Environmental Noise & Vibration Product Catalogue 2020

SVANTEK

About SVANTEK

SVANTEK specialises in the design and manufacture of professional instrumentation for the measurement and analysis of sound & vibration. Established in Warsaw, Poland in 1990, SVANTEK now supplies products across 40 countries, worldwide. With 28 years of industry experience, the company has established itself as one of the leading innovators in sound & vibration products, with a global reputation for producing some of the most accurate and reliable instruments on the market.

The first monitoring station SV 210 from SVANTEK has been introduced in 2004. Since that time, the line of Svantek products such as the SV 258 4-channel noise & vibration monitoring station and SV 200 all in one noise monitoring station made a great impact on the noise and vibration exposure measurements techniques.

List of Contents

MONITORING SYSTEMS – ENVIRONMENTAL NOISE

MONITORING SYSTEMS – BUILDING VIBRATION

SOUND & VIBRATION LEVEL METERS

VIBRATION SENSORS

ACOUSTIC CALIBRATORS

VIBRATION CALIBRATORS

SOFTWARE

BUILDING ACOUSTICS

SV 200A

All in One
Noise Monitoring Station

SV 200A Noise Monitoring Station

SV 200A is the top-of-the range **NOISE MONITORING STATION** with built-in microphones for **NOISE DIRECTIVITY** detection. This revolutionary solution enables identification of dominant noise sources providing information about their location both in vertical and horizontal directions.
In practice, the measurement of directionality gives the opportunity to indicate the dominant source of noise in the area of measurement, the exclusion of unwanted events.

Four additional microphones located on sides of the housing use the sound intensity technique to detect the **DIRECTION** of a **DOMINANT NOISE SOURCE** both in the vertical and horizontal axes. The Leq distribution in angle sectors is saved as the time-history and can be used for data filtering and reporting.

Station can perform a real-time frequency analysis in **1/1** and **1/3 OCTAVE** bands and save it as time-history data. Additionally it can record the **AUDIO SIGNAL** for **NOISE SOURCES RECOGNITION** and data recalculation.

The **ADVANCED ALARMS** function can send e-mail and SMS notifications triggered by threshold level conditions combined with time conditions. Station's status alarms are also available.

The **3G MODEM, WLAN** and **LAN** provide fast data transfer over the Internet to PC with standard Internet **connectivity.**

SvanNET enables a plug & play connection to Internet and easy management of measurement projects. Regardless of the SIM card type, Public or Private, SvanNET will establish connection, giving full access to the measurement data via **WEB BROWSER**.

Following **ISO 1996-2** requirements, the SV 200A is using the **ELECTROSTATIC ACTUATOR** to perform the periodic system check. **CHECKING OF THE COMPLETE MEASUREMENT CHAIN** including the microphone is the advantage of using electrostatic actuator method.

The **LARGE WINDSCREEN** is highly efficient in reduction of a wind noise effects even at high wind speeds. Metal spikes protect station against birds.

The **WEATHERPROOF** housing protects the SV 200A noise monitoring station against extreme weather conditions while fulfilling **CLASS 1 ACCURACY.**

The accurate **GPS** module provides information on the localization as well as measurement **TIME SYNCHRONIZATION.**

OLED display and 5 push-buttons enable the results **PREVIEW** and measurement parameters **CONFIGURATION.**

The SV 200A has an internal Li-Ion battery and interface for direct solar panels connection. A **WATERPROOF** mains adapter for charging the battery and powering the station is also included.

The **Bluetooh®** and **Wireless LAN** provide **access point** for an easy configuration with the SvanNET Application.

About SV 200A

The SV 200A is a new noise monitoring station dedicated for permanent noise monitoring. With four additional microphones the SV 200A is able to detect the direction of the dominant noise source. The monitoring station has been equipped with a various options for connection including 3G, LAN, Wireless LAN and Bluetooth®.

SV 200A All in One Noise Monitoring Station

The SV 200A is a Class 1 sound level meter integrated with a wireless communication via 3G, LAN, Wireless LAN and Bluetooth®. The list of add-ons also includes an built-in -electrostatic actuator, GPS module and e-compass. The waterproof power supply is also provided.

SvanNET is an advanced server solution supporting remote connection with SV 200A. The SvanNET allows usage of all types of SIM cards with the SV 200A modem regardless if they have public or private IP. The connection over the SvanNET allows users to use a web browser to watch real time measurement results, manually download files and reconfigure the station as well as manually download files and configure the station.

SvanPC++ Remote Communication software package offers advanced features such as automatic data download, CSV and HTML data publishing as well as FTP upload. The SvanPC++_RC module supports configuration of the monitoring station as well as configuration of advanced alarms that combine triggers based on time with noise thresholds.

SvanNET Application uses any local interface like Bluetooth®, LAN or Wireless LAN, USB for an easy configuration of the SV 200A for the connection with the SvanNET or customer server or PC.

Optional software

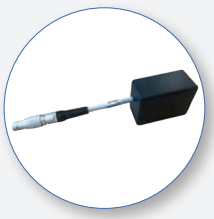
SvanNET Projects offers powerful functions such as automatic files download, data storage, status and measurement alarms, data sharing, public website creation and automatic reporting. The Projects functionality can be activated at any time by ordering the upgrade.

SvanPC++ Environmental Measurements module is designed for post-processing of data recorded by the monitoring station. The module offers a powerful calculator and an automated noise event finder for noise source identification. SvanPC++_EM allows to combine and compare data from multiple measurements as well as create and save reports in MS Word™ templates. It can be activated at any time by ordering the activation code or hardware key.

Optional accessories to SV 200A

SP 275
Weather Station
based on
VAISALA module

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



SP 200
LAN
Adapter

SB 276
Solar Panel
to Monitoring
Station

SV 200A Technical Specifications

Standards	Class 1: IEC 61672-1:2013, Class 1: IEC 61260-1:2014	
Weighting Filters	A, C, Z	
RMS Detector	Digital True RMS detector with Peak detection, resolution 0.1 dB Time constants: Slow, Fast, Impulse	
Microphone	Microtech Gefell MK 255, 50 mV/Pa, prepolarised 1/2" condenser microphone	
Preamplifier	Integrated	
Linear Operating Range	25 dBA RMS ÷ 133 dBA Peak (in accordance to IEC 61672)	
Dynamic Measurement Range	15 dBA RMS ÷ 133 dBA Peak (typical from noise floor to the maximum level)	
Internal Noise Level	less than 15 dBA RMS	
Frequency Range	3.5 Hz ÷ 20 kHz	
Meter Mode Results	Elapsed time, Lxy (SPL), Lxeq (LEQ), Lxpeak (PEAK), Lxymax (MAX), Lxymin (MIN), Lxye (SEL), LN (LEQ STATISTICS), Lden, LEPd, Ltm3, Ltm5 Simultaneous measurement in three profiles with independent set of filters (x) and detectors (y)	
Statistics	L_n (L_1-L_{99}), complete histogram in meter mode and 1/1 & 1/3 octave analysis Simultaneous measurement in three profiles with independent set of filters and detectors	
1/1 Octave Analysis[1]	Real-time analysis meeting class 1 requirements of IEC 61260 (31.5 Hz ÷ 16 kHz)	
1/3 Octave Analysis[1]	Real-time analysis meeting class 1 requirements of IEC 61260 (20 Hz ÷ 20 kHz)	
Noise Directivity[1]	Maximum noise energy directivity measurements in both azimuth and altitude directions including noise energy distribution diagram	
Audio Recording[1]	Time domain records to wav file format on demand with selectable bandwidth and recording period	
Data Logger	Logging of summary results, spectra directivity and weather data with logging step down to 1 s and time history of selected parameters with short logging step down to 20 ms	
Ingress Protection Rating	IP 65	
Inputs	Power supply LEMO 3-pin, extended I/O port LEMO 10-pin, LAN interface LEMO 7-pin	
Remote System Check	Built-in electrostatic actuator, triggered manually or in automated mode	
Memory	16 GB (non-removable)	
Display & Keyboard	1.1" OLED display and 5 push-buttons keyboard	
Communication Interfaces	USB, RS 232, UART (TTL), LAN, Bluetooth®, 3G modem, WLAN	
GPS	Used for time synchronization and localization	
Power Supply	Li-Ion rechargeable battery (non-removable)	
	Operation time on battery (10.8 V / 6.7 Ah)	
	SV 200A (modems off)	up to 7 days
	SV 200A with 3G on	up to 4 days[2]
	Solar Panel (not included)	MPPT voltage 15.0 V ÷ 20.0 V
	SB274 AC power supply (included)	Input 100 ÷ 240 VAC, output +15 VDC 2.67 A, IP 67 housing
	External DC source (not included)	voltage range 10.5 V – 24 V, e.g. 12 V or 24 V accumulator[3]
Environmental Conditions	Temperature	from -30 °C to 70 °C[4]
	Humidity	up to 99 % RH
Dimensions	860 mm length (total); 70 mm diameter excluding windscreen (windscreen diameter 130 mm)	
Weight	3.2 kg	

[1] function operates together with sound level meter mode
[2] meter mode, time history logging step 1 second, 3G modem transmission 10 % of the measurement time
[3] 15 V required for internal battery charging
[4] only with external powering

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.

SV 307

All in One
Noise Monitoring Station

SV 307 Noise Monitoring Station

The **SV 307** is a new Noise Monitoring Station dedicated for permanent noise monitoring. The SV 307 integrates Class 1 sound level meter with a modem in the compact waterproof housing.

SV 307 is a new **CLASS 1** noise monitoring station designed for permanent noise monitoring with built-in community & airport characteristics.

Wide frequency range up to 20 kHz with lifetime warranty microphone[1] in **MEMS** technology.

Patented **system check** with an inbuilt reference sound source producing level of 100 dBA at 1 kHz.

As an option, the SV 307 can perform real time frequency analysis in **1/1 and 1/3 octave bands** and save results with the time history data. Additionally, it can record the audio signal as standard **WAVE** files for noise source recognition.

A large colour **OLED** display and 10 push-buttons enable easy configuration of the SV 307 in the field without needing an external handset or reconnection to a PC.

The system is specially designed for **easy installation** - SV 307 is small, light weight and easy to install by a single person.

The SV 307 is equipped with a new MEMS microphone with a **life-time warranty**. The measurement data is stored on the microSD card.

The **large windscreen** is highly efficient in reduction of a wind noise effects even at high wind speeds. Metal spikes protects station against birds.

The **removable** & **weatherproof** housing protects the SV 307 noise monitoring terminal against extreme weather conditions while fulfilling **Class 1 accuracy**.

The SV 307 has an internal Li-Ion battery and interface for connecting **solar panels**. A waterproof mains adapter for charging the battery and powering the station is also included.

The **GSM MODEM** provides fast data transfer over the Internet to PC with standard Internet connectivity.

The accurate **GPS module** provides information on the localization as well as measurement time synchronization.

SvanNET enables a plug & play connection to Internet and easy management of measurement projects. Regardless of the SIM card type, Public or Private, SvanNET will establish connection, giving full access to the measurement data via **WEB BROWSER**.

On-line data in SvanNET

SvanNET cloud service monitors the wireless communication, powering and access to the SV 307 data. The scope of the basic SvanNET can be extended with multipoint Project management that offers data storage in the cloud, data sharing, advanced alarming and reporting features. SvanNET is an on-line solution which means it doesn't require software installation and is accessible through a web browser. The responsive design enables usage of SvanNET on various devices such as smartphones or tablets.

SvanNET

SvanNET is an advanced server solution supporting remote connection with SV 307. The SvanNET allows usage of all types of SIM cards with the SV 307 modem regardless if they have public or private IP. The connection over the SvanNET allows users to use a web browser to watch real time measurement results, download manually files and reconfigure the station as well.

PC Software

SvanPC++ is a PC software supporting functions such as measurement data downloading from instruments to PC, measurement setups creating, basic Leq/RMS recalculation, measurement results in text, table and graphical form of presentation, export data to a spread sheet or text editor applications. New version of SvanPC++ software also supports analysis of wave files from Svantek's instruments (for example calculation of tonality).

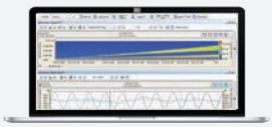
Optional functions

SvanNET Projects offers powerful functions such as automatic files download, data storage, status and measurement alarms, data sharing, public website creation and automatic reporting. The Projects functionality can be activated at any time by ordering the upgrade.

The accurate **GPS module** provides information on the localization as well as measurement time synchronization.

SvanPC++ Environmental Measurements module is designed for post-processing of data recorded by monitoring station. The module offers a powerful calculator and an automated noise event finder for noise source identification. Thanks to its "Projects" functionality, SvanPC++_EM allows to combine and compare data from multiple measurements as well as create and save reports in MS Word™ templates. It can be activated at any time by ordering an activation code or hardware key.

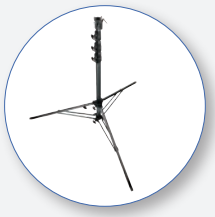
The option for **1/3 octave REAL-TIME** analysis allows the analysis of the noise frequency contents and is used for verification of noise sources in the environment. It can be activated at any time by ordering the activation code.



The option of **TIME DOMAIN SIGNAL RECORDING** to WAVE format works during measurement and is logged in parallel to a time history. Once downloaded to PC it can be played back. Settings such as triggers or recording time are adjustable. In addition to audio play-back, WAVE file can be post-processed in SvanPC++ software that provides calculation of overall results such as Leq, Lmax, Lmin, Lpeak as well as 1/3 octave and FFT calculations or tonality. It can be activated at any time by ordering the activation code.

Optional accessories to SV 307

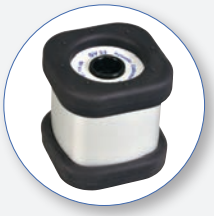
SP 276
Weather Station based on GILL module



SA 206
Mast for Microphone Protection Kit

SB 371
Solar Panel to Monitoring Station

SB 275
External 33 Ah Battery to Monitoring Station



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

What's inside the SV 307 kit?

The SV 307 is an integrated Noise Monitoring Station which means that the sound level meter has been integrated with a 3G modem and outdoor enclosure. The waterproof power supply is also provided for continuous operation in the field. Each SV 307 has its factory calibration certificate and **36-MONTHS WARRANTY CARD**. The part of the kit is the new MEMS **microphone**[1] **with a lifetime warranty.**

SV 307 Technical Specifications

Standards	Class 1: IEC 61672-1:2013, Class 1: IEC 61260-1:2014	
Weighting Filters	A, B, C, Z, LF	
RMS Detector	Digital True RMS detector with Peak detection, resolution 0.1 dB Time constants: Slow, Fast, Impulse	
Microphone	Patented[1] MEMS design microphone ST 30 in 1/2" housing	
Preamplifier	Integrated	
Linear Operating Range	30 dBA RMS ÷ 126 dBA Peak (in accordance to IEC 61672)	
Dynamic Measurement Range	20 dBA RMS ÷ 126 dBA Peak (typical from noise floor to the maximum level)	
Internal Noise Level	less than 20 dBA RMS	
Frequency Range	20 Hz ÷ 20 kHz	
Meter Mode Results	Elapsed time, Lxy (SPL), Lxeq (LEQ), Lxpeak (PEAK), Lxymax (MAX), Lxymin (MIN), Lxye (SEL), 2 x LR (Rolling Leq),10 x LN (LEQ STATISTICS), Lden, LEPd, Ltm3, Ltm5, GPS coordinates Simultaneous measurement in three profiles with independent set of filters (x) and detectors (y)	
Statistics	L_n (L_1-L_{99}), complete histogram in meter mode and 1/1 & 1/3 octave analysis Simultaneous measurement in three profiles with independent set of filters and detectors	
1/1 Octave Analysis[2] (optional)	Real-time analysis meeting class 1 requirements of IEC 61260 (31,5 Hz ÷ 16 kHz)	
1/3 Octave Analysis[2] (optional)	Real-time analysis meeting class 1 requirements of IEC 61260 (20 Hz ÷ 20 kHz)	
Data Logger	Logging of summary results (SR) and spectra data with interval step down to 1 second and time history (TH) of selected parameters with shorter interval step down to 100 milliseconds.	
Audio Recording[2] (optional)	Time domain records to wav file format on demand with selectable bandwidth and recording period	
Ingress Protection Rating	IP 65	
Inputs	Power supply LEMO 4-pin, extended I/O port LEMO 5-pin	
Remote System Check	Real-time system check[1] and Built-in sound source producing level of 90 dB at 1 kHz	
Memory	Micro SD card 16 GB (removable)	
Display & Keyboard	OLED colour display 128 x 160 px and 10 push-button keyboard	
Communication Interfaces	USB, 3G modem	
GPS	for time synchronization and localization	
Power Supply	Li-Ion rechargeable battery (non-removable)	
	Operation time on battery (7.2 V / 10 Ah)	
	Modem off	up to 6 days
	Modem on	up to 5 days[3]
	Solar Panel (not included)	MPPT voltage 17.0 V ÷ 20.0 V
	AC power supply (included)	Input 100 ÷ 240 VAC, output +15 VDC 2.5 A, IP 67 housing
	External DC source (not included)	voltage range 10.5 V ÷ 24 V e.g. 12 V or 24 V accumulator
Environmental Conditions	Temperature	from -20 °C to 50 °C
	Humidity	up to 95 % RH
Dimensions	680 mm length; 80 mm diameter excluding windscreen (windscreen diameter 130 mm)	
Weight	Approx. 1.8 kg	

[1]patent pending
[2]function operates together with sound level meter mode
[3]depends on modem usage

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.

SV 271 LITE

Noise Monitoring Station

SV 271 LITE Noise Monitoring Station

SV 271 LITE is a portable monitoring system housed in a waterproof case dedicated for periodic **OUTDOOR** measurements.

The low power consumption enables continuous **OPERATION UP TO 3 WEEKS**. The operation time can be even tripled with the external battery (SB 272).

The station offers **AUDIO EVENTS** recording and frequency analysis in **1/1 or 1/3 OCTAVES** for noise sources recognition.

The station is based on the **SVAN 971** which can be easily removed from the case and used as a hand-held sound level meter.

SVAN 971 is a Class 1 **TYPE APPROVED** sound level meter in accordance with the IEC 61672-1 standard.

The **TIME-HISTORY** of results such as Leq, Max, Min and Peak with two simultaneous logging steps is saved on a 16 GB microSD card (upgradeable up to 128 GB).

The **EASE OF USE** and fast configuration are ones of the biggest advantages of SV 271.

The light-weight microphone protection kit gives an easy access for calibration with an acoustic calibrator. Once the calibration signal is detected, the system starts the **CALIBRATION AUTOMATICALLY**.

The **LARGE WINDSCREEN** is highly efficient in the reduction of a wind noise effects even at high wind speeds.

Military standard **CONNECTORS** provide reliable, robust and waterproof cable connections.

Station uses a **WATERPROOF DC POWER SUPPLY** that is designed for outdoor use.

Station can be powered from the internal battery or external DC power supply and is ready for direct connection of a **SOLAR PANEL.** The powering is managed by the intelligent charging unit.

About SV 271 LITE

SV 271 LITE is an outdoor monitoring system based on the type-approved SVAN 971 Class 1 sound level meter that can be easily removed from the case and used as hand-held sound level meter.
The IP 65-rated case contains a lead-acid battery which operating life of 21 days can be easily extended by connecting an external battery or a solar panel. The intelligent charging unit enables use of a solar panel without expensive controllers or heavy batteries.
The case is fitted with very robust, waterproof connectors (military standard) and is supplied with an IP 65 external power supply.

The light-weight microphone protection kit can be easily installed on a mast with standard mounting threads.
All accessories fit conveniently into a second carrying case.
The system provides broad-band results such as Leq, Max, Min and Peak with all standard weighting filters together with an incredible time-history logging feature with two adjustable logging steps.
For noise sources recognition the SV 271 LITE offers options for Audio Events recording and frequency analysis in 1/1 or 1/3 octave bands.

What's inside the SV 271 LITE?

The SV 271 LITE kit consists of two carrying cases. The main unit is a waterproof carrying case with internal 17 Ah battery and internal charging unit supporting powering from external DC or solar panel. The SVAN 971 Class 1 sound level meter is installed inside. The outdoor power supply and outdoor microphone kit are packed inside the second transportation case. The kit includes license for SvanPC++ software and has its factory calibration certificate and 36 months warranty card.

PC Software

SvanPC++ is a PC software providing functions such as measurement data downloading from instruments to PC, measurement setups creation basic Leq/RMS recalculation, measurement results in text, table and graphical form of presentation, export data to spread sheet or text editor applications.

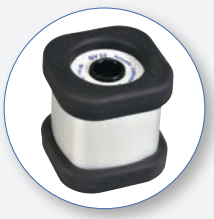
Optional functions

The option for **1/1 or 1/3 OCTAVE REAL-TIME ANALYSIS** allows the analysis of the noise frequency contents. It can be activated at any time by ordering an activation code.

The option of **AUDIO EVENT RECORDING** works during measurement and is logged in parallel to time history. Once downloaded to PC it can be played back. Settings such as triggers or recording time are adjustable. It can be activated at any time by ordering an activation code.

SvanPC++ ENVIRONMENTAL MEASUREMENTS module is designed for post-processing of data recorded by monitoring station. The module offers a powerful calculator and an automated noise event finder for noise source identification. SvanPC++_EM allows to combine and compare data from multiple measurements as well as create and save reports in MS Word™ templates. The module can be activated at any time by ordering the activation code or hardware key.

Optional accessories to SV 271 LITE



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

SB 271
Solar Panel to Monitoring Station

SB 272
External 33 Ah Battery to Monitoring Station

SA 206
Mast for Microphone Protection Kit

SV 271 Technical Specifications

Standards	Class 1: IEC 61672-1:2013; Class 1: IEC 61260-1:2014
Weighting Filters	A, B, C, Z
Time Constants	Slow, Fast, Impulse
RMS Detector	Digital True RMS detector with Peak detection, resolution 0.1 dB
Microphone Protection Kit	SA 271 outdoor protection kit (IP 65) with an extension cable
Microphone	ACO SV 7052E, 35 mV/Pa, prepolarised 1/2" condenser microphone
Preamplifier	SV 18 detachable
Linear Operating Range	25 dBA RMS ÷ 140 dBA Peak (in accordance to IEC 61672)
Dynamic Measurement Range	15 dBA RMS ÷ 140 dBA Peak (typical from noise floor to the maximum level)
Internal Noise Level	less than 15 dBA RMS
Dynamic Range	>110 dB
Frequency Range	10 Hz ÷ 20 kHz
Meter Mode Results	Elapsed time, Lxy (SPL), Lxeq (LEQ), Lxpeak (PEAK), Lxymax (MAX), Lxymin (MIN), LR (ROLLING LEQ OPTION), Ovl (OVERLOAD), Lxye (SEL), LN (LEQ STATISTICS), Lden, LEPd, Ltm3, Ltm5 Simultaneous measurement in three profiles with independent set of filters (x) and Detectors (y)
Statistics	L_n (L_1-L_{99}), complete histogram in meter mode
Audio Recording[1] (optional)	Audio events recording, trigger and continuous mode, 12 kHz sampling rate, wav format
1/1 Octave Analysis[1] (optional)	Real-time analysis meeting Class 1 requirements of IEC 61260, center frequencies from 31.5 Hz to 16 kHz
1/3 Octave Analysis[1] (optional)	Real-time analysis meeting Class 1 requirements of IEC 61260, center frequencies from 20 Hz to 20 kHz
Data Logger	Time-history logging of summary results, spectra with adjustable double logging steps down to 100 ms
Memory	MicroSD card 16 GB (removable & upgradeable up to 128 GB)
Power Supply	Waterproof DC power supply 15 V , 60 W (acceptable voltage range 11 V ÷ 30 V) Built-in battery 17 Ah / 12 V Secondary external battery 33 Ah / 12 V (optional) Solar panel (optional)
Operating Time on Battery	Up to 21 days[2] Test conditions: meter mode, display dimmed, 100 ms time-history logger, continuous event recording
Environmental Conditions	Temperature -10 °C ÷ +50 °C
Dimensions	305 x 270 x 194 mm (without cables)
Weight	Approximately 9 kg including battery (without accessories)

[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.

SV 277 PRO

Noise Monitoring Station

SV 277 PRO Noise Monitoring Station

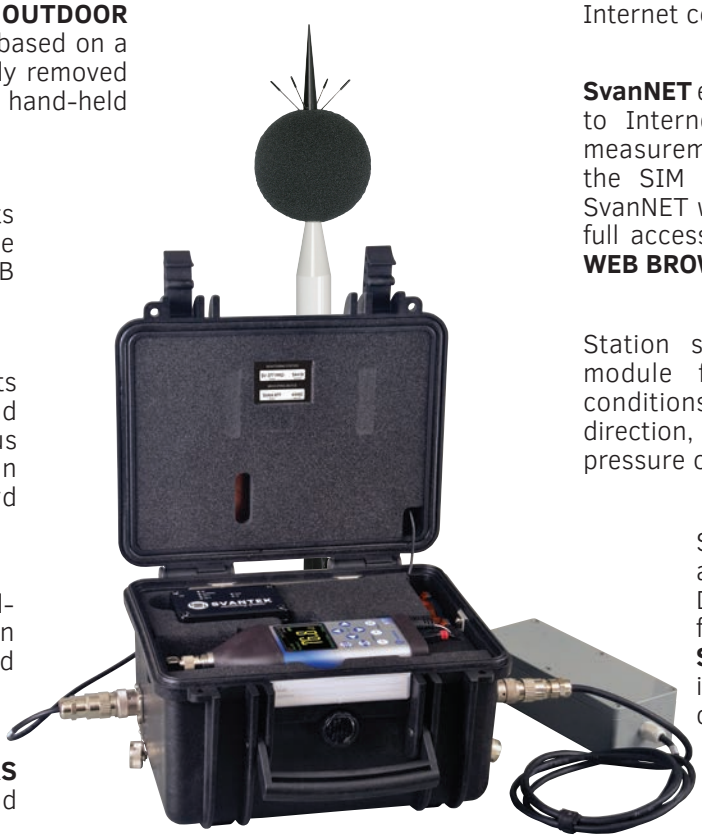
SV 277 PRO is a portable monitoring system housed in a waterproof case dedicated for periodic **OUTDOOR** measurements. The station is based on a **SVAN 977A** which can be easily removed from the case and used as a hand-held sound level meter.

CLASS 1 noise measurements are performed over a very wide dynamic range - over 110 dB from 10 Hz up to 20 kHz.

The **TIME-HISTORY** of results such as Leq, Max, Min and Peak with two simultaneous logging steps is saved on 16 GB microSD card (upgradeable up to 128 GB).

The station can perform real-time frequency analysis in **1/1 or 1/3 OCTAVE** bands and save it as time-history data.

Military standard **CONNECTORS** provide reliable, robust and waterproof cable connections.



The **3G MODEM** provides data transfer over the Internet to PC with standard Internet connectivity.

SvanNET enables a plug & play connection to Internet and easy management of measurement projects. Regardless of the SIM card type, Public or Private, SvanNET will establish connection, giving full access to the measurement data via **WEB BROWSER**.

Station supports an optional **METEO** module for assessment of weather conditions such as wind speed and direction, temperature, humidity, ambient pressure or rainfall.

Station can be powered from an internal battery or outdoor DC power supply and is ready for direct connection of a **SOLAR PANEL.** The powering is managed by the intelligent charging unit.

What's inside the SV 277 PRO

The SV 277 PRO kit consists of two carrying cases. The main unit is a waterproof carrying case with internal 17 Ah battery and internal charging unit supporting powering from external DC or solar panel. The SVAN 977A Class 1 sound level meter is installed inside.
The outdoor power supply and outdoor microphone kit are packed inside the second transportation case. The kit includes license for SvanPC++ software and SvanNET connectivity service. Each kit has its factory calibration certificate and 36 months warranty card.

About SV 277 PRO

SV 277 PRO is an outdoor monitoring system based on SVAN 977A Class1 sound level meter. The IP65-rated case contains a lead-acid battery which operating time can be easily extended by connecting an external battery or a solar panel. The intelligent charging unit enables use of a solar panel without expensive controllers or heavy batteries. The case is fitted with very robust, waterproof connectors (military standard) and is supplied with an IP65 external power supply. The light-weight microphone protection kit can be easily installed on a mast with standard mounting threads. All accessories fit conveniently into a second carrying case. The system provides broad-band results such as Leq, Max, Min and Peak with all standard weighting filters together with an incredible time-history logging feature with two adjustable logging steps. The broad-band results can be recorded in three acoustic profiles which enable measurements to be taken with 3 different filters (A, C, Z) as well as 3 different detector time constants (Fast, Slow, Impulse).
The monitoring station uses a 3G modem for the remote communication with Internet. SvanNET, a connectivity service, supports the connection between PC and station. The SvanNET allows the usage of all types of SIM cards with the system, regardless if they have public or private IP. The connection over the SvanNET allows users to use a mobile phone or tablet to check the status of the noise monitoring station.
The SVAN 977A can be easily removed from the case and used as a hand-held sound level meter.

SV 277 PRO Noise Monitoring Station Software

SvanNET

SvanNET is an advanced server solution supporting remote connection with SV 277 PRO. The SvanNET allows usage of all types of SIM cards with the SV 277 PRO modem regardless if they have public or private IP. The connection over the SvanNET allows users to use a web browser to watch real time measurement results, manually download files and reconfigure the station.

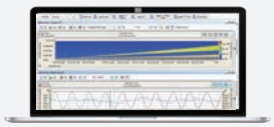
SvanPC++ is a PC software providing functions such as measurement data downloading from instruments to PC, measurement setups creation, basic Leq/RMS recalculation, measurement results in text, table and graphical form of presentation, export data to spread sheet or text editor applications. Additionally, SvanPC++ includes a module for an advanced analysis of WAV files from SV 277 PRO. The WAV analyser can be used for variety of calculations, such as 1/3 octave, FFT or tonality analysis.

Optional functions

SvanNET Projects offers powerful functions such as automatic files download, data storage, status and measurement alarms, data sharing, public website creation and automatic reporting. The Projects functionality can be activated at any time by ordering the upgrade.

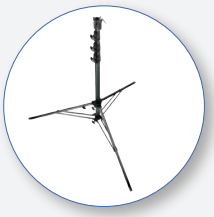
SvanPC++ Environmental Measurements module is designed for post-processing of data recorded by monitoring station. The module offers a powerful calculator and an automated noise event finder for noise source identification. SvanPC++_EM allows to combine and compare data from multiple measurements as well as create and save reports in MS Word™ templates. It can be activated at any time by ordering an activation code or hardware key.

The option for **1/3 OCTAVE REAL-TIME** analysis allows the analysis of the noise frequency contents. The statistical analysis in 1/3 octave bands is used for verification of noise sources in the environment. It can be activated at any time by ordering the activation code.



The option of **TIME DOMAIN SIGNAL RECORDING** to WAVE format works during measurement and is logged in parallel to a time history. Once downloaded to PC it can be played back. Settings such as triggers or recording time are adjustable. In addition to audio play-back, WAVE file can be post-processed in SvanPC++ software that provides calculation of overall results such as Leq, Lmax, Lmin, Lpeak as well as 1/3 octave and FFT calculations or tonality. It can be activated at any time by ordering the activation code.

Optional accessories to SV 277 PRO



SA 206
Mast for
Microphone
Protection Kit

SB 271
Solar Panel
to Monitoring
Station

SB 272
External 33 Ah
Battery
to Monitoring Station

SP 272
Alarm Lamp
to Monitoring
Station

SP 275
Weather Station
based on
VAISALA module

SV 277 PRO Technical Specifications

Standards	Class 1: IEC 61672-1:2013; Class 1: IEC 61260-1:2014
Meter Mode	Elapsed time, Lxy (SPL), Lxeq (LEQ), Lxpeak (PEAK), Lxymax (MAX), Lxymin (MIN), Ovl (OVERLOAD %), Lxye (SEL), LN (LEQ STATISTICS), Lden, LEPd, Ltm3, Ltm5 Simultaneous measurement in three profiles with independent set of filters (x) and detectors (y)
Analyser[1] (optional)	1/1 or 1/3 octave real-time analysis
Audio Recording[1] (optional)	Time domain signal recording to WAV signal, continuous or triggered Sampling rate: 12/24/48 kHz with 24-bit resolution
Weighting Filters	A, C, Z, B,LF, U, AU
RMS Detector	Digital True RMS detector with Peak detection, resolution 0.1 dB
Detector Time Constants	Slow, Fast, Impulse
Microphone Protection Kit	SA 277 outdoor protection kit (IP 65) with SC 277 extension cable
Microphone	ACO 7052E, 35 mV/Pa, prepolarised 1/2" condenser microphone
Preamplifier	SV 12L IEPE preamplifier
Linear Operating Range	25 dBA RMS ÷ 140 dBA Peak (in accordance to IEC 61672)
Dynamic Measurement Range	15 dBA RMS ÷ 140 dBA Peak (typical from noise floor to the maximum level)
Internal Noise Level	Less than 15 dBA RMS
Frequency Range	10 Hz ÷ 20 kHz with ACO 7052E
Data Logger	Time-history logging with two adjustable logging steps down to 2 milliseconds
Memory	MicroSD card 16 GB (upgradeable to 128 GB)
Remote Communication	3G modem
Power Supply	Waterproof DC power supply 15 V , 60 WATT (acceptable voltage range 11 V ÷ 30 V) Internal battery 17 Ah / 12 V Secondary external battery 33 Ah / 12 V (optional) Solar panel (optional)
Operating Time on Battery	4 days with continuous modem transmission[2] 8 days with modem switched off[2] Test Conditions: meter mode, display dimmed, 2 ms time-history logger, continuous event recording
Environmental Conditions	Temperature -10 °C ÷ +50 °C
Dimensions	305 x 270 x 194 mm (without cables)
Weight	Approximately 9 kg including battery

[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.

SV 279 PRO

Noise Monitoring Station

SV 279 PRO Noise Monitoring Station

SV 279 PRO is a portable monitoring station housed in a waterproof case dedicated for periodic **OUTDOOR** measurements. The system is based on the **SVAN 979** which can be easily removed from the case and used as a hand-held sound level meter.

SVAN 979 is a Class 1 **TYPE APPROVED** sound level meter in accordance with IEC 61672-1 standard.

Station can perform a real-time frequency analysis in **1/3 OCTAVE** bands and save it as time-history data.

The **AUDIO RECORDING** works during measurement and is logged as a WAV file in parallel to the time-history, so it can be played back in the PC software. Settings such as triggers or the recording time are adjustable.

The **TIME-HISTORY** of results such as Leq, Max, Min and Peak with two simultaneous logging steps is saved on 16 GB microSD card (upgradeable to 128 GB).

The **LARGE WINDSCREEN** is highly efficient in the reduction of a wind noise effects even at high wind speeds.

The accurate **GPS** module provides an information on the localization as well as measurement **TIME SYNCHRONIZATION.**

Station supports an optional **METEO** module for assessment of weather conditions such as wind speed and direction, temperature, humidity, ambient pressure or rainfall.

The **3G MODEM** provides the fast data transfer over the Internet to PC with the standard Internet connectivity.

Station can be powered from an internal battery or outdoor DC power supply and is ready for direct connection of **SOLAR PANEL.** The powering is managed by the intelligent charging unit.

SvanNET enables a plug & play connection to Internet and easy management of measurement projects. Regardless of the SIM card type, Public or Private, SvanNET will establish connection, giving full access to the measurement data via **WEB BROWSER**.

About SV 279 PRO

SV 279 PRO is an outdoor monitoring system based on the SVAN 979 Class 1, type approved sound level meter. The IP 65-rated case contains a lead-acid battery which operating time can be easily extended by connecting an external battery or solar panel. The intelligent charging unit enables use of a solar panel without expensive controllers and heavy batteries.
The case is fitted with very robust, waterproof connectors (military standard) and is supplied with an IP 65 external power supply.
The light-weight outdoor microphone kit can be easily installed on a mast with standard mounting threads. All accessories fit conveniently into a second carrying case.

The system provides broad-band results such as Leq, Max, Min and Peak with all standard weighting filters together with an incredible time-history logging feature with two adjustable logging steps.
SvanNET is a connectivity service that supports the connection between PC and station. It allows the usage of the system with all types of SIM cards, regardless if they have public or private IP. Additionally, it gives an access to a status of monitoring stations over a mobile phone or tablet.

What's inside the SV 279 PRO?

The SV 279 PRO kit consists of two carrying cases. The main unit is a waterproof carrying case with internal 17 Ah battery and a charging unit supporting powering from an external DC or solar panel. The monitoring case is equipped with GPS module and modems for 3G communication. The SVAN 979, Class 1 sound level meter with options for frequency analysis and audio recording is installed inside the main unit.
The outdoor power supply and outdoor protection kit for microphone are packed inside the second transportation case. The kit includes license for SvanPC++ software and SvanNET connectivity service. Each kit has its factory calibration certificate and 36 months warranty card.

SvanNET

SvanNET is an advanced server solution supporting remote connection with SV 279 PRO. The SvanNET allows usage of all types of SIM cards with the SV 279 PRO modem regardless if they have public or private IP. The connection over the SvanNET allows users to use a web browser to watch real time measurement results, manually download files and reconfigure the station.

SvanPC++ is a PC software providing functions such as measurement data downloading from instruments to PC, measurement setups creation, basic Leq/RMS recalculation, measurement results in text, table and graphical form of presentation, export data to spread sheet or text editor applications.
Additionally, SvanPC++ includes a module for an advanced analysis of WAV files from SV 279 PRO. The WAV analyser can be used for variety of calculations, such as 1/3 octave, FFT or tonality analysis.

Optional functions

SvanNET Projects offers powerful functions such as automatic files download, data storage, status and measurement alarms, data sharing, public website creation and automatic reporting. The Projects functionality can be activated at any time by ordering the upgrade.

SvanPC++ Environmental Measurements module is designed for post-processing of data recorded by monitoring station. The module offers a powerful calculator and an automated noise event finder for noise source identification. Thanks to its "Projects" functionality, SvanPC++_EM allows to combine and compare data from multiple measurements as well as create and save reports in MS Word™ templates. It can be activated at any time by ordering an activation code or hardware key.

Optional accessories to SV 279 PRO

SA 206
Mast for
Microphone
Protection Kit

SB 271
Solar Panel
to Monitoring
Station

SB 272
External 33Ah
Battery
to Monitoring
Station

SP 272
Alarm Lamp
to Monitoring
Station

SP 275
Weather Station
based on
VAISALA module

SV 279 PRO Technical Specifications

Standards	Class 1: IEC 61672-1:2013; Class 1: IEC 61260-1:2014
Meter Mode	Elapsed time, Lxy (SPL), Lxeq (LEQ), Lxpeak (PEAK), Lxymax (MAX), Lxymin (MIN), Ovl (OVERLOAD %), Lxye (SEL), LN (LEQ STATISTICS), Lden, LEPd, Ltm3, Ltm5 Simultaneous measurement in three profiles with independent set of filters (x) and detectors (y)
Analyser[1]	1/1 or 1/3 octave real-time analysis Pure tone detection meeting ISO 1996-2 (Tonality option) User programmable second order band pass filters (option)
Audio Recording[1]	Time domain signal recording to WAV signal, continuous or triggered Sampling rate: 12/24/48 kHz with 24-bit resolution
Weighting Filters	A, C, Z, B, G
RMS Detector	Digital true RMS detector with peak detection, resolution 0.1 dB
Detector Time Constants	Slow, Fast, Impulse
Microphone Protection Kit	SA 279 outdoor protection kit (IP 65) with an SC 279 extension cable
Microphone	GRAS 40AE, 50 mV/Pa, prepolarised 1/2" condenser microphone
Preamplifier	SV 17 Voltage type (supports 200 V polarisation)
Linear Operating Range	22 dBA RMS ÷ 140 dBA Peak (in accordance to IEC 61672)
Dynamic Measurement Range	12 dBA RMS ÷ 140 dBA Peak (typical from noise floor to the maximum level)
Internal Noise Level	Less than 12 dBA RMS
Frequency Range	3.15 Hz ÷ 20 kHz, with GRAS 40AE microphone
Data Logger	Time-history logging with two adjustable logging steps down to 2 milliseconds
Memory	MicroSD 16 GB (removable and upgradeable to 128 GB)
Communication	3G modem
GPS	Used for time synchronization and localization
Power Supply	Waterproof DC power supply 15 V , 60 W (acceptable voltage range 11 V ÷ 30 V) Internal battery 17 Ah / 12 V Secondary external battery 33 Ah / 12 V (optional) Solar panel (optional)
Operating Time on Battery	4 days with continuous 3G modem transmission[2] 8 days with modems switched off[2] Test conditions: meter mode, display dimmed, 2 ms time-history logger, continuous event recording
Environmental Conditions	Temperature -10 °C ÷ +50 °C
Dimensions	305 x 270 x 194 mm (without cables)
Weight	Approximately 9 kg including battery

[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.

SV 258 PRO

Building Vibration and Noise Monitoring Station

Building Vibration Measurements with SV 258 Pro

The ground vibration mode in the SVAN 958A has been developed for both short- and long-term monitoring applications. It measures triaxial velocity and acceleration in parallel and calculates Peak Particle Velocity and Vibration Dose value simultaneously. In addition to logging overall values and frequency spectra, the time domain signal is stored for post processing purposes.

An additional measurement channel is available for Class 1 noise measurements in parallel to triaxial vibration measurements. FFT is used for dominant frequency determination according to BS and DIN standards. Alternatively, the RMS or PEAK velocity spectrum in 1/3 octave bands can be used for comparison with user curves.

SV 258 PRO is a **portable monitoring system** housed in a waterproof case dedicated for periodic and long-term outdoor measurements.

The **GSM modem** provides fast data transfer over the Internet to PC with standard Internet connectivity. SMS and E-MAIL alarms can be configured based on vibration or noise levels.

SvanNET enables a plug & play connection to Internet and easy management of measurement projects. Regardless of the SIM card type, Public or Private IP numbers, SvanNET will establish connection, giving full access to the measurement data via **WEB BROWSER**.

The station is based on SVAN 958A which can be easily removed from the case and used as **hand-held** sound and vibration level meter.

The low-noise, hermetically sealed **tri-axial** piezoelectric accelerometer enables an outdoor use without additional enclosures.

Peak Particle Velocity (**PPV**), PPV Vector Sum and Vibration Dose Value (**VDV**) are measured simultaneously in THREE AXES. The time history logging of vibration velocity results (PPV) and acceleration (VDV) is performed simultaneously.

Station is fully configurable to measurement of **human vibration** in buildings in accordance to ISO 2631-1, BS 6472 and DIN 4150-2.

Station can be powered from **internal battery** or outdoor DC power supply and is ready for direct connection of **solar panel**. The powering is managed by the intelligent charging unit.

Military standard connectors provide reliable, **robust and waterproof cable connections.**

An additional measurement channel is available for **Class 1 noise** measurements in parallel to tri-axial vibration measurements.

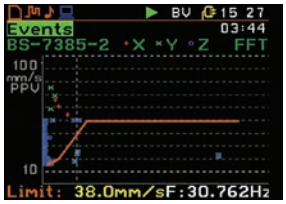
Building and Ground Vibrations

Ground vibrations pose a potential threat to the structures of buildings as well as causing a nuisance for people living in such buildings. The effects of damage to building structures can be extremely expensive as well as dangerous to their surroundings. One can imagine the scope of the damage that would be caused by the collapse of a building or bridge.

Vibrations in buildings can also have a detrimental effect on any people in the buildings both in terms of their well-being and productivity. Additional symptoms can be wide ranging from insomnia to shortness of breath.

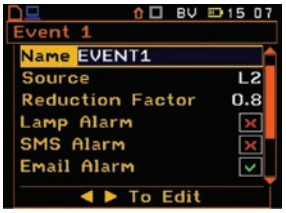
All in One Solution

The new SV 258 PRO is dedicated for building vibration measurement that uses methods based on Peak Particle Velocity and Dominant Frequency. The measurement of human vibration in buildings is possible as the station allows simultaneous measurement of velocity and acceleration of vibrations with two independent steps of recording. In addition, it is possible to enrich the measurement with Class 1 noise results.



Building Vibration Standards

The choice of Building Vibration Standard and the type of building (curve) enables the vibration velocity measurements according to with commonly used standards such as DIN 4150-3 or BS 7385-2 that use Peak Particle Velocity and Dominant Frequency method.

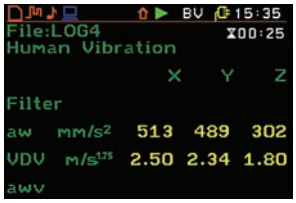


Alarms and Events

The system generates SMS and E-mail notifications as well as visual and audio alarms. In addition to simple triggers from PPV or LEQ values, you can configure alarms from standard curves (e.g. DIN 4150-3) or custom curves based on FFT or 1/3 octaves. The triggering of an alarm starts the Event, whose length is configurable. After the Event time has elapsed, the instrument starts analysing the data and indicates the highest PPV value and its dominant frequency. The time and value of the Event is saved in the meter's memory.

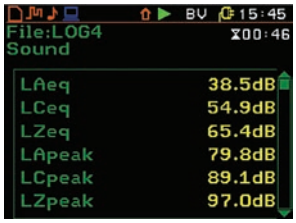
User Curves in FFT and 1/3 Octaves

If you can't find the vibration standard on the list of implemented ones, you can always input customized values to create a criterion curve based on FFT or 1/3 octave (RMS, PEAK or MAX).



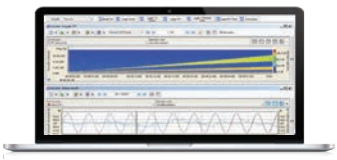
Human Vibration in Buildings

The station allows simultaneous measurement of vibration acceleration, allowing the measurement of VDV with a different recording step than PPV making the reporting much easier. The analyzer has built-in weighing filters according to ISO 2631-1 and ISO 2631-2 as well as DIN 4150-2. It is also possible to measure the impact of vibrations on people using 1/3 octave spectrum.



Class 1 Noise

The fourth channel in the station can be used to measure sound in accordance with the requirements of IEC 61672 Class 1. The results (e.g. LEQ, MAX, MIN or PEAK) are recorded together with the vibration velocity and acceleration steps, making the correlation of sound and vibrations much easier.



Wave Recording

With WAV analysis software you can search for peaks and calculate FFT or 1/3 octave spectrum on selected time periods. The post-processing software comes with the system at no additional cost.

On-line data access with SvanNET

The built-in GSM modem transmits measurement data to the SvanNET server where the user has access to current data, historical data, and can also generate a measurement report.

SV 258 Pro Technical Specifications

Standards	DIN 4150-3, DIN 4150-2, BS 7385-2, 22/09/1994, 23/07/1986, IN-1226, USER FFT, USER 1/3 OCTAVE
Meter Mode	PPV, DF, RMS, VDV, MAX, Peak, Peak-Peak, Vector, aw, awv
Profiles Per Channel	2 (Velocity and Acceleration)
Analyser	1/3 octave real-time analysis or FFT analysis Time domain signal recording to WAV format
Filters in Velocity Profile	DIN 80, DIN 315, VEL1
Filters in Acceleration Profile	HP1, HP3, HP10, Wk, Wd, Wc, Wj, Wm, Wg, Wb
RMS & RMQ Detectors	Digital true RMS & RMQ detectors with Peak detection, resolution 0.1 dB
Detector Time Constants	Fast 125 ms in accordance to DIN 4150-2
Accelerometer	SV 84 triaxial high sensitivity (1 V/g), noise floor RMS: 14 µm/s (VEL1), 2 µm/s (VEL3)
Measurement Range	SV 84: 0.0005 m/s² RMS ÷ 50 m/s² PEAK
Frequency Range	SV 84: 0.2 Hz ÷ 315 Hz
Standards	Class 1: IEC 61672-1
Meter Mode	SPL, Leq, SEL, Lden, Ltm3, Ltm5, Statistics - Ln (L1-L99), LMax, LMin, LPeak
Weighting Filters	A, C, Z, G
RMS Detector	Digital true RMS detector with Peak detection, resolution 0.1 dB
Detector Time Constants	Slow, Fast, Impulse
Microphone kit (optional)	SV 208A outdoor microphone kit with an extension cable
Measurement Range	16 dBA RMS ÷ 140 dBA Peak (Total Dynamic Range)
Linearity Range	26 dBA RMS ÷ 140 dBA Peak (IEC 61672)
Frequency Range	0.5 Hz ÷ 20 kHz (microphone dependent) with MK 255: 3.5 Hz ÷ 20 kHz
Remote Communication	3G modem
Power Supply	DC power supply / charger 11 V ÷ 30 V (waterproof) Internal battery 17 Ah / 12 V Secondary external battery 33 Ah / 12 V (optional) Solar panel (optional)
Operating Time on Battery	3 days with continuous modem transmission[2] 7 days with modem switched off[2] Test Conditions: meter mode, display dimmed, 10 ms time-history logger
Environmental Conditions	Temperature -10 °C ÷ +50 °C
Dimensions	420 x 340 x 210 mm (without accessories)
Weight	Approximately 9 kg including battery

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

SVAN 979

Sound & Vibration Analyser

SVAN 979 Sound & Vibration Analyser

The SVAN 979 is a **CLASS 1 TYPE APPROVED** Sound Level Meter and Analyser with the superior technical specifications. Its measuring range starts from as low as **12 dBA**!

Signal input consists of high quality omnidirectional GRAS 40 AE microphone allowing sound measurements from **3.15 Hz**. Thanks to SV 17 preamplifier it is also possible to use microphones requiring **200 V** polarisation voltage.

The preamplifier has been **REINFORCED** with a metal collar for additional protection of the measurement path.

SVAN 979 can be used as a **VIBRATION** meter - simply by connecting a cable and a vibration sensor.

OLED 2.4" color display (320 x 240 pixels) provides a **SUPER CONTRAST VISIBILITY** even in sunny weather.

Aluminum **ROBUST** housing gives the comfort of a secure grip to the user and protects the hardware against the electromagnetic interference.

SVAN 979 is powered from 4xAA **RECHARGEABLE** batteries which come with a dedicated charger. External power supply is also provided.

Two dedicated interfaces provide capability of cooperation with two external devices at the same time, for example **GPS** device and **3G** modem.

The frequency analyser offers **1/1 AND 1/3 OCTAVE** real-time analysis and **FFT.**

Time domain signal recording with **48 kHz** enables **AUDIO LISTENING** as well as **WAVE** recalculation in SvanPC++ software.

RT60, SIGNAL GENERATOR, millisecond spectra logging allows users to perform all the measurements necessary to obtain facade, airborne or impact **SOUND INSULATION** results. The measurement is supported by the smartphone application.

Built-in **Bluetooth®** interface provides additional advantages such as device configuration by usage of a smartphone or tablet with Android platform and **SvanMobile** application.

The **Building Acoustics Assistant** application supports SVAN 979 in acoustic insulation measurements.

Standard kit includes 16 GB **microSD** card which can be easily exchanged to a card with maximum storage capacity of **128 GB.**

About SVAN 979

SVAN 979 is a device combining all necessary measurement functionalities in one hand-held tool.
The instrument is dedicated for acoustic engineering applications such as sound insulation measurements, precise frequency or signal tonality analysis.
In standard, this sophisticated tool has been equipped with frequency analysis in 1/1 & 1/3 octave bands, FFT analysis and audio recording for noise source recognition. Basic kit also includes building acoustic pack: RT 60 measurement and signal generator functions.
Additional options such as Tonality or unique 1/6 & 1/12 octave analysis make this unit a complete accessory for acoustic engineers.
Thanks to implementation of the G weighting filter, the instrument is a perfect choice for measurements on wind farms where infrasound measurements are often necessary.

What's inside the SVAN 979 kit?

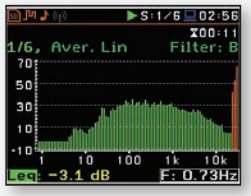
The kit consists of SVAN 979 Class 1 sound & vibration level meter with a detachable preamplifier SV 17 and high quality omni-directional GRAS 40AE microphone, compliant to IEC 61094-4. The list of accessories includes: SA 143 carrying case, SA 22 windscreen, 16 GB microSD card, four rechargeable AA batteries, USB cable, and CD with user manual. Each SVAN 979 has its factory calibration certificate and 36 months warranty card.

Software for SVAN 979

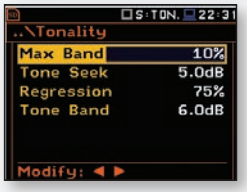
SvanPC++ is a PC software supporting functions such as measurement data downloading from instruments to PC, measurement setups creation, basic Leq/RMS recalculation, measurement results in text, table and graphical form of presentation, export data to a spread sheet or text editor applications. New version of SvanPC++ software also supports analysis of wave files from Svantek's instruments (for example calculation of tonality).

SvanMobile is an application for Android devices that uses the Bluetooth® connection to control the SVAN 979. It allows the user to trigger measurements, edit settings, rename files and view the results remotely. Anyone who makes measurements in the environment will appreciate the ability of SvanMobile to automatically add weather data and GPS position to the measurement report. SvanMobile also allows to link measurement files from the sound level meter to media files from the smartphone such as photos, video or audio recordings.

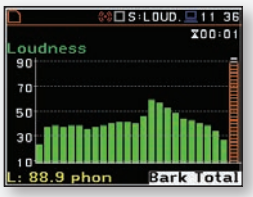
Optional functions



Thanks to its powerful computing processors, SVAN 979 can perform very sophisticated real-time frequency analysis in **1/6** or **1/12 OCTAVE BANDS**. It can be activated at any time by ordering the activation code.



TONALITY is a common sound quality analysis in relation to human hearing. Tonality determines annoying tones considered as a negative attribute of sound and calculates penalty value in dB which should be added to the noise level to indicate its annoyance.
In accordance with ISO 1996-2 tonal analysis is obligatory if noise characteristics includes audible tones. It can be activated at any time by ordering the activation code.



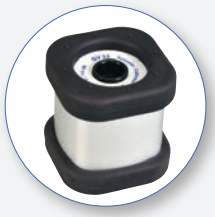
LOUDNESS is a measure of sound that corresponds to the subjective perception of humans, by taking into account the sensitivity of human hearing for different frequencies (Zwicker method according to ISO 532B standard). In many cases, loudness has been proven to be more reliable than A-weighted levels (and time history) in quantifying relatively low-level broadband sounds in agreement with subjective impression. It can be activated at any time by ordering the activation code.

Optional accessories to SVAN 979

SC 93
Extension Cable
for Preamplifier

SA 279
Microphone
Outdoor
Protection Kit

SM 279 PRO
Outdoor
Monitoring
Case



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

SA 420B
Tripod Up To
4 m Height

SVAN 979 Technical Specifications

Sound Level Meter & Analyser

Standards	Class 1: IEC 61672-1:2013 (type approved); Class 1: IEC 61260-1:2014
Meter Mode	Elapsed time, Lxy (SPL), Lxeq (LEQ), Lxpeak (PEAK), Lxymax (MAX), Lxymin (MIN), Ovl (OVERLOAD %), Lxye (SEL), LN (LEQ STATISTICS), Lden, LEPd, Ltm3, Ltm5 Simultaneous measurement in three profiles with independent set of filters (x) and detectors (y)
Analyser	1/1 or 1/3 octave[1] real-time analysis; 1/6 or 1/12 octave[1] real-time analysis (optional) FFT[1] 1600 lines, up to 20.0 kHz band; Reverberation time analysis in 1/1 or 1/3 octave bands (RT 60) Loudness[1] based on ISO 532B standard and Zwicker model (optional) Pure tone detection meeting ISO 1996-2 Tonality[1] (optional) User programmable second order band pass filters[1] (optional)
Weighting Filters	A, C , Z , B, G
RMS Detector	Digital True RMS detector with Peak detection, resolution 0.1 dB
Detector Time Constants	Slow, Fast, Impulse
Microphone	GRAS 40AE, 50 mV/Pa, prepolarised 1/2" condenser microphone
Preamplifier	SV 17 Voltage type (support 200 V polarisation)
Linear Operating Range	22 dBA RMS ÷ 140 dBA Peak (in accordance to IEC 61672)
Total Dynamic Range	12 dBA RMS ÷ 140 dBA Peak (typical from noise floor to the maximum level)
Internal Noise Level	Less than 12 dBA RMS
Frequency Range	3.5 Hz ÷ 20 kHz, with GRAS 40AE microphone

Vibration Level Meter & Analyser

Standards	ISO 20816-1
Meter Mode	RMS, MAX, Peak, Peak-Peak Simultaneous measurement in three profiles with independent set of filters and detectors
Analyser	1/1 or 1/3 octave[1] real-time analysis; 1/6 or 1/12 octave[1] real-time analysis (optional) FFT[1] real-time analysis 1600 lines, up to 20.0 kHz band RPM[1] rotation speed measurement parallel to the vibration measurement (optional) User programmable second order band pass filters[1] (optional)
Filters	HP1, HP3, HP10, Vel1, Vel3, Vel10, VelMF, Dil1, Dil3, Dil10, Wh
RMS Detector	Digital True RMS detector with Peak detection, resolution 0.1 dB
Detector Time Constants	From 100 ms to 10 s
Accelerometer (optional)	Any IEPE accelerometer
Measurement Range	Transducer dependent
Frequency Range	0.5 Hz ÷ 22.4 kHz (transducer dependent)

General Information

Input	LEMO 7-pin: Direct AC, Direct AC with 200 V polarisation, Direct DC or IEPE type with TEDS	
Self-vibration Monitoring	Built-in	
Dynamic Range	115 dB	
Frequency Range	0.5 Hz ÷ 22.4 kHz, sampling rate 48 kHz	
Data Logger	Time-history logging with logging step down to 2 millisecond, Time-domain signal recording and audio events recording function	
Signal Generator	Sine, White noise, Pink noise	
Display	Super contrast (10000:1) OLED 2.4" colour display (320 x 240 pixels)	
Memory	MicroSD card 16 GB (included)	
Interfaces	USB 1.1 Client, USB 1.1 Host, Bluetooth, RS 232 (with optional SV 55) GPS time synchronisation and positioning (optional) Extended I/O - AC output (1 V Peak) or Digital Input/Output (Trigger – Pulse)	
Power Supply	Four NiMH AA rechargeable batteries (included)	operation time > 8 h ÷ 12 h (4.8 V / 2.6 Ah)[2]
	SA 17A external battery pack (optional)	operation time > 24 h[2]
	External power supply	6 V/500 mA DC ÷ 15 V/250 mA DC
	USB interface	500 mA HUB
Environmental Conditions	Temperature	from -10 °C to 50 °C
	Humidity	up to 90 % RH, non-condensed
Dimensions	310 x 79 x 39 mm (with microphone and preamplifier)	
Weight	Approx. 0.6 kg with batteries	

[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.

SVAN 977A

Sound & Vibration Level Meter

SVAN 977A Sound & Vibration Level Meter

SVAN 977A 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.

SVAN 977W **TYPE APPROVED WELMEC** version is available.

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

The microphone preamplifier has been **REINFORCED** with a metal collar to protect it against mechanical damage.

The **TIME HISTORY LOGGING** of results such as Leq, Max, Min and Peak with two simultaneous logging steps is saved on a 16 GB **microSD** card (upgradeable to 128 GB).

Large **OLED DISPLAY** is a full color and **HIGH CONTRAST** so it can be used in a sunlight or night. The OLED technology doesn't use back-light giving SVAN 977A more battery operating time.

With a special microphone the meter provides measurement range of the **ULTRASOUNDS** up to 40 kHz.

The **Bluetooth®** interface connects the meter with the SvanMobile application that allows the user to trigger measurements, edit settings, rename files and view the results remotely.
Anyone who makes measurements in the environment will appreciate the ability of SvanMobile to automatically add weather data and **GPS** position to the measurement report.
SvanMobile also allows to link measurement files from the sound level meter to media files from the smartphone such as photos, videos or audio recordings.

About SVAN 977A

The SVAN 977A is a Class 1 Sound and Vibration meter designed for occupational and environmental measurement applications. It provides broad-band results such as Leq, Max, Min and Peak with all standard weighting filters together with an incredible time-history logging feature with two adjustable logging steps.
One unique feature of the SVAN 977A is ultrasound measurement band up to 40 kHz. The ultrasound band is normally considered as the frequency range above 20 kHz. Ultrasound is used in a number of industrial processes such as cleaning, drilling or welding as well as hospitals for medical procedures.
The built-in Bluetooth® interface together with smart-phone application, SvanMobile, extends measurement capabilities with all the features offered by smartphones including text/voice comments, photo, video, GPS position etc.

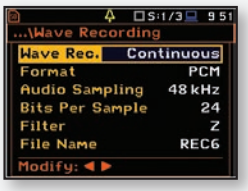
Software for SVAN 977A

SvanPC++ is a PC software supporting functions such as measurement data downloading from instruments to PC, measurement setups creation, basic Leq/RMS recalculation, measurement results in text, table and graphical form of presentation, export data to a spread sheet or text editor applications. New version of SvanPC++ software also supports analysis of wave files from Svantek's instruments (for example calculation of tonality).

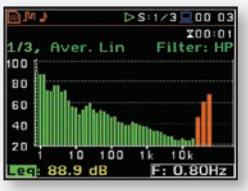
Supervisor is a dedicated software for determination of occupational noise & vibration exposure. It supports data download, instrument configuration and provides tools for reporting. The data files from the SVAN 977A can be used for calculation of all required measurement results and uncertainties in accordance to measurement strategies described in ISO 9612.

SvanMobile is an application for Android devices that uses the Bluetooth® connection to control the SVAN 977A. It allows the user to trigger measurements, edit settings, rename files and view the results remotely. Anyone who makes measurements in the environment will appreciate the ability of SvanMobile to automatically add weather data and GPS position to the measurement report. SvanMobile also allows to link measurement files from the sound level meter to media files from the smartphone such as photos, video or audio recordings.

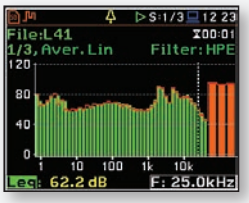
Optional functions



TIME DOMAIN SIGNAL RECORDING means recording the raw signal samples with defined frequency up to 48 kHz. Analysis of the raw signal is used whenever frequency analysis is not sufficient. Post-processing of high quality wave files (48 kHz, 24 bit) such as calculation of tonality is available in SvanPC++ program. Time domain signal is recorded in a wave format which means that it can be played back in the PC software and used for noise source recognition (audio recording).



FREQUENCY ANALYSIS of the signal in 1/1 or 1/3 octave bands allows to determine the influence of high or low frequencies on overall values. The 1/3 octave can be also used for the assessment of tonality in accordance to ISO 1996-2 (simplified method). It can be activated at any time by ordering the activation code.



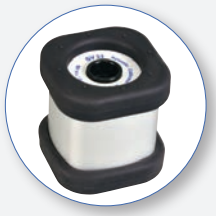
With an optional microphone and 1/3 octave or FFT analysis SVAN 977A provides analysis of the **ULTRASOUNDS** up to 40 kHz. The ultrasound band is normally considered as the frequency range above 20 kHz. Limits of permissible ultrasound levels are usually expressed in terms of Leq and Max values specified in 1/3 octave bands for 20 kHz, 25 kHz, 31.5 kHz and 40 kHz.

Optional accessories to SVAN 977A

SC 26
Extension Cable
for Preamplifier

SA 277
Microphone
Outdoor
Protection Kit

SM 277 PRO
Outdoor
Monitoring
Case



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

SV MK202E
Ultrasound
Microphone up to
40 kHz band

What's inside the SVAN 977A kit?

The kit consists of SVAN 977A Class 1 sound & vibration level meter with a detachable preamplifier SV 12L and high quality omni-directional ACO SV 7052E microphone, compliant to IEC61094-4. The list of accessories includes: SA 143 carrying case, SA 22 windscreen, 16 GB microSD card, four AA batteries, USB cable, and CD with user manual. Each SVAN 977A has its factory calibration certificate and 36 months warranty card.

SVAN 977A 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
Microphone	ACO SV 7052E, 35 mV/Pa, prepolarised 1/2" condenser microphone
Preamplifier	SV 12L detachable (TNC)
Linear Operating Range	25 dBA RMS ÷ 140 dBA Peak (in accordance to IEC 61672)
Total Dynamic Measurement Range	15 dBA RMS ÷ 140 dBA Peak (typical from noise floor to the maximum level)
Internal Noise Level	Less than 15 dBA RMS
Dynamic Range	>110 dB
Frequency Range	10 Hz ÷ 20 kHz with ACO SV 7052E
Meter Mode Results	Elapsed time, Lxy (SPL), Lxeq (LEQ), Lxpeak (PEAK), Lxymax (MAX), Lxymin (MIN), LR (ROLLING LEQ), 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)
Analyser[1] (optional)	1/1 octave or optional 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)
Statistics	L_n (L_1-L_{99}), complete histogram in meter mode and 1/1 or 1/3 octave analysis
Data Logger[1]	Time-history logging of summary results, spectra with adjustable double logging steps down to 2 ms
Audio Recording[1] (optional)	Audio records to time-history data or WAV format with selectable band and recording period

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] (optional)	1/1 octave or optional 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[1]	Continuous or triggered time-domain signal recording to WAV format (optional)

General information

Input	IEPE with TNC connector	
Memory	MicroSD card 16 GB (removable & upgradeable)	
Display	Super contrast (10000:1) OLED 2.4" colour display (320 x 240 pixels)	
Interfaces	USB 2.0 Client, Bluetooth®, RS 232 (with optional SV 55)	
	External I/O - AC output (1 V Peak) or Digital Input/Output (Trigger – Pulse)	
Power Supply	Four AA batteries	operation time > 12 h (6 V / 2 Ah)[2]
	Four rechargeable AA batteries	operation time > 16 h (4.8 V / 2.6 Ah)[2] (not included)
	External power supply	6 V/500 mA DC ÷ 15 V/250 mA DC
	USB interface	500 mA HUB
Environmental Conditions	Temperature	from -10 °C to 50 °C
	Humidity	up to 90 % RH, non-condensed
Dimensions	340 x 79 x 39 mm (with microphone and preamplifier)	
Weight	Approx. 0.6 kg with batteries	

[1]works together with the meter mode
[2]dependent on instrument operation mode

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.

SVAN 974

Vibration Level Meter & Analyser

SVAN 974 Vibration Level Meter & Analyser

SVAN 974 is a **VIBRATION LEVEL METER** designed for machine vibration measurements in accordance to ISO 20816-1.

The input supports **IEPE** and **CHARGE** type accelerometers.

Three independent profiles offer parallel **ACCELERATION, VELOCITY AND DISPLACEMENT** measurements with advanced data logger including spectral analysis.

OLED 2.4" color display (320 x 240 pixels) provides a **SUPER CONTRAST** visibility in dark light conditions or even in direct sunlight.

SVAN 974 is powered from 4xAA **BATTERIES** that can be easily replaced in the field.

Aluminum **ROBUST** housing gives the comfort of a secure grip to the user and protects the hardware against the electromagnetic interference.

The top cover has two inputs, one for the vibration accelerometer, second for a connection of the **TACHOMETER**.

Built-in **FFT, Digital Oscilloscope** together with **TIME DOMAIN SIGNAL** recording to WAV format option enable a detailed vibration frequency analysis.

The SV 80 vibration accelerometer enables vibration measurements from **0.5 Hz up to14 kHz.**

The **TIME HISTORY LOGGING** of results such as RMS, Max, Peak and Peak-Peak with two simultaneous logging steps is saved on a 8 GB **microSD** card.

About SVAN 974

The SVAN 974 is a vibration level meter and analyser designed to measure vibrations from machinery. The instrument uses the SV 80 accelerometer, which is an ideal choice for walk-around vibration measurements in challenging industrial environments with heavy machinery, such as pumps, motors or fans. The flexible accelerometer input also supports different types of vibration sensors including IEPE, charge and direct.
The SVAN 974 can simultaneously present the parallel vibration acceleration, velocity and displacement results along with frequency analysis and wave recordings.

The FFT analysis allows selection of the frequency band providing accurate analysis of the vibration source of interest (e.g. 1600 lines in frequency band up to 1.25 kHz). With a dedicated tachometer the SVAN 974 can monitor RPM together with vibration assessment (simple order tracking).
The powerful digital signal processor allows incredibly fast time history logging to a microSD card. The measurements data can be easily downloaded to a PC using the SvanPC++ software package over a USB connection.

What's inside the SVAN 974 kit?

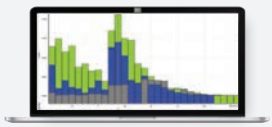
The kit consists of SVAN 974 together with SV 80 accelerometer and SA 27 mounting magnet, SC 27 coil cable all packed in SA 74 waterproof carrying case. The accessories list also contains 8 GB microSD card and CD with user manual. Each SVAN 974 has its factory calibration certificate and 36 months warranty card.

PC Software

SvanPC++ is an advanced PC software dedicated for data analysis from general noise and vibration measurements. It provides sophisticated functions such as Projects or Wave Analyser enabling various data comparisons.

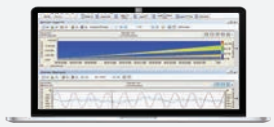
Optional functions

TIME SIGNAL RECORDING means recording the raw signal with a defined frequency sampling. Analysis of the raw signal is used whenever frequency analysis is not sufficient. Time signal is recorded in a wave format. The option can be activated at any time by ordering the activation code.



FREQUENCY ANALYSIS of the signal in 1/1 or 1/3 octave bands is often used for a comparison of the machine vibration condition with the manufacturer's data. It can be activated at any time by ordering the activation code.

DIGITAL OSCILLOSCOPE is used to observe the change of an electrical signal over time, such that voltage and time describe a shape which is continuously graphed against a calibrated scale. The observed waveform can be analyzed for such properties as amplitude, frequency, rise time, time interval, distortion and others. The option can be activated at any time by ordering the activation code.



ROTATION MEASUREMENT OPTION is used whenever measuring vibration of machines with rotating elements. Information about revolutions per minute is calculated and added to data files basing on impulses generated by external tachometer. Function works simultaneously to other functions such as level meter or frequency analysis. The option can be activated at any time by ordering the activation code.

Optional accessories

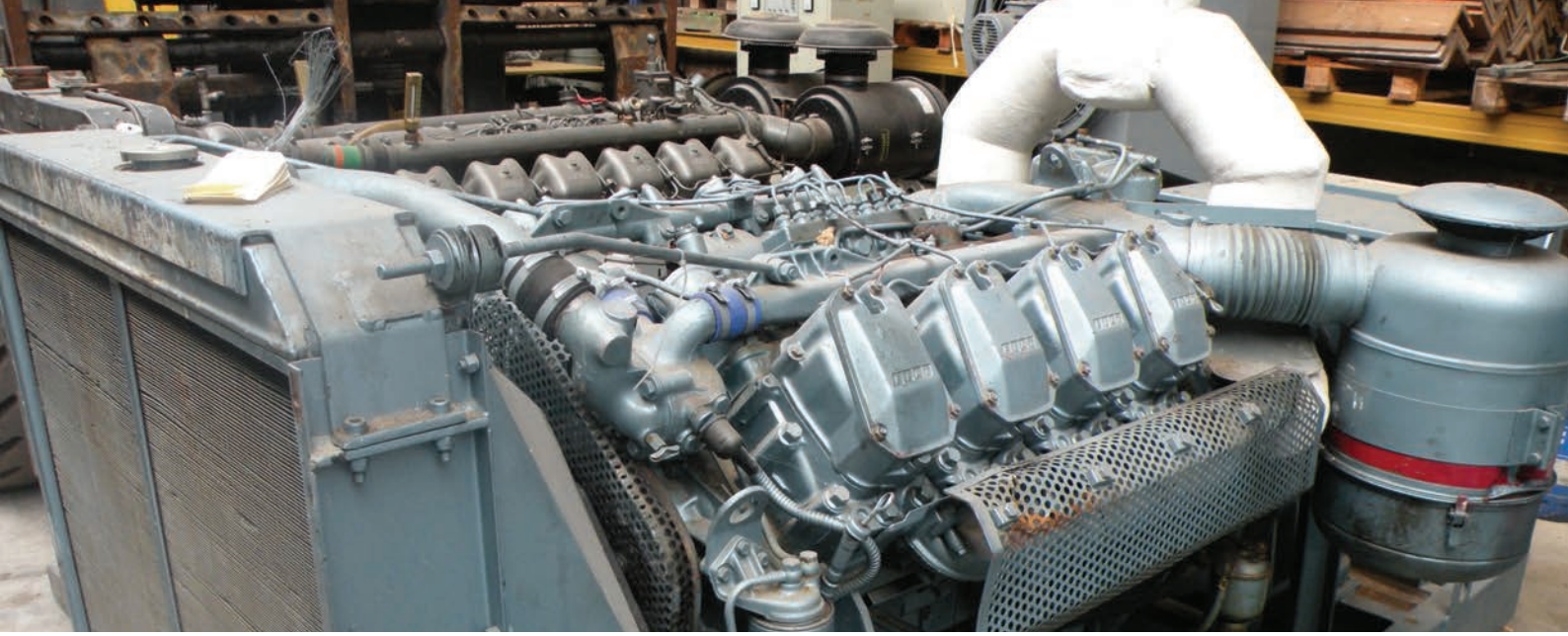
SV RPM_PROB
Laser Tachometer

SV 81
Vibration
Accelerometer
500 mV/g

SV 110
Hand-held
Vibration
Calibrator

SV 111
Hand-Arm and
Whole-Body Vibration
Calibrator

SA 47
Fabric Carrying Bag



SVAN 974 Technical Specifications

Vibration Level Meter

Standards	ISO 20816-1
Results	RMS, Peak, Peak-Peak, Max Simultaneous measurement in three profiles with independent set of filters and detectors
Weighting	Filters HP1, HP3, HP10, Vel1, Vel3, Vel10, VelMF, Dil1, Dil3, Dil10, HP, Wh
RMS Detector	Digital True RMS detector with Peak detection, resolution 0.1 dB
Time Constants	From 100 ms to 10 s
Accelerometer	SV 80 IEPE type, sensitivity 100 mV/g
Measurement Range	0.01 ms^{-2} RMS ÷ 500 ms^{-2} Peak (with SV 80 and HP1 filter, accelerometer dependent)
Frequency Range	0.5 Hz ÷ 14 kHz (with SV 80 and HP1 filter, accelerometer dependent)

Vibration Analyser

Data Logger[1]	Time-history logging including spectra with 2 adjustable logger steps down to 2 ms
FFT[1]	400 or 800 or 1600 lines in selectable band from 78 Hz to 20 kHz with HP weighting filter, selectable averaging: linear or exponential, and selectable window
1/1 Octave[1] (optional)	Real-time analysis, 15 filters with centre frequencies from 1 Hz to 16 kHz meeting Class 1: IEC 61260
1/3 Octave[1] (optional)	Real-time analysis, 45 filters with centre frequencies from 0.8 Hz to 20 kHz meeting Class 1: IEC 61260
RPM Measurements (optional)	1 ÷ 99999 rotation speed measurement parallel to the vibration measurement
Time-Domain Recording (optional)	Time-domain signal recording to WAV format

General Information

Input	IEPE, Charge amplifier or Direct with TNC connector	
IEPE Current	Selectable: 1.5 mA, 3.0 mA, 4.5 mA	
Dynamic Range	More than 100 dB in single range	
Internal Noise Level	Less than 10 µV RMS (IEPE input & HP1 filter)	
Frequency Range	0.5 Hz ÷ 22.6 kHz, sampling rate 48 kHz	
Display	Colour OLED 2.4", 320 x 240 pixels	
Memory	MicroSD 8 GB included (slot supports 4 GB ÷ 128 GB cards)	
Interfaces	USB 1.1, Extended I/O - AC output 1 V RMS Sine (1.41 V Peak) or Digital Input/Output (Trigger - Pulse)	
Power Supply	Four AA batteries (alkaline)	operation time > 12 h (6.0 V / 1.6 Ah)[2]
	Four AA rechargeable batteries (not included)	operation time > 16 h (4.8 V / 2.6 Ah)[2]
	USB interface	500 mA HUB
Environmental Conditions	Temperature	from -10 °C to 50 °C
	Humidity	up to 90 % RH, non-condensed
Dimensions	140 x 83 x 33 mm (without accelerometer and cable)	
Weight	Approx. 390 grams including batteries (without accelerometer and cable)	

[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.

SVAN 971

Class 1
Sound Level Meter

SVAN 971 Sound Level Meter

SVAN 971 is a **CLASS 1** Sound Level Meter in accordance to IEC 61672-1. The meter is **TYPE APPROVED** in most of the countries around the globe.

The meter is suitable for noise at work measurements in accordance to standards such as **ISO 9612, OSHA, MSHA and ACGIH**.

It is the **SMALLEST** Class 1 instrument on the market. The size and weight are very convenient when making hand-held measurements.

The **TIME HISTORY LOGGING** of results such as Leq, Max, Min and Peak with two simultaneous logging steps is saved on a 16 GB **microSD** card (upgradeable to 128 GB).

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 SVAN 971 more battery operating time. The size of display is a perfect compromise between power savings and visibility.

Once the calibration signal is detected, SVAN 971 starts the **AUTO-CALIBRATION**, saving the calibration data together with the measurement file, both before and after measurement.

The built-in **VIBRATION SENSOR** informs meter about vibrations that interfere with noise measurements. In addition, the sensor detects the horizontal position of meter so the meter knows when to **ROTATE** the display.

VOICE ANNOTATIONS (voice comments) before or after the measurements allow easy identification of data files.

SVAN 971 has **USB SOCKET** which can be used for communication with PC software as well as for powering the instrument from an USB port.

One of the biggest advantages of using SVAN 971 is its **POWER EFFICIENCY**. It can run up to 24 hours on one set of small AAA batteries.

About SVAN 971

The SVAN 971 is a Class 1 sound level meter in accordance to IEC 61672. The instrument is extremely small but offers unprecedented state of the art technology. For those who do not need to alter the measurement settings, the SVAN 971 has an extremely simple operational mode with only Start/Stop controls. This means that the SVAN 971 is the ideal choice for many applications including industrial noise measurement for health and safety, short term environmental noise monitoring and general noise measurements for acoustic consultants or technical engineers. The instrument is easily calibrated in the field using an acoustic calibrator as the calibration begins automatically when the microphone is inserted into the calibrator. The instrument also includes a built-in vibration sensor that provides information about vibrations that could influence the measurements. The SVAN 971 measures broad-band results with all necessary weighting filters as well as 1/1 octave or 1/3 octave band filters. It also offers time-history logging with two adjustable logging steps. The audio events recording allows to listen and recognize noise sources. The data are stored on a microSD card and can be easily downloaded to a PC using the Supervisor or SvanPC++ software.

What's inside the SVAN 971 kit?

The kit consists of SVAN 971 Class 1 sound level meter with detachable preamplifier SV 18 and high quality omni-directional ACO SV 7052E microphone, compliant to IEC61094-4. The list of accessories includes: SA 22 windscreen, 16 GB microSD card, four AAA batteries, USB cable, and CD with user manual. Each SVAN 971 has its factory calibration certificate and 36 months warranty card.

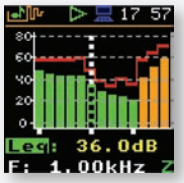
PC Software for SVAN 971

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, NR-15 or NHO-01. The data files from the SVAN 971 can be used for calculation of all required measurement results and uncertainties in accordance to the three measurement strategies described in ISO 9612.

SvanPC++ is a PC software supporting functions such as measurement data downloading from instruments to PC, measurement setups creation, basic Leq/RMS recalculation, measurement results in text, table and graphical form of presentation, export data to a spread sheet or text editor applications. New version of SvanPC++ software also supports analysis of wave files from Svantek's instruments (for example calculation of tonality).

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.

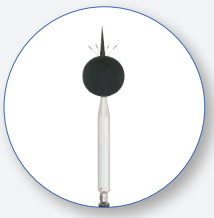


FREQUENCY ANALYSIS of the signal in 1/1 or 1/3 octave bands. The 1/1 octave analysis is often used for selection of hearing protectors. The 1/3 octave function allows to determine the influence of high or low frequencies on overall values. It can be activated at any time by ordering the activation code.

DOSIMETER option provides results such as: DOSE, DOSE_8h, PrDOSE, LAV, LAE (SEL), LAE8 (SEL8), PLAE (PSEL), E, E_8h, LEPd, PTC PEAK COUNTER), PTP (PEAK THRESHOLD %), ULT (UPPER LIMIT TIME), TWA, PrTWA, Lc-a and the selection of exchange rate between 2, 3, 4, 5, 6. It can be activated at any time by ordering the activation code.

Optional accessories to SVAN 971

SC 91
Microphone
Extension Cable



SA 271
Microphone
Outdoor
Protection Kit

SM 271 LITE
Outdoor
Monitoring
Case

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

SA 420B
Tripod Up To
4 m Height

SVAN 971 Technical Specifications

Standards	Class 1: IEC 61672-1:2013,Class 1: IEC 61260-1:2014 (Type Approved)	
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 7052E, 35 mV/Pa, prepolarised 1/2" condenser microphone	
Preamplifier	SV 18 detachable (60 UNS thread)	
Linear Operating Range	25 dBA RMS ÷ 140 dBA Peak (in accordance to IEC 61672)	
Dynamic Measurement Range	15 dBA RMS ÷ 140 dBA Peak (typical from noise floor to the maximum level)	
Internal Noise Level	Less than 15 dBA RMS	
Dynamic Range	>110 dB	
Frequency Range	10 Hz ÷ 20 kHz	
Meter Mode 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	
Dosimeter Mode 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[1]	Ln (L1-L99), complete histogram in meter mode	
Data Logger[1]	Time-history logging of summary results, spectra with two adjustable logging steps down to 100 ms	
1/1 Octave Analysis[1] (optional)	Real-time analysis meeting Class 1 requirements of IEC 61260, centre frequencies from 31.5 Hz to 16 kHz	
1/3 Octave Analysis[1] (optional)	Real-time analysis meeting Class 1 requirements of IEC 61260, centre frequencies from 20 Hz to 20 kHz	
Audio Recording[1] (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	
Memory	MicroSD card 16 GB (removable & upgradeable up to 128 GB)	
Display	Colour 96 x 96 pixels OLED type	
Keyboard	8 push buttons	
Communication Interfaces	USB 2.0 client SV 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[2]
	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
Physical Characteristics	Dimensions	232.5 mm x 56 x 20 mm (including microphone and preamplifier)
	Weight	Approx. 225 grams with batteries (Approx. 8.20 oz)

[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.

SVAN 958A

Four-Channel
Sound and Vibration Analyser

SVAN 958A Four-Channel Sound and Vibration Analyser

Four-channel **SOUND & VIBRATION** analyser dedicated for engineering applications.

Depending on an application, each channel can be **INDEPENDENTLY** configured e.g. one tri-axial and one mono-axial vibration sensor or four microphones etc.

The Class 1 Sound Level Meter enables the simultaneous four-channel real-time frequency analysis in **1/1 AND 1/3 OCTAVE BANDS**.

The meter can be used for **BUILDING ACOUSTIC** measurements e.g. simultaneous 4-channel RT 60 measurements.

The **RS 232** interface enables integration with the production line.

The **FFT ANALYSER** offers the detailed frequency analysis in a selectable frequency band.

The **BUILDING VIBRATION** mode offers simultaneous **VELOCITY** and **ACCELERATION** measurements with the automatic indication of a **DOMINANT FREQUENCY**.

OLED 2.4" color display (320 x 240 pixels) provides a **SUPER CONTRAST VISIBILITY** even in sunny weather.

Aluminum **ROBUST** housing gives the comfort of a secure grip to the user and protects the hardware against the electromagnetic interference.

About SVAN 958A

SVAN 958A is an unique four-channel instrument offering 20 kHz-band sound & vibration analysis. It is a perfect choice for all applications that require simultaneous Class 1 noise measurements & triaxial vibration assessment. Each of four input channels can be independently configured for sound or vibration mode with different filters and RMS detector time constants giving users an enormous measurement flexibility. The real advantage of SVAN 958A is the capability to perform advanced analysis simultaneously to the level meter mode. In practise this allows to obtain broad-band results such as Leq, RMS, Lmax, Lmin, Lpeak together with four-channel analysis like FFT or octave band analysis. List of available analyser functions includes FFT, 1/1 or 1/3 octave, cross spectra, sound intensity, RT 60 and more. All measurement results are stored in the non-volatile 32 MB internal memory and can be easily downloaded to a PC with SvanPC++ software. SVAN 958A with RS 232 interface (SV 55) can be offered with GPRS modem or LAN & WLAN connection module. Together with SvanNET or SvanPC++_RC remote communication software, these interfaces provide easy remote access to instrument settings & data over Internet and local area network. Instrument is powered from four AA standard or rechargeable batteries as well as from the external DC power source or USB interface. Robust case and light weight design accomplish the exceptional features of this instrument.

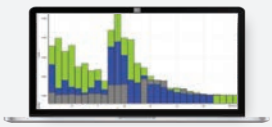
What's inside the SVAN 958A kit?

The standard kit includes SVAN 958A 4-channel sound & vibration level meter with an USB cable, set of 4x AA batteries, SC 61 TNC/BNC adapter and the user manual on a CD disk. Each SVAN 958A has its factory calibration certificate and a **36-MONTH WARRANTY CARD**. The standard kit also includes license for PC software.

PC Software

SvanPC++ is a PC software supporting functions such as measurement data downloading from instruments to PC, measurement setups creation, basic Leq/RMS recalculation, measurement results in text, table and graphical form of presentation, export data to a spread sheet or text editor applications. New version of SvanPC++ software also supports analysis of wave files from Svantek's instruments (for example calculation of tonality).

Optional functions



FREQUENCY ANALYSIS is an irreplaceable tool for sound & vibration engineers. Depending on an application frequency analysis can be more or less detailed. Thanks to its powerful computing processor, SVAN 958A can perform very sophisticated 4-channel frequency analysis such as 1/1 or 1/3 octave, FFT or FFT cross spectrum. Each option can be activated separately at any time by ordering the activation code.

Optional accessories to SVAN 958A

SV 60
Sound
Measurement Kit

SV 80 / 81
Mono-axial
Accelerometers

SV 84 / 85
Tri-axial
Accelerometers

SV 207B
Building Vibration
Kit

SM 258 PRO
Monitoring
Case

SV 55
Cable for RS 232
devices

SV 111
Vibration
Calibrator

SA 154
Calibration
Adapter to SV 84

SV 208
Outdoor Sound
Measurement Kit

SA 48
Waterproof
Carrying Case

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

SA 420B
Tripod Up To
4 m Height

SVAN 958A Technical Specifications

Vibration Level Meter & Analyser

Standards	ISO 8041:2005, ISO 20816-1, DIN 4150-3, BS 7385-2
Meter Mode	RMS, VDV, MTVV or Max, Peak, Peak-Peak
Analyser[1] (optional)	1/1 or 1/3 octave real-time analysis FFT 1600 lines with Hanning, Kaiser-Bessel or Flat Top window FFT cross spectra measurements RPM rotation speed measurements parallel to the vibration measurement (1 ÷ 99999)
Filters	Wd, Wk, Wc, Wj, Wm, Wb, Wg (ISO 2631), Wh (ISO 5349), HP1, HP3, HP10, Vel1, Vel3, Vel10, VelMF, Dil1, Dil3, Dil10, KB (DIN 4150)
RMS Detector	Digital True RMS detector with Peak detection, resolution 0.1 dB Time constants: from 100 ms to 10 s
Accelerometer (optional)	SV 84 triaxial high sensitivity accelerometer for ground or building vibration measurements (1 V/g) SV 38 triaxial accelerometers for whole-body measurements (1 V/g MEMS type)
Measurement Range	Accelerometer dependent (with SV 84: 0.0005 m/s^2 RMS ÷ 50 m/s^2 PEAK)
Frequency Range	0.8 Hz ÷ 20 kHz; accelerometer dependent

Sound Level Meter & Analyser

Standards	Class 1: IEC 61672-1:2013
Meter Mode	SPL, Leq, SEL, Lden, LEPd, Overload time, Ltm3, Ltm5, LMax, LMin, LPeak, Simultaneous measurement in three profiles with independent filters and detectors
Analyser[1] (optional)	1/1 or 1/3 octave real-time analysis FFT[1] 1600 lines with Hanning, Kaiser-Bessel or Flat Top window FFT cross spectra measurements Sound Intensity measurements
Weighting Filters	A, C, Z and G
RMS Detector	Digital True RMS detector with Peak detection, resolution 0.1 dB Time constants: Slow, Fast, Impulse
Microphone (optional)	MK 255, Class 1, 50 mV/Pa, prepolarised 1/2" condenser microphone with SV 12L preamplifier SV 25, Class 2, dose meter, ceramic 1/2" microphone with integrated preamplifier
Measurement Range	Total Dynamic Range: 16 dBA RMS ÷ 140 dBA Peak Linearity Range (IEC 61672): 26 dBA RMS ÷ 140 dBA Peak
Frequency Range	0.5 Hz ÷ 20 kHz (microphone dependent, with MK 255 microphone: 3.5 Hz ÷ 20 kHz)

General Information

Input	IEPE type (channels 1, 2, 3 - LEMO4-pin & channel 4 - TNC connector)	
Dynamic Range	100 dB, 4 x 20 bits A/D converters	
Frequency Range	0.5 Hz ÷ 22.4 kHz, sampling rate 48 kHz	
Data Logger	Time-history logging to internal memory	
Display	Super contrast (10000:1) OLED 2.4" colour display (320 x 240 pixels)	
Memory	32 MB non-volatile flash type	
Interfaces	USB 1.1 Client, RS 232 (option: SV 55 required) Extended I/O - AC output (1V Peak) or Digital Input/Output (Trigger / Pulse)	
Power Supply	Four AA batteries (alkaline)	operation time > 10 h (6.0 V / 1.6 Ah)[2]
	Four AA rechargeable batteries (not included)	operation time > 14 h (4.8 V / 2.6 Ah)[2]
	SA 17A external battery pack (optional)	operation time > 24 h
	External power supply	6 V DC ÷ 24 V DC (1.5 W)
	USB interface	500 mA HUB
Environmental Conditions	Temperature	from -10 °C to 50 °C (14 °F to 122 °F)
	Humidity	up to 90 % RH, non-condensed
Dimensions	140 x 82 x 42 mm	
Weight	510 grams with batteries (Approx. 2.00 lb)	

[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.

SV 84 Building Vibration Accelerometer

SV 84 is a **LOW-NOISE**, hermetically sealed **TRIAXIAL** piezoelectric accelerometer designed to monitor building and ground vibrations with SVAN 958A analyser.

A hermetically sealed glass connector protects the SV 84 from harmful dust and moisture enabling the **OUTDOOR** use without additional enclosures.

Signal ground is **ISOLATED** from the mounting surface and outer case to prevent ground loops.

Optional accessories to SV 84

SV 111
Vibration Field
Calibrator

SA 207B
Building Vibration
Kit

SC 282
Cable to SV 84
and SVAN 958A

SV 84 Technical Specifications

Performance	
Number of Axes	3
Sensitivity (± 10 %)	100 mV/(m/s²) ~ 1000 mV/g
Measurement Range	0.0005 m/s² RMS ÷ 50 m/s² Peak
Frequency Response (± 3 dB)	0.2 Hz ÷ 3 700 Hz
Resonant Frequency	16 kHz
Residual Noise (1 Hz, 24°C)	2.0 µg RMS
Residual Noise (1 kHz, 24°C)	6.3 µg RMS
Electrical	
Supply Current (IEPE)	2 mA ÷ 10 mA
Supply Voltage (IEPE)	22 V ÷ 28 V
Bias Voltage (IEPE)	+10 VDC
Output Impedance (Nominal)	50 Ω
Charge / Discharge Time Constant (start-up time)	< 10 sec. typ.
Environmental Conditions	
Maximum Vibration (shock survival)	50 000 m/s² Peak
Thermal Sensitivity Coefficient	0.1 %/°C F.S.
Operating Temperature Range (recommended)	from -10 °C to +50 °C
Humidity / Enclosure	Not affected, hermetically sealed
Physical	
Connector	M12 glass seal
Dimensions	41x42x23 mm (with connector)
Weight	275 grams
Mounting Thread	M6
Material Housing & Connector	Stainless steel

SV 85 General Purpose Vibration Accelerometer

The SV 85 is a IEPE based **TRIAXIAL ACCELEROMETER** designed for general purpose vibration measurements with the SVAN 958A four-channel analyser.

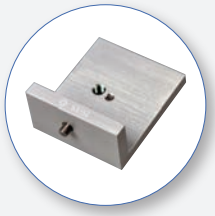
The **HERMETIC SEALED** tri-axial industrial piezoelectric accelerometer is suitable to monitor the vibration in harsh industrial environment.

Signal ground is **ISOLATED** from the mounting surface and outer case to prevent ground loops.

Optional accessories to SV 85

SV 111
Vibration Field Calibrator

SV 110
Hand-held Vibration Calibrator



SA 154
Calibration Adapter to SV 85

SC 282
Cable to SV 85 and SVAN 958A

SV 85 Technical Specifications

Performance	
Number of Axes	3
Sensitivity (± 10 %)	10 mV/(m/s²) ~ 100 mV/g
Measurement Range	0.005 m/s² RMS ÷ 500 m/s² Peak
Frequency Response (± 3 dB)	0.5 Hz ÷ 13 000 Hz (Z axis); 0.5 Hz ÷ 10 000 Hz (X, Y axis)
Resonant Frequency	40 kHz
Residual Noise (1 Hz, 24°C)	300 µg RMS
Residual Noise (1 kHz, 24°C)	3000 µg RMS
Electrical	
Supply Current (IEPE)	2 mA ÷ 10 mA
Supply Voltage (IEPE)	22 V ÷ 28 V
Bias Voltage (IEPE)	+12 +/- 2 VDC
Output Impedance (Nominal)	50 Ω
Charge / Discharge Time Constant (start-up time)	< 1 sec. typ.
Environmental Conditions	
Maximum Vibration (shock survival)	50 000 m/s² Peak
Thermal Sensitivity Coefficient	0.1 %/°C F.S.
Operating Temperature Range (recommended)	from -10 °C to +50 °C
Humidity / Enclosure	Not affected, hermetically sealed
Physical	
Connector	M12 glass seal
Dimensions	28.5x27x16.5 mm (with connector)
Weight	84 grams
Mounting Thread	M6
Material Housing & Connector	Stainless steel

SV 80 General Purpose Vibration Accelerometer

The SV 80 is an industry standard IEPE piezoelectric accelerometer offered to Svantek's Vibration Level Meters (974, 977, 979, 958A).

It is an ideal choice for walk-around vibrations measurement in the rugged environments of **INDUSTRIAL** machinery monitoring, such as pumps, motors etc.

The accelerometer is mounted on a vibrating surfaces with the mounting magnet.

Optional accessories to SV 80

SV 110
Hand-held
Vibration
Calibrator

SA 27
Mounting
Magnet

SC 27
TNC/TNC coil
cable

SV 80 Technical Specifications

Performance	
Number of Axes	1
Sensitivity (± 5 %)	10 mV/(m/s²) ~ 100 mV/g
Measurement Range	0.01 m/s² RMS ÷ 500 m/s² Peak
Frequency Response (by design guideline, ± 3 dB)	0.5 Hz ÷ 14 000 Hz
Resonant Frequency	25 kHz
Residual Noise (1 Hz, 24°C)	30 µg RMS
Residual Noise (1 Hz to 25 kHz, 24°C)	300 µg RMS
Electrical	
Supply Current (IEPE)	2 mA ÷ 10 mA
Supply Voltage (IEPE)	22 V ÷ 28 V
Bias Voltage (IEPE)	+12 VDC
Output Impedance (Nominal)	50 Ω
Charge / Discharge Time Constant (start-up time)	< 1 sec. typ.
Environmental Conditions	
Maximum Vibration (shock survival)	50 000 m/s² Peak
Thermal Sensitivity Coefficient	0.07 %/°C F.S.
Operating Temperature Range (recommended)	from -10 °C to +50 °C
Humidity / Enclosure	IP 67, epoxy sealed
Physical	
Connector	TNC socket, top radially mounted
Weight	40 grams
Mounting Thread	10-32 UNF 2B

SV 81 General Purpose Vibration Accelerometer

The SV 81 is an industry standard IEPE accelerometer offered to Svantek's Vibration Level Meters (974, 977, 979, 958A).

The accelerometer's **HIGH SENSITIVITY** and **LOW ELECTRONIC NOISE** enable measurements of very low vibration amplitudes over the typical machines' frequency operating ranges.

The accelerometer is mounted on a vibrating surfaces with the mounting magnet.

Optional accessories to SV 81

SV 110
Hand-held
Vibration
Calibrator

SA 27
Mounting
Magnet

SC 27
TNC/TNC coil
cable

SV 81 Technical Specifications

Performance	
Number of Axes	1
Sensitivity (± 5 %)	50 mV/(m/s²) ~ 500 mV/g
Measurement Range	0.002 m/s² RMS ÷ 100 m/s² Peak
Frequency Response (by design guideline, ± 3 dB)	0.2 Hz ÷ 3700 Hz
Resonant Frequency	16 kHz
Residual Noise (1 Hz, 24°C)	2.4 µg RMS
Residual Noise (1 Hz to 25 kHz, 24°C)	25 µg RMS
Electrical	
Supply Current (IEPE)	2 mA ÷ 10 mA
Supply Voltage (IEPE)	22 V ÷ 28 V
Bias Voltage (IEPE)	+12 VDC
Output Impedance (Nominal)	50 Ω
Charge / Discharge Time Constant (start-up time)	< 10 sec. typ.
Environmental Conditions	
Maximum Vibration (shock survival)	50 000 m/s² Peak
Thermal Sensitivity Coefficient	0.07 %/°C F.S.
Operating Temperature Range (recommended)	from -10 °C to +50 °C
Humidity / Enclosure	IP 67, epoxy sealed
Physical	
Connector	TNC socket, top radially mounted
Weight	40 grams
Mounting Thread	10-32 UNF 2B

Acoustic Calibrators SV 34B, SV 33B, SV 36

New SVANTEK sound calibrators use a **piezoresistive pressure sensor** as the reference sensor to control the calibration signal. Use of piezoresistive pressure sensor ensures an excellent long-term stability and immunity on the changes of the atmospheric conditions.

The calibration signal accuracy is controlled by the **microprocessor** and **built-in sensors** that measure **static pressure and temperature**. The feedback regulation control loop makes all adjustments of the calibration signal fully automatic so users do not require any manual adjustments to the ambient temperature and static pressure levels.

The SV 36 Class 1 acoustic calibrator features an **infrared sensor** that detects microphone presence and turns on/off the calibrator automatically.

The accuracy of acoustic calibrator should match the class of the sound level meter. A **CLASS 1** (SV 33B or SV 36) or **CLASS 2** (SV 34B) calibrator should be used, depending on the class of instrument.

SV 33B and SV 34B provide 114 dB calibration level whereas the SV36 offers two levels **94 dB or 114 dB**.

The user interface of the calibrator is equipped with a **PUSH BUTTON** and a **LED** diodes signalizing calibration and battery faults.

Unlike many others, the SVANTEK calibrators feature a **ROBUST HOUSING** that gives the comfort of a secure grip to the user.

Is my result correct?

The only way to be sure that you can answer 'yes' to this questions is to perform an acoustic calibration using a calibrator that fully conforms to current standards. The norms and standards impose the requirement to calibrate the measurement channel before each measurement or measurement session and after the measurement as well for result verification purposes. If you don't perform these basics checks then what do your results actually mean?
An acoustic calibrator is a device which produces an acoustic pressure of defined level and frequency. In other words, an acoustic calibrator is a template of acoustic pressure. With the help of such a reference template we can check the accuracy of the measurements performed with the sound level meter and adjust it if a drift error in sensitivity is indicated.
The accuracy of acoustic calibrators used for the calibration of the measurement path should match the class of sound level meter. Depending on the instrument's performance Class 1 or Class 2 calibrators are used. A sound level meter is calibrated correctly only if the measurement error is within the allowed range of tolerance defined by the standards for the meter of a given class (defined by IEC 61672:).
Unlike many others, the Svantek calibrators feature a robust housing that gives the comfort of a secure grip to the user. The interior design of our acoustic calibrators is based on reference sensors and microprocessor controlled signal source including digital sound pressure level, static pressure and temperature compensation. Due to the feedback regulation control loop our calibrators do not require any adjustments by the user and operate over a wide range of ambient temperature and humidity assuring excellent stability of the calibration levels and their frequency.
Each acoustic calibrator is provided with a statement of the calibration which allows the user to be certain that their instruments will measure correctly.

Technical Specifications

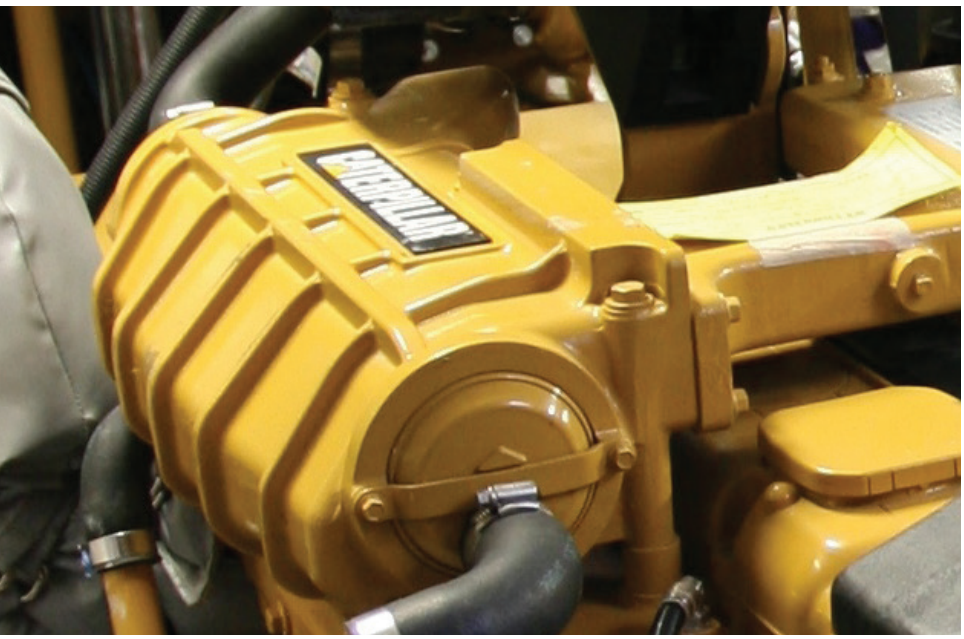
	SV 36	SV 33B	SV 34B
Calibration Signal Parameters:			
Sound Pressure Level (SPL)	114 dB or 94 dB	114 dB	114 dB
IEC 60942:2003 Accuracy	Class 1	Class 1	Class 2
SPL Tolerance	± 0.3 dB	± 0.3 dB	± 0.5 dB
Frequency Tolerance	± 0.2 %	± 0.2 %	± 0.2 %
Total Harmonic Distortion (THD)	< 0.50 % for 94 dB < 0.75 % for 114 dB level	< 0.75 %	< 0.75 %
General Information:			
Effective Load Volume Sensitivity	0.00027 dB / mm^3	0.00027 dB / mm^3	0.00027 dB / mm^3
Level Stabilisation Time	typically 10 s, max 25 s	typically 15 s, max 30 s	typically 15 s, max 30 s
Calibrated Microphones	1/2" and 1/4" with SA 30 adapter	1/2" and 1/4" with SA 30 adapter	1/2" and 1/4" with SA 30 adapter
Storage Temperature Range	-25 °C ÷ +70 °C	-25 °C ÷ +70 °C	-25 °C ÷ +70 °C
CE Classification	EN 61010-1: 2010 EN 61326-1:2013 EN 60942:2003	EN 61010-1: 2010 EN 61326-1:2013 EN 60942:2003	EN 61010-1: 2010 EN 61326-1:2013 EN 60942:2003
Working Conditions:			
Temperature Range	from -10 °C to +50 °C (related SPL error ≤ ±0.15 dB)	from -10 °C to +50 °C (related SPL error ≤ ±0.15 dB)	from 0°C to +40 °C (related SPL error ≤ ±0.2 dB)
Atmospheric Pressure Range	from 65 kPa to 108 kPa (related SPL error ≤ ±0.10 dB)	from 65 kPa to 108 kPa (related SPL error ≤ ±0.10 dB)	from 65 kPa to 108 kPa (related SPL error ≤ ±0.10 dB)
Humidity Range	from 25 % to 90 % RH (related SPL error ≤ ±0.05 dB)	from 25 % to 90 % RH (related SPL error ≤ ±0.05 dB)	from 25 % to 90 % RH (related SPL error ≤ ±0.05 dB)

Reference conditions:	
Ambient Temperature	23 °C
Atmospheric Pressure	101.3 kPa
Humidity	30 % ÷ 80 % RH
Effective Microphone Load Volume	250 mm^3 for microphone type B&K 4134
Power supply:	
Battery Type	2 x LR03 (IEC) / AAA (ANSI) alkaline batteries
Continuous Operating Time	40 hours for 94 dB level, 30 hours for 114 dB level
Stand-by Period	around two years
Minimal Voltage Requirements	2.1 V
Maximum Operating Voltage	4,0 V DC - absolute maximum suply voltage at the battery terminals

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.

SV 110 & SV 111

Vibration Calibrators



SV 110 Hand-Held Vibration Calibrator

The SV 110 is a hand-held vibration calibrator designed for on-site checks of hand-arm vibration meters in accordance to ISO 8041 both at 80 Hz and 160 Hz. The menu is simply operated by three push-buttons and a small OLED display. Depending on a chosen frequency, a user may select a calibration range from 1 m/s² to 10 m/s².
The SV 110 is a perfect solution for calibration checks of hand-arm vibration meters including Svantek's SV 103 and SV 106. Following the requirements of ISO 8041, the calibrator's built-in tri-axial reference accelerometer measures the cross-axis (transverse) vibrations to detect any interference to the calibration signal. Faults caused by transverse vibrations are indicated by LED on the calibrator's housing. This unique solution ensures stability of both calibration level & frequency, independent from the mass of the test object.
A small size of the SV 110 makes it very useful for calibration checks of various types of machine vibration accelerometers. The calibrator menu provides selection between both metric systems 'g' and 'm/s²' as well as choice of frequency unit between Hertz (Hz) and Cycle Per Minute (CPM). Accelerometers are conveniently attached using a mounting stud, a mounting disc or a dedicated adapter.
The calibrator has a built-in rechargeable batteries that typically allows for 12 hours of continuous operation.

SV 110 is hand-held vibration field calibrator designed in accordance to ISO 8041 for in-situ checks of hand-arm vibration meters.

The calibrator operates on two frequencies **80 Hz or 160 Hz** enabling in-situ checks of hand-arm vibration meters as well as machine vibration meters.

Titanium shaking table and **POWERFUL SHAKER** enable calibration of sensors with mass up to 300 g at 80 Hz.

The built-in **RECHARGEABLE** battery typically provides enough power for 12 hours of continuous operation.

*Sensors shown on photos are not included in the kit.

Two conveniently located **LED DIODES** show the current status during the calibration process.

The calibrator aluminum housing is **ROBUST** and additionally protected with rubber covers on both ends.

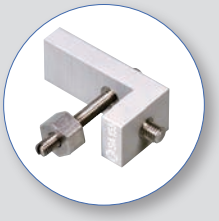
The **LEATHER COVER** gives comfort of a secure grip to the user.

The calibrator is simple in use. It has three **PUSH-BUTTONS** for selection of frequency and amplitude and start/stop control.

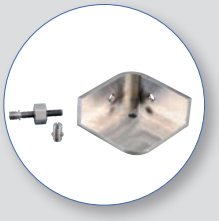
The **OLED** graphical screen displays information on selected frequency and vibration level.

Optional accessories to SV 110

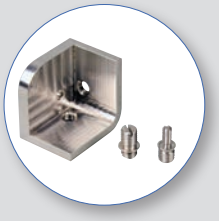
SA 105
Calibration Adapter to SV 105, SV105F and SV 107 Accelerometers



SA 155
Calibration Adapter to SV 150 and SV 151 Accelerometers



SA 40
Calibration Adapter to SV 3233A Accelerometer



SA 44
Calibration Adapter to SV 50 Accelerometer

SV 111 Vibration Calibrator

The SV 111 vibration calibrator is designed for in-situ checks in accordance with the ISO 8041 standard. The device is intended for operation in the field to check that an instrument is working correctly. The calibrator is based on a built-in tri-axial reference accelerometer and digitally-controlled shaker. In accordance with ISO 8041 requirements the reference accelerometer will measure cross-axes / transverse vibrations to detect any interference to the calibration signal. Three LEDs will light up on the calibrator panel whenever a fault caused by transverse vibrations is detected. This unique feature ensures the stability of the calibration level & frequency independently of the object being tested. The SV 111 is designed to calibrate a variety of vibration meters at different frequencies from 16 Hz up to 640 Hz. Depending on the frequency selected, the user may choose the level of calibration from 1 m/s^2 to 10 m/s^2.
The shaker can be loaded with up to 1 kilogram. Any improper object fixing is automatically detected and indicated by LEDs on the control panel giving information about the axis that needs correcting.
A set of adapters is available for calibration checks on tri-axial sensors including a special adapter for Svantek whole-body sensors (seat-pads), which can be directly mounted onto the shaker. Other types of vibration transducers can be easily attached using a mounting stand, a mounting disc or adapter.

SV 111 is a vibration field calibrator designed in accordance to **ISO 8041** for in-situ checks of whole-body and hand-arm vibration meters.

Calibrator is suitable for all types of vibration transducers for **ACCELERATION, VELOCITY and DISPLACEMENT** at 15.92 Hz; 79.6 Hz; 159.2 Hz and 636.6 Hz.

The shaker can be loaded with maximum payload of **1 kg at 15.92 Hz** enabling calibration of a complete seat-pad or building vibration sensors.

The built-in **RECHARGEABLE** battery provides up to 20 hours of continuous operation.

The **OLED** colour graphical screen displays information on selected frequency and vibration level.

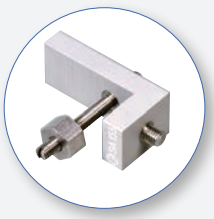
The calibrator is simple in use. It has three **PUSH-BUTTONS** for selection of frequency, amplitude and start/stop control.

The **BUILT-IN REFERENCE TRANSDUCER** detects errors during calibration process and ensures calibration stability.

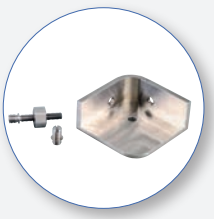
*Sensors shown on photos are not included in the kit.

Optional accessories to SV 111

SA 105
Calibration
Adapter
to SV 105
Accelerometer

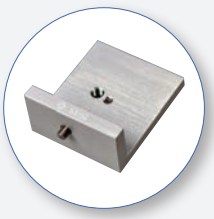


SA 155
Calibration
Adapter to SV 150
and SV 151
Accelerometers



SA 40
Calibration
Adapter to
SV 3233A
Accelerometer

SA 44
Calibration
Adapter to SV 50
Accelerometer



SA 154
Calibration
Adapter to SV 84
Accelerometer

Technical Specifications

SV 110

SV 111

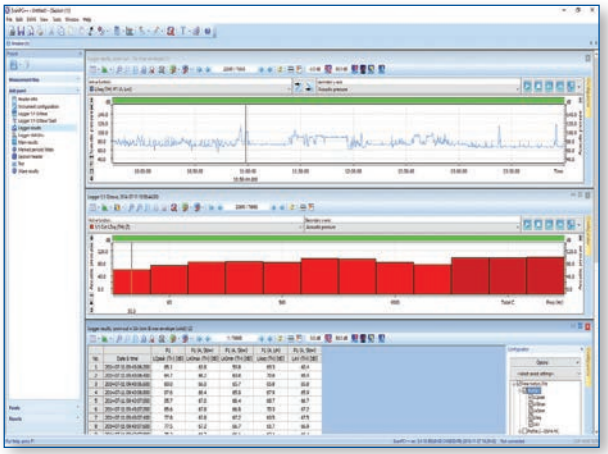
	SV 110	SV 111
Calibration signal parameters		
Vibration Accelerations (RMS in m/s²)	1; 2; 3; 4; 5; 6; 7; 8; 9; 10 (at 79.58 Hz) 1; 2; 3; 4; 5; 6; 7; 8; 9; 10 (at 159.2 Hz)	1 (at 15.92 Hz) 1; 2; 3; 4; 5; 6; 7; 8; 9; 10 (at 79.58 Hz) 1; 2; 3; 4; 5; 6; 7; 8; 9; 10 (at 159.2 Hz) 1 (at 636.6 Hz)
Vibration Velocities (RMS in mm/s)	2, 4, 6, 8 10, 12, 14, 16, 18, 20 (at 79.58 Hz) 1; 2; 3; 4; 5; 6; 7; 8; 9; 10 (at 159.2 Hz)	10 (at 15.92 Hz) 2, 4, 6, 8 10, 12, 14, 16, 18, 20 (at 79.58 Hz) 1; 2; 3; 4; 5; 6; 7; 8; 9; 10 (at 159.2 Hz) 0.25 (at 636.6 Hz)
Vibration Displacement (RMS in µm)	4, 8, 12, 16, 20, 24, 28, 32, 36, 40 (at 79.58 Hz) 1; 2; 3; 4; 5; 6; 7; 8; 9; 10 (at 159.2 Hz)	100 (at 15.92 Hz) 4, 8, 12, 16, 20, 24, 28, 32, 36, 40 (at 79.58 Hz) 1; 2; 3; 4; 5; 6; 7; 8; 9; 10 (at 159.2 Hz) 0.0625 (at 636.6 Hz)
Amplitude Error	Less than ± 3%	Less than ± 3%
Frequency Error	Less than ± 0,5%	Less than ± 0,5%
Transverse Vibration	Less than 10% of the main direction	Less than 10% of the main direction
Harmonic Distortion	< 3 % (at 79.58 Hz) < 3 % (at 159.2 Hz)	< 5 % (at 15.92 Hz) < 3 % (at 79.58 Hz) < 3 % (at 159.2 Hz) < 3 % (at 636.6 Hz)
General information		
Maximum Weight of Calibrated Object	300 grams (at 79.58 Hz) 200 grams (at 159.2 Hz)	1000 grams (at 15.92 Hz) 300 grams (at 79.58 Hz) 200 grams (at 159.2 Hz) 200 grams (at 636.6 Hz)
Sensor Mounting	Thread M5 x 6 mm	Thread M5 x 12 mm
Working conditions		
Temperature Range	-10 °C ÷ 50 °C	-10 °C ÷ 50 °C
Humidity Range	25 % ÷ 85 %	25 % ÷ 85 %
Power supply		
Battery Type	Rechargeable 7.2 V / 2 Ah	Rechargeable 6 V / 12 Ah
Continuous Operating Time	up to 12 hours	Up to 20 hours
Charging Time	5 hours (with SA 54) or 10 hours (with USB)	Less than 10 hours
Power Supply for Charger	SA 54 (5V / 1A) or mini USB 500 mA HUB	SA 33 (12 V/ 1A) or15 W; 8÷24 V
Overall weight and dimensions		
Weight	1200 g (incl. battery)	8.2 kg (incl. battery)
Dimensions	170 x 65 x 65 mm	395 x 270 x 194 mm

*Sensors shown on photos are not included in the kit.

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.

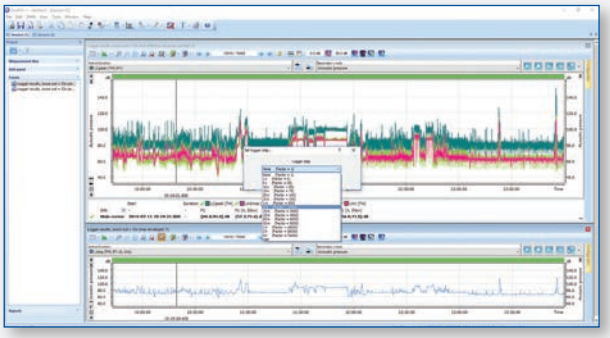
SvanPC++ Software

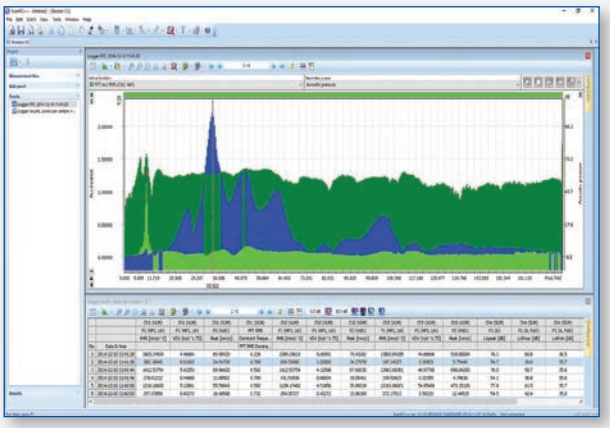
SvanPC++ is an advanced PC software supporting SVANTEK measuring instruments including SV10x, SVAN 95x and SVAN 97x series.
The basic software offers functions of editing instrument settings, downloading data files from instrument as well as data preview and basic recalculations of Leq and RMS (logger step recalculation).
Recently the SvanPC++ has been enriched with the new Projects that allow to combine numerous data files into Sessions. The main advantage of using Projects is the possibility of data comparison as well as an easy report management.
Reports are prepared in a form of panels (text, photos, tables, graphs, plots) and can be exported to Excel™ spread sheet or Word™ text editor applications. Each Project can be saved and recalled in the future.



Features

- Instrument connection Wizard offering setup editor and download of measurement data via USB, Bluetooth® and RS 232
- New Projects with customized views saving
- Leq / RMS logger step recalculation
- Data calculation in marked blocks
- Recalculation of FFT to 1/3 and 1/1 octave spectrum
- Logarithmic / linear units recalculation
- Data shift / clip / delete functions
- Spectrogram view for frequency analysis
- Enhanced data presentation with a secondary Y-axis for plots comparison
- WAVE files playback
- Data export to Word™ and Excel™





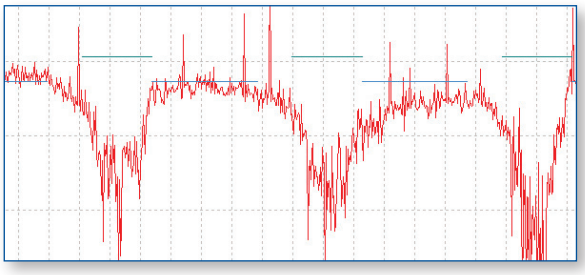
Technical Requirements

Supported Operating Systems	Windows 7 Windows 8 / 8.1 Windows 10
Minimum PC Requirements	Processor 1.6 GHz 1 GB RAM 200 MB free disk space for installation 5 GB free disk space for operating (e.g. temporary files)

SvanPC++ Environmental Measurements Module

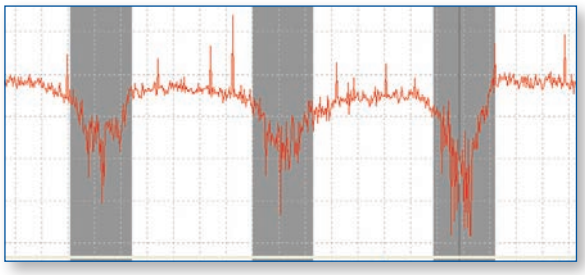
Advanced calculator

SvanPC++ Environmental Monitoring module offers the advanced calculator that works together with logger files containing time histories of noise or vibration signals. The calculator supports analysis of Day/Night/Evening levels, statistics analysis as well as tonality or impulsivity calculation from 1/3 octave spectra. Calculation results are displayed both as a graph and table form.



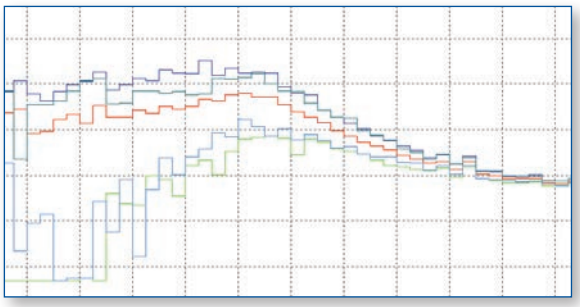
Markers & Block Generator

Environmental measurement often provide large amount of data. The Marker Block Generator browses through the long logger files in search of events defined by the user. It can find data in the given time range and cross check it with noise, vibration or meteo thresholds. Search results can be also filtered by the event duration or time of the day etc.



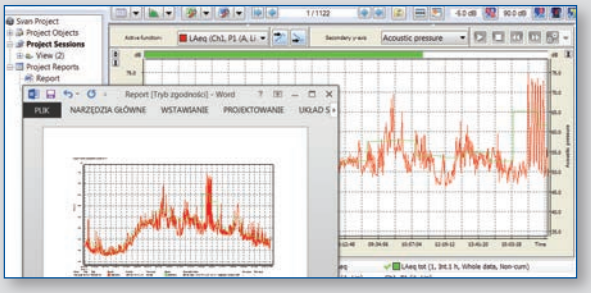
Data comparison

Environmental Monitoring module offers comparison of measurement results with reference ones. An imported file or calculated function can be used as the comparison reference. Comparison of spectra (e.g. 1/3 octave) is also possible.

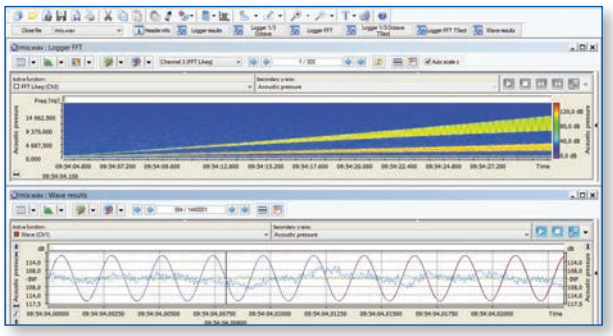


Reporting

Reporting is based on MS Word™ and it allows to export tables or graphs to a printable text document. Any created report can be saved as a template and used with other data files. Reports and templates are saved together with the Project so they can be recalled whenever necessary.



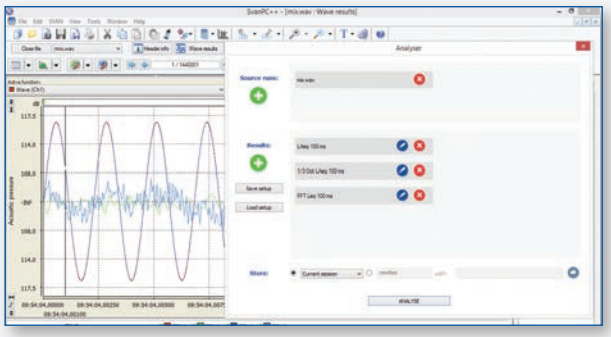
SvanPC++ Wave Analyser

