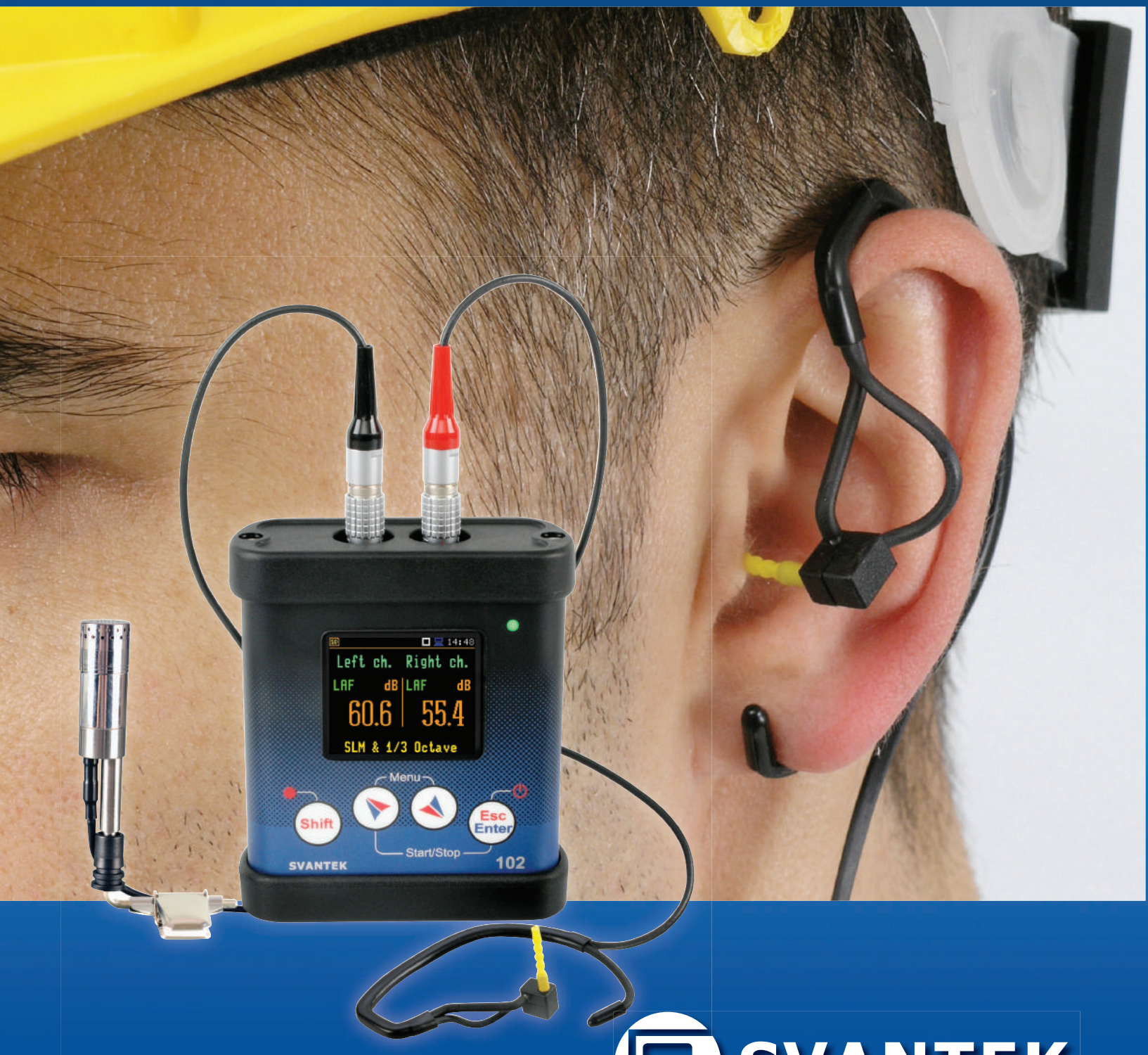
SV 102A+

Class 1 Dual-Channel Noise Dosimeter



SVANTEK
health and safety

SV 102A+ Class 1 Dual-Channel Noise Dosimeter

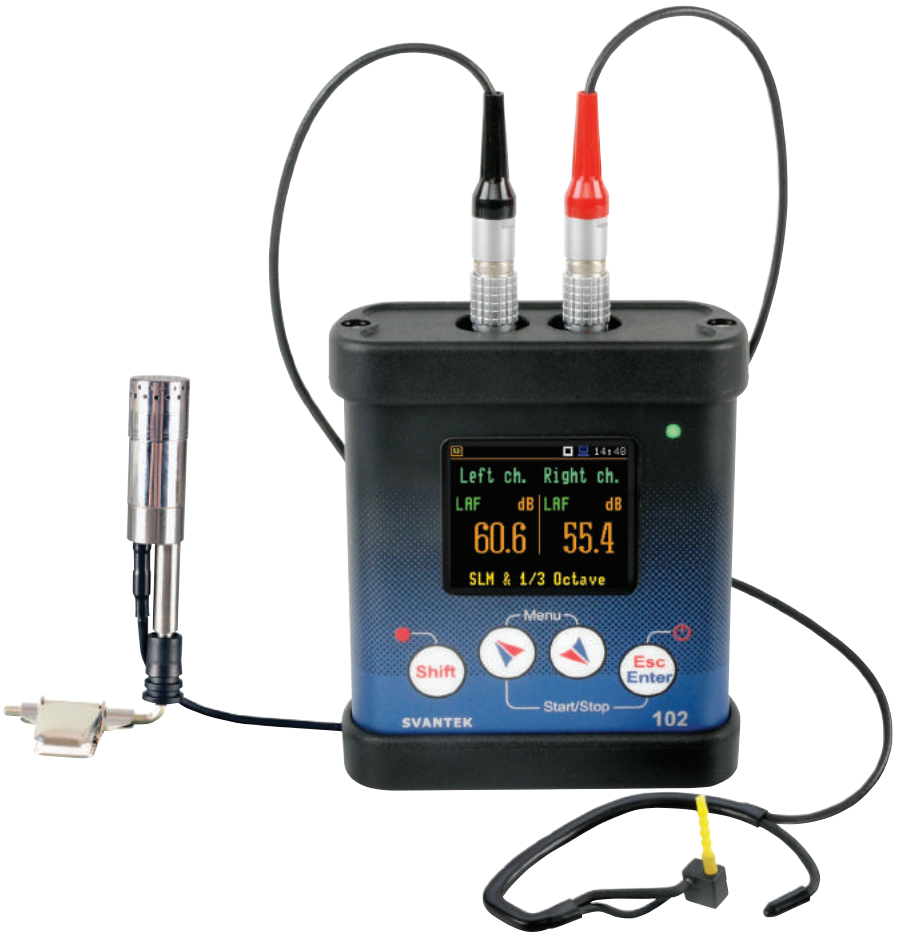
The SV 102A+ is a **DUAL-CHANNEL** noise dosimeter designed for the accurate measurement of noise exposure to ISO 9612, OSHA and NIOSH standards. The two channel technology allows for noise exposure levels to be assessed simultaneously on **BOTH SIDES OF THE HEAD**.

The meter meets **CLASS 1** requirements of IEC 61672 and it can be used when measuring at very **LOW TEMPERATURES** (from -10 °C) or when noise is **DOMINATED BY HIGH FREQUENCIES** as it is recommended by ISO 9612.

The colour digital display is an **OLED** screen with a high contrast visibility even in full daylight or in low ambient light areas. It displays information in both text and graphical form.

The **AUTO-CALIBRATION** facility makes the SV 102A+ very easy to use. Once the instrument detects the calibration signal it starts the calibration process automatically, saving the calibration data together with the measurement file, both before and after measurement.

The **TIME HISTORY LOGGING** of results such as Leq, Max, Min and Peak with two simultaneous logging steps is saved in **8 GB** memory. All dosimetry results such as DOSE, TWA, LAV are also included.



ISO 11904-1 MIRE (microphone in real ear) measurement takes sound measurements from the ear and performs the one-third octave band analysis. The SV 102A+ can perform such analyses using a special microphone probe SV 25S placed at the entrance of the ear canal. **MIRE** can be used to measure noise exposure in situations where normal dosimetry methods are inappropriate such as in a **TELEPHONE CALL CENTRE** where the sound comes from headphones. The option of MIRE measurements requires the SV 25S MIRE microphone and 1/3 octave analysis.

About SV 102A+

The SV 102A+ is a Class 1 dual-channel noise dosimeter that has been designed for the accurate measurement of noise exposure to ISO 9612 and MIRE (microphone in real ear) measurements to ISO 11904-1.
