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INTELLECTUAL PROPERTY

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SV 973

Class 2 Sound Level Meter & Sound Exposure Meter

SVANTEK

health and safety

SV 973 Sound Level Meter & Sound Exposure Meter

SV 973 **Sound Level Meter** is a CLASS 2 instrument in accordance to IEC 61672.

Sound exposure meter mode with measurement range up to **141 dB Peak**.

Wide frequency range up to **10 kHz** in sound level meter mode.

Microphone in a **MEMS** technology with a lifetime warranty.

The **OLED display** is a full color and high contrast so it can be used in a sunlight or even at night. The OLED technology doesn't use back-light giving SV 973 more battery operating time. The size of display is a perfect compromise between power savings and visibility.

Very long **operating time** up to 38 hours on AAA replaceable batteries.

The **USB connector** can be used for communication with PC software as well as for powering the instrument from an external battery or PC.

The **time history logging** of results such as Leq, Max, Min and Peak is saved on built-in 8 GB memory.

Automatic calibration starts the calibration and saves the calibration data together with a measurement file, both before and after measurement.

Voice comments before or after the measurements allow easy identification of data files.

Audio recording works during measurement and is logged in parallel to the time history (optional).

The SV 973 can perform real-time frequency analysis in **1/1 octave (included)** and **1/3 octave** bands (optional).

RT 60 reverberation time measurement in 1/1 or 1/3-octave bands in accordance to ISO 3382 supported by the Building Acoustics Assistant mobile application (optional).

About SV 973

SV 973 combines Class 2 sound level meter and sound exposure meter in one device. The meter has been designed in accordance to IEC 61672 and offers a wide frequency range up to 10 kHz (in the sound level meter mode).
The unique feature of the SV 973 is the microphone in a MEMS technology with a lifetime warranty.
The meter's measurement range enables its use in industrial and environmental noise measurements. For measurements of noise at work, the dedicated sound exposure meter function shifts the dynamic measuring range of sound level meter up to 141 dB Peak.

The instrument is easily calibrated in field using an acoustic calibrator as the calibration begins automatically when the microphone is inserted into the calibrator.
The SV 973 can measure broad-band results with all the necessary weighting filters as well as 1/1 octave or 1/3 octave band filters. Audio events recording function works together with sound level meter mode. The reverberation time (RT 60) function is also available as and option.
The data are stored on built-in 8 GB memory and can be easily downloaded to a PC using the Supervisor or SVANPC++ software.

What's inside the SV 973 kit?

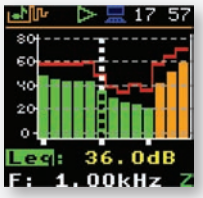
The kit consist of SV 973 Class 2 sound level meter equipped with a new robust MEMS microphone with a life-time warranty. The kit includes: SA 22 windscreen, SA 80 soft bag for instrument, 8 GB built-in memory, four AAA batteries, USB-C cable, and CD with user manual. Each SV 973 has its factory calibration certificate and 36 months warranty card.

PC Software for SV 973

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 973 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

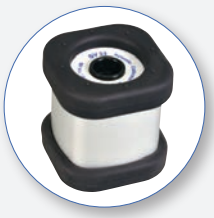
AUDIO RECORDING is synchronized with a noise time-history and it can be opened and played back in Supervisor software enabling noise source recognition. The recording is programmable, it can be triggered on threshold or time and the length of recording can be set as well. It can be activated at any time by ordering the activation code.



FREQUENCY ANALYSIS of the signal in 1/3 octave bands. The 1/3 octave function allows to determine the influence of high or low frequencies on overall values. It can be activated at any time by ordering the activation code.

RT60 ANALYSIS provides reverberation time calculation for 1/1 octave bands (from 63 Hz to 8 kHz) or 1/3-octave bands (from 50 Hz to 10 kHz) and three total RMS levels (A, C and Z weighted). Whole measurement process and calculations implemented in SV 973 fulfil the ISO 3382 standard. It can be activated at any time by ordering the activation code.

Optional accessories to SV 973



SV 34 Class 2
Acoustic Calibrator
114 dB at 1 kHz

SA 47M
Carrying Bag
Fabric Material

SA 21
Tripod

SV 973 Technical Specifications

Sound Level Meter

Standards	Class 2: IEC 61672-1:2013
Weighting Filters	A, B, C, Z, LF
Time Constants	Slow, Fast, Impulse
RMS Detector	Digital True RMS detector with Peak detection, resolution 0.1 dB
Microphone	ST 973 MEMS microphone in 1/2" housing
Preamplifier	Integrated
Total Dynamic Range	25 dBA RMS ÷ 128 dBA Peak (typical from noise floor to the maximum level)
Linear Operating Range	32 dBA RMS ÷ 128 dBA Peak (in accordance to IEC 61672)
Internal Noise Level	Less than 25 dBA RMS
Frequency Range	20 Hz ÷ 10 kHz
Meter Mode Results	Elapsed time, Lxy, Leqx (LEQ), Lxpeak (PEAK), Lxymax (MAX), Lxymin (MIN), LEx, Lden, LEPd, Ltm3, Ltm5, where x - weighting filter A/ B/ C/ Z; y - time constant Fast/ Slow/ Impulse EX (expected LEQ value), SD (standard LEQ deviation), OVL (overload time %).
Measurement Profiles	Simultaneous measurement in three profiles with independent set of filters (x) and detectors (y)
Statistics	Ln (L_1-L_{99}), complete histogram in meter mode
Data Logger	Time-history logging of summary results, spectra with two adjustable logging steps down to 100 ms
Audio Recording (optional)	Audio events recording, trigger and continuous mode, 12 kHz sampling rate, WAV format
Voice Comments	Audio records on demand, created before or after measurement, added to measurement file

Sound Exposure Meter

Total Dynamic Range	43 dBA RMS ÷ 141 dBA Peak (typical from noise floor to the maximum level)
Linear Operating Range	50 dBA RMS ÷ 141 dBA Peak (in accordance to IEC 61672)
Frequency Range	20 Hz ÷ 10 kHz
Exchange Rates	2, 3, 4, 5, 6
Measurement Results	Lxy, Leqx (LEQ), Lxpeak (PEAK), Lxymax (MAX), Lxymin (MIN), LEx, Lden, LEPd, Ltm3, Ltm5, Ln (Leq statistics), where x - weighting filter A/ C/ Z; y - time constant Fast/ Slow/ Impulse Lc-a, DOSE, D_8h, PrDOSE, LAV, LAE8 (SEL8), PLAE (PSEL), E, E_8h, PTC (peak counter), PTP (peak threshold), ULT (upper limit time), TWA, PrTWA, EX (expected LEQ value), SD (standard LEQ deviation), OVL (overload time %).

Analyser

1/1 Octave Analysis Filters	Real-time analysis meeting Class 1 requirements of IEC 61260-1:2014, centre frequencies from 31.5 Hz to 8 kHz (included)
1/3 Octave Analysis Filters	Real-time analysis meeting Class 1 requirements of IEC 61260-1:2014, centre frequencies from 20 Hz to 10 kHz (optional)
RT 60	RT 60 reverberation time analysis in 1/1 or 1/3 octave bands (optional)

General Information

Memory	Built-in 8 GB memory	
Display	Colour 96 x 96 pixels OLED type	
Keyboard	8 push buttons	
Communication Interfaces	USB 2.0, Bluetooth® 4.2	
Power Supply	Four AAA alkaline or rechargeable NiMH batteries (not included)	
	Operation time	20 h ÷ 38 h[1]
Environmental Conditions	Temperature	from -10 °C to 50 °C
	Humidity	up to 95 % RH, non-condensed
Physical Characteristics	Dimensions	205 mm x 52 x 20 mm with microphone
	Weight	Approx. 225 grams with batteries

[1]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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