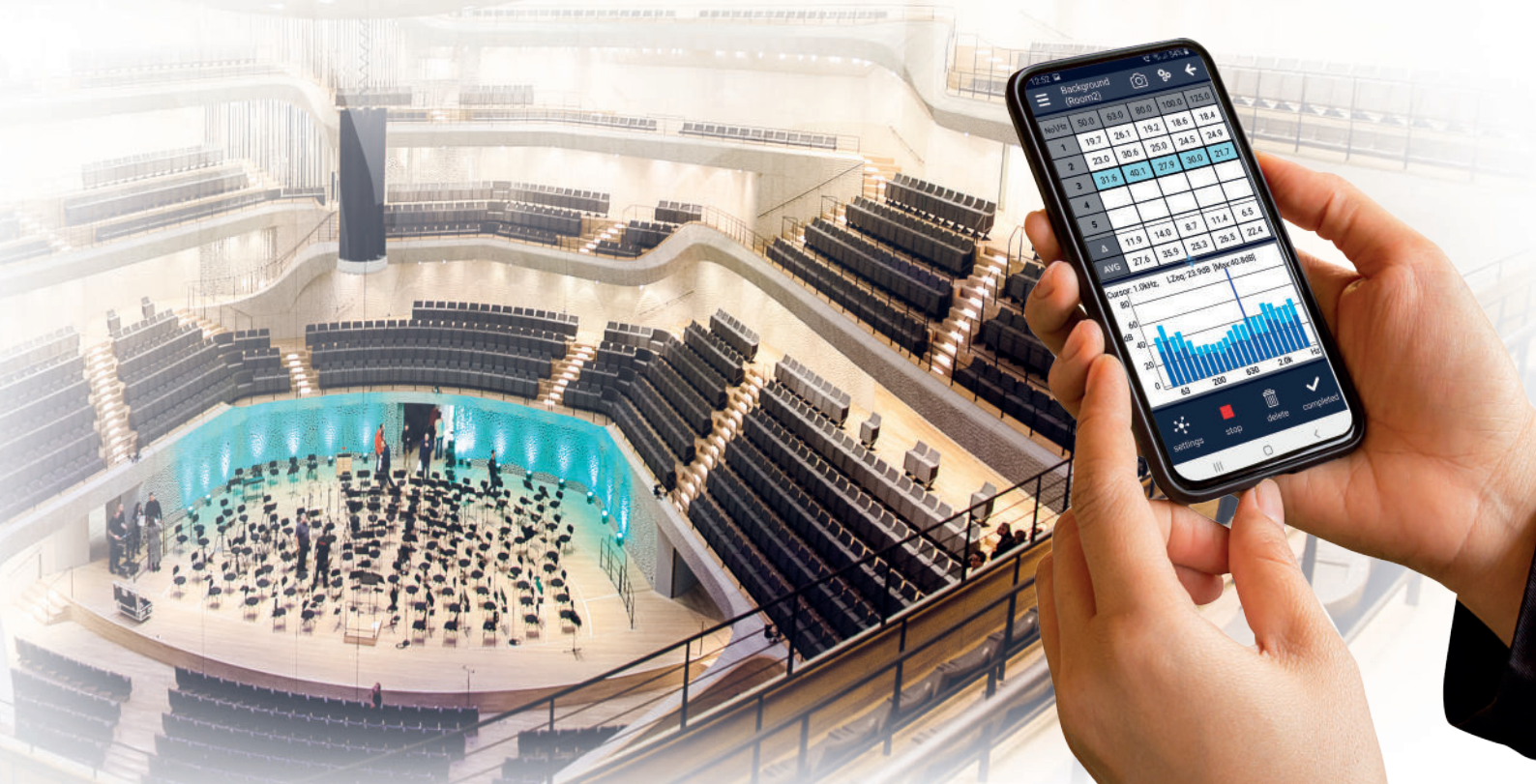
SVANTEK
building acoustics

SV 971A

Class 1
Sound Level Meter

The high accuracy of the SV 971A meter along with its millisecond spectra logging allows users to perform all measurements necessary to obtain facade, airborne or impact sound insulation results as well as STIPA.

With the Building Acoustics Assistant application, the SV 971A can be controlled remotely from a tablet or smartphone. The mobile application uses predefined setups that make building acoustics measurements at multiple points both easy and fast. Building acoustic measurement can be performed with a single or two instruments at the same time!



SV 971A

Sound Level Meter

Updated hardware

Large measurement range with a new microphone

The SV 971A is equipped with the new measuring microphone offering the LAeq linear measurement range from 27 to 137 dB (140 dB Peak) in a single range! The improved design of the microphone ensures even better long-term stability of its sensitivity.

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 compliant with the ISO requirements.

New Options

RT 60 and STIPA measurements

Along with the new hardware additions, the SV 971A has been equipped with a new internal program that supports the measurements of the reverberation time measurement RT 60 and STIPA speech intelligibility, both supported by a mobile application..