A typical application of MIRE measurement is a noise exposure monitoring in telephone call centres where the sound comes from headphones; an application not suited to classical dosimetry methods.
MIRE measurement involves measuring the sound in the ear and performing a one-third octave band analysis on it.

SV 102A+ gives the unique opportunity to assess the exposure on both sides of the head simultaneously. This is particularly important when a worker is exposed to noise coming from a dominant directional source where placing the microphone on only one side could understate the true level of noise exposure.
Another use of dual channel technology is the simultaneous measurement with the standard microphone outside and the MIRE inside any hearing protection.

What's inside the SV 102A+ kit?

The standard SV 102A+ kit includes SV 15 preamplifier with cable, SV 7052E microphone, 2x AA batteries, 8 GB memory card and a USB cable for communication with PC. Each SV 102A+ has its factory calibration certificate and a **36-MONTH WARRANTY CARD** that is also applicable to the microphone. The standard kit also includes license for PC software.

Supervisor Software

Supervisor software supports data download, instrument configuration and provides complete set of tools for determination of occupational noise exposure from noise level measurements in accordance to all standards using TWA and DOSE such as OSHA, ACGIH, MSHA, NHO-01 or NR-15. The data files from the SV 102A+ can be used for calculation of all required measurement results and uncertainties in accordance to the three measurement strategies described in ISO 9612.

Optional functions

The option for **1/1** and **1/3 OCTAVE** real-time analysis allows accurate and correct selection of hearing protectors. When presented as a spectrogram, the octave analysis can be used for a quick verification of noise sources in the time history. It can be activated at any time, by ordering an activation code.

The **AUDIO EVENTS RECORDING** option works during measurement and is logged in parallel to time history so it can be played back in the PC software. The settings, like triggers or recording time, are adjustable. It can be activated at any time, by ordering an activation code.

Optional accessories

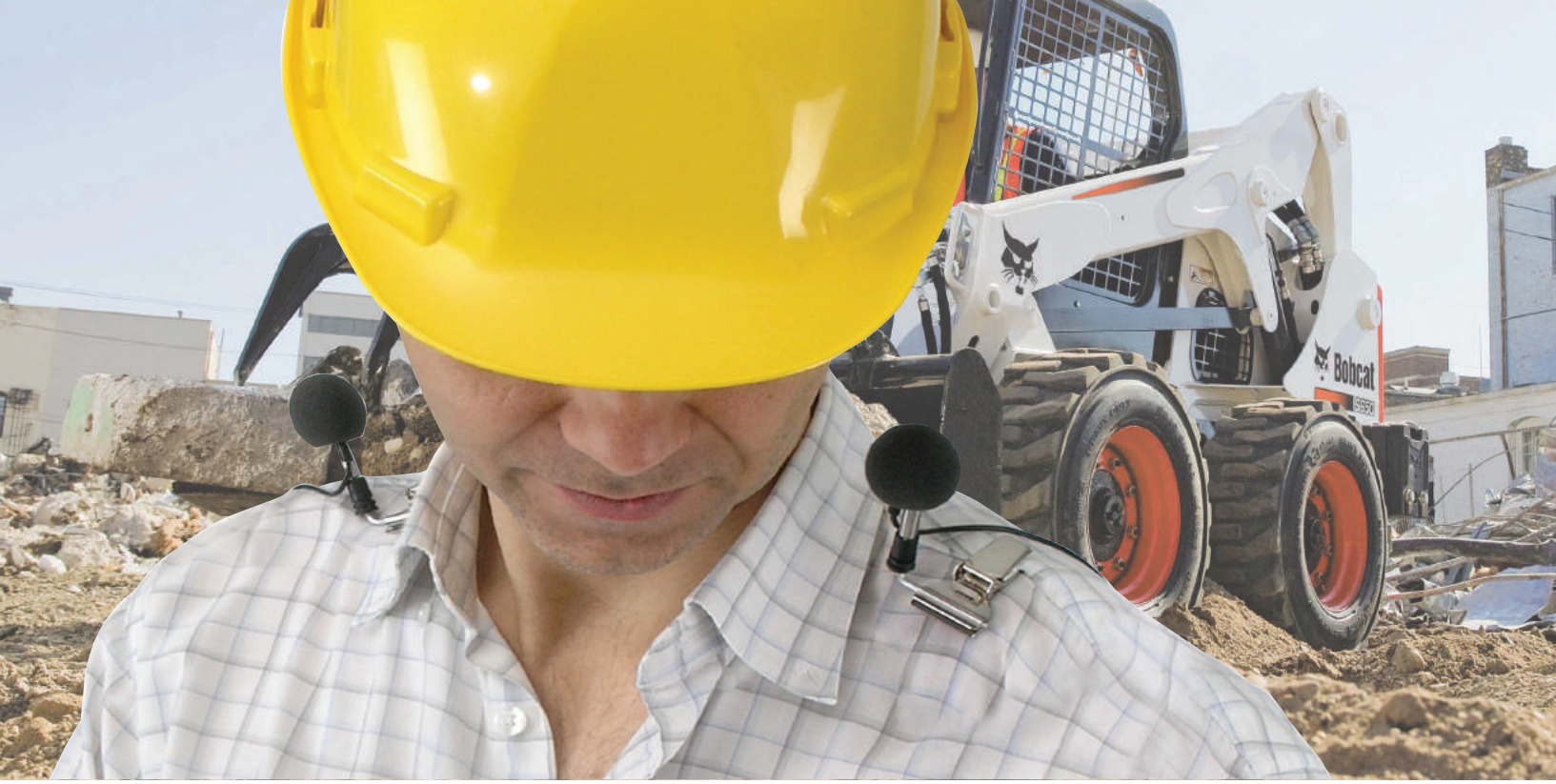
SV 15
Microphone
Preamplifier
with a Clip

ACO SV 7052E
Condenser
Microphone

SV 36 Class 1
Acoustic Calibrator
94 dB / 114 dB
at 1 kHz

SV 25S
MIRE Microphone

SA 131
Calibration
Adapter for MIRE



SV 102A+ 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)	
SLM Mode	Leq, Spl, SEL, LEP,d, 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 8 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)	operation time > 16 h (3.0 V / 1.6 Ah)[2]
	Two rechargeable batteries (not included)	operation time > 20h (2.4 V / 2.6 Ah)[2]
	USB interface	150 mA HUB
Environmental Conditions	Temperature	from -10 °C to 50 °C
	Humidity	up to 90 % RH, non-condensed
Dimensions	95 x 83 x 33 mm without microphones	
Weight	260 grams with batteries (without microphones)	

[1]function parallel to the meter mode
[2]depending 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.

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