# SVANTEK
building acoustics

SV 977D

Class 1
Sound & Vibration Level Meter

The SV 977D is a Class 1 Sound and Vibration meter designed for building acoustics, and occupational and environmental noise measurements. The meter is equipped with a 1/2" MK 255 microphone offering a wide frequency range from 3 Hz and, excellent long-term stability of sensitivity. The SV 977D has a built-in Bluetooth® interface for wireless connection with smartphone applications such as Building Acoustics Assistant which extends the measurement capabilities dedicated for building acoustics. The SV 977D can also be used as a vibration level meter by simply connecting the appropriate cable and a vibration sensor.
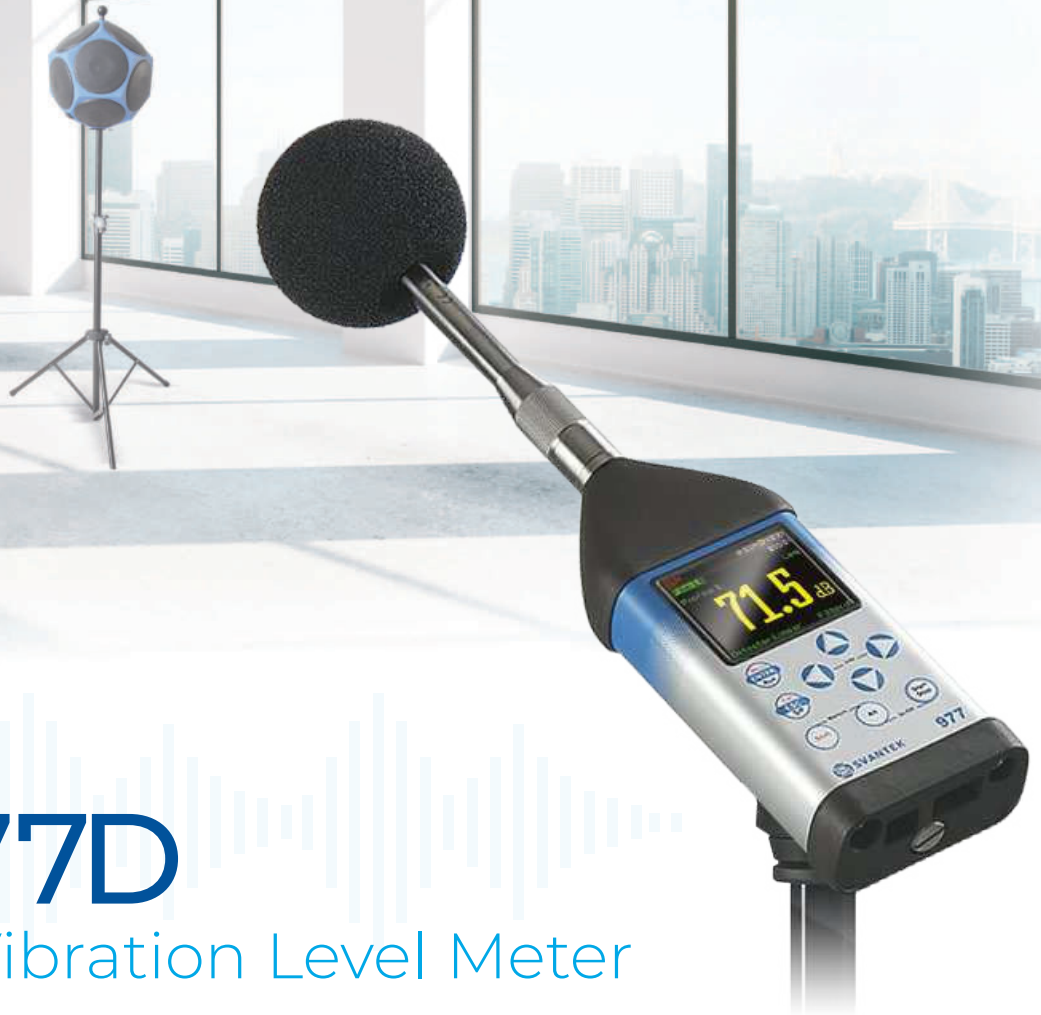
SV 977D
Sound & Vibration Level Meter

Wide application

Large measurement range for various applications

The new SV 977D is the top-class professional class 1 sound level meter designed for engineering applications, building acoustics and ultrasound measurements up to 40 kHz.

BA Assistant

Building Acoustics mobile application

The smartphone application helps the user in calculating the insulation in accordance with ISO 16283. Sound insulation results are presented on the display and in the form of a report which is compliant with the ISO requirements.

Free tools

1/1 and 1/3 octave on board

Frequency analysis of signals in the 1/1 or 1/3 octave bands makes it possible to determine the influence of high or low frequencies on the overall values. Both functions are available in sound and vibration mode at no extra cost.

Key Features

Class 1 sound & vibration level meter

The SV 977D Class 1 Sound & Vibration Level Meter and Analyser is designed to meet the needs of both environmental monitoring and occupational health and safety monitoring specialists.

Real-time frequency analysis

Depending on the application, frequency analysis can be done in the 1/1 octave, 1/3 octave spectra or optionally in FFT.

WAV recording

Optional time domain signal recording to WAV format with a defined frequency up to 48 kHz. Postprocessing of high quality wave files (48 kHz, 24 bit) is available in SvanPC++ program.

RT60 Reverberation time measurements

The RT 60 functionality in the instrument provides fast verification of results on site. Calculation of RT 60 values is based on 1/1 or 1/3 octave logging results. The smartphone application helps the user in calculating the insulation in accordance with ISO 16283.

STIPA in accordance with IEC 60268

The meter is supported by a dedicated mobile application to help perform STIPA measurements and calculations. The STIPA signal is usually reproduced by loudspeakers available as part of the public information system under study, and in some cases dedicated loudspeakers are used.