ISI sa-nv Instrumentation for Science and Industry (INTERCONTINENTAL SERVICES INC)
Rue du Doyenné 3 Dekenijstraat 1180 Brussels – Belgium - Tel 02/ 343 30 81
mail : sales@isi-be.eu web : www.isi-be.eu

Key Features

The smallest Class 1 sound level meter

The SV 971A is a class 1 sound level meter in accordance with IEC 61672-1. It is the smallest class 1 instrument on the market. The size and weight are very convenient when making hand-held measurements.

Reverberation time measurements

The RT 60 functionality in the instrument is fast verification of results on site. Calculation of RT 60 values is based on 1/1 or 1/3 octave logging results.

Real-time frequency analysis

Frequency analysis is a critical tool in building acoustics measurements. Depending on the application, frequency analysis can be done in the 1/1 octave spectra or the 1/3 octave spectra. SV 971A records the time-history of spectra with the millisecond accuracy which enables the calculation of RT60 results as well as calculation of sound insulation results.

Sound insulation measurement

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 compliant with the ISO requirements. The project is saved in the memory of the sound meter along with the measurement files.

STIPA in accordance with IEC 60268

In organizing STIPA measurements and calculations, the meter is supported by a dedicated mobile application. The STIPA signal is usually reproduced by loudspeakers available in the public information system under study, in some cases dedicated loudspeakers are used.

Low power consumption

One of the biggest advantages of using the SV 971A is its power efficiency. It can run up to 24 hours on one set of small AAA batteries.

Software

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

Application working on Android platforms is easy to install and intuitive to operate. The user interface allows the preview of 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 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. The project is saved in the memory of the sound meter along with the measurement files.

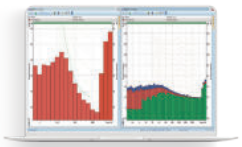
Optional accessories

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

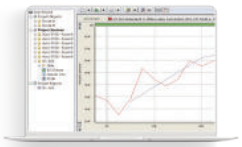
SA 72
Waterproof carrying case

SA 271A
Microphone
Outdoor Protection Kit

SC 91A
Microphone
Extension Cable



SF 971A_P1
Package 1/1 & 1/3 octave and audio recording



SF 971A_P2
Package RT 60 and STIPA

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Technical Specifications

Standards	Class 1: IEC 61672-1:2013, Class 1: IEC 61260-1:2014
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	ACO SV 7152, 32 mV/Pa, prepolarised 1/2" condenser microphone
Preamplifier	SV 18A detachable (60 UNS thread)
NORMAL Linear Operating Range Dynamic Range	 27 dBA RMS ÷ 140 dBA Peak (in accordance to IEC 61672) 20 dBA RMS ÷ 140 dBA Peak (typical from noise floor to the maximum level)
LOW Linear Operating Range Dynamic Range	 24 dBA RMS ÷ 126 dBA Peak (in accordance to IEC 61672) in a single range 17 dBA RMS ÷ 126 dBA Peak (typical from noise floor to the maximum level)
Internal Noise Level (acoustical compensated)	20 dBA RMS in the range NORMAL 17 dBA RMS in the range LOW
Dynamic Range	120 dB
Frequency Range	5 Hz ÷ 20 kHz (+/- 3 dB)
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
Sound Exposure Meter Results	Lxy (SPL), Lxeq (LEQ), Lxpeak (PEAK), Lxymax (MAX), Lxymin (MIN), DOSE, (optional) DOSE_8h, PrDOSE, LAV, Lxye (optional) (SEL), Lxye8 (SEL8), PLxye, (PSEL), E, E_8h, LEPd, PTC (PEAK COUNTER), PTP (PEAK THRESHOLD %), ULT (UPPER LIMIT TIME), TWA, PrTWA, Lc-a Exchange Rate 2, 3, 4, 5, 6
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
Data Logger	Time-history logging of summary results, spectra with two adjustable logging steps down to 100 ms and down to 2 ms in the RT 60 mode
1/1 Octave Analysis (option)	Real-time analysis meeting Class 1 requirements of IEC 61260, centre frequencies from 16 Hz to 16 kHz
1/3 Octave Analysis (option)	Real-time analysis meeting Class 1 requirements of IEC 61260, centre frequencies from 8 Hz to 20 kHz
Audio Recording (option)	Audio recording on trigger or continuous mode, 12 / 24 / 48 kHz sampling rate, wav format
Voice Comments	Audio records on demand, created before or after measurement, added to measurement file
Memory	MicroSD card 32 GB (removable & upgradeable up to 128 GB)
Display	Colour 96 x 96 pixels OLED type
Keyboard	8 push buttons
Communication Interfaces	USB 2.0, Bluetooth® 5.2 SP 76 - RS 232 cable with external power supply connector (optional)
Power Supply	Four AAA alkaline or rechargeable NiMH batteries (not included) Operation time 16 h ÷ 24 h (depending on configuration and environmental conditions) USB interface 100 mA HUB
Environmental Conditions	Temperature from -10 °C to 50 °C (14 °F to 122 °F) Humidity up to 95 % RH, non-condensed
Dimensions	232.5 mm x 56 x 20 mm (including microphone and preamplifier)
Weight	Approx. 225 grams with batteries (Approx. 8.20 oz)