internal memory with time step down to 100 millisecond to microSD card	
Audio Recorder ¹	Time-domain signal events recorder (optional)	
Dual-channel Mode	Dual-channel measurement mode with second microphone ACO SV 7052E or SV 25S	
1/1 Octave ¹	Dual-channel 1/1 octave real-time analysis and spectra logging, 10 filters with centre frequencies from 31.5 Hz to 16 kHz, Type 1: IEC 61260 (optional)	
1/3 Octave ¹	Dual-channel 1/3 octave real-time analysis and spectra logging, 31 filters with centre frequencies from 20 Hz to 20 kHz, Type 1, IEC 61260 (optional)	
Input	2 x LEMO 2-pin, Direct	
Display	Colour 160 x 128 pixels OLED type	
Memory	MicroSD card 32 GB (removable & upgradeable)	
Interfaces	USB 1.1 Client Extended I/O - AC output (1 V Peak) / Digital Output (Alarm trigger) / Digital Input (Input trigger)	
Power Supply	Two AA batteries (alkaline) Two rechargeable batteries (not included) USB interface	operation time > 16 h (3.0 V / 1.6 Ah) ² operation time > 20h (2.4 V / 2.6 Ah) ² 150 mA HUB
Environmental Conditions	Temperature Humidity	from -10 °C to 50 °C up to 90% RH, non-condensed
Dimensions	95 x 83 x 33 mm without microphones	
Weight	260 grams with batteries (without microphones)	

¹function parallel to the meter mode

²depending on configuration and environmental conditions

The policy of our company is to continually innovate and develop our products. Therefore, we reserve the right to change the specifications without prior notice.