Ultrasounds to 40 kHz

With an optional microphone and 1/3 octave or FFT analysis, the SV 977D provides analysis of ultrasounds up to 40 kHz.

Vibration level meter

If you disconnect the microphone preamplifier, you can use the instrument to take vibration measurements by simply connecting the appropriate cable and a vibration sensor.

Software

SVAN PC++

All measurement files are saved in the internal memory of the instrument, but after this more complex analyses can be carried out using the SvanPC++ Building Acoustics software module. The software includes a very powerful calculator that automatically averages the 1/n octave spectra time history and performs calculation of reverberation time.

BA ASSISTANT

The Building Acoustics Assistant application works on Android platforms, and is easy to install and intuitive to operate. The user interface shows a preview of the results in the form of time-history plots as well as numerical values. The smartphone application helps the user in calculating the insulation in accordance with ISO 16283. Sound insulation results are presented on the display and in the form of a report which is compliant with the ISO requirements. A project containing measurements from the source and receiving rooms for different sound source positions is created during the measurement process. The project is saved in the memory of the sound meter along with the measurement files.

Optional accessories

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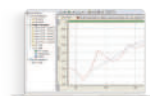94 dB / 114 dB at 1 kHz

MK 202
Ultrasound 1/2"
Microphone

SA 277D
Microphone
Outdoor Protection Kit

SC 26
Microphone
Extension Cable

SF 977D_15
WAV recording

SF 977D_P1
Package RT 60 and STIPA

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Technical Specifications

Sound Level Meter & Analyser

Standards	Class 1: IEC 61672-1:2013, Class 1: IEC 61260-1:2014
Weighting Filters	A, B, C, Z, LF, U, AU
Time Constants	Slow, Fast, Impulse
RMS Detector	Digital True RMS detector with Peak detection, resolution 0.1 dB
Microphone	Microtech Gefell MK 255, 50 mV/Pa, prepolarised 1/2" condenser microphone
Preamplifier	SV 12L detachable (TNC)
Linear Operating Range Dynamic Range	23 dBA RMS ÷ 140 dBA Peak (in accordance to IEC 61672-1:2013) 16 dBA RMS ÷ 140 dBA Peak (typical from noise floor to the maximum level)
Internal Noise Level	Less than 16 dBA RMS
Dynamic Range	110 dB
Frequency Range	3 Hz ÷ 20 kHz with Microtech Gefell MK 255
Sound Level Meter Results	Elapsed time, Lxy (SPL), Lxeq (LEQ), Lxpeak (PEAK), Lxymax (MAX), Lxymin (MIN), where x - weighting filter A/ B/ C/ Z; y - time constant Fast/ Slow/ Impulse LR (ROLLING LEQ OPTION), Ovl (OVERLOAD), Lxye (SEL), LN (LEQ STATISTICS), Lden, LEPd, Ltm3, Ltm5
Measurement Profiles	Simultaneous measurement in three profiles with independent set of filters (x) and detectors (y)
Statistics	Ln (L1-L99), complete histogram in meter mode and 1/1 or 1/3 octave analysis
Data Logger	Time-history logging of summary results, spectra with two adjustable logging steps down to 2 ms
Analyser	1/1 or 1/3 octave real-time analysis, up to 40.0 kHz band meeting Class 1 requirements of IEC 61260-1 FFT analysis 1600 lines, up to 40.0 kHz band (optional) RPM rotation speed measurement parallel to the vibration measurement (optional) RT60 reverberation time measurement (optional) STIPA speech transmition index measurement and calculations (optional)
Audio Recording	Audio recording on trigger or continuous mode, 12 / 24 / 48 kHz sampling rate, wav format (optional)

Vibration Level Meter & Analyser

Standards	ISO 20816-1
Meter Mode	RMS, Max, Peak, Peak-Peak Simultaneous measurement in three profiles with independent filter sets and detectors
Filters	HP1, HP3, HP10, Vel1, Vel3, Vel10, VelMF, Dil1, Dil3, Dil10, Wh
Accelerometer	SV 80 (100 mV/g) or any IEPE accelerometer (optional)
Analyser	1/1 or 1/3 octave real-time analysis, up to 40.0 kHz band meeting Class 1: IEC 61260-1 FFT analysis 1600 lines, up to 40.0 kHz band (optional) RPM rotation speed measurement parallel to the vibration measurement (optional)
Data Logger	Time-history logging of summary results, spectra with two adjustable logging steps
Time-domain Signal Recording	Continuous or triggered time-domain signal recording to WAV format (optional)

General information

Input	IEPE with TNC connector	
Memory	MicroSD card 32 GB (removable & upgradeable up to 128 GB)	
Display	Blanview TFT-LCD 2.4" colour display (320 x 240 pixels)	
Communication Interfaces	USB-C, Bluetooth® 5.2, RS 232 (with optional SP 76) External I/O - AC output (1 V Peak) or Digital Input/Output (Trigger − Pulse)	
Power Supply	Four AA dry batteries	operational time > 12 h[1]
	Four rechargeable AA batteries	operational time > 16 h[1] (4.8 V / 2.6 Ah) (not included)
	External power supply	6 V/500 mA DC ÷ 15 V/250 mA DC
	USB interface	min. 500 mA HUB
Environmental Conditions	Temperature	from -10 °C to 50 °C (14 °F to 122 °F)
	Humidity	up to 95 % RH, non-condensed
Dimensions	343 x 79 x 39 mm (with microphone and preamplifier)	
Weight	Approx. 0.6 kg with batteries	

[1] typical operational time is dependent on the instrument operation mode, and battery type

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.

SOUND AND VIBRATION MEASUREMENT SOLUTIONS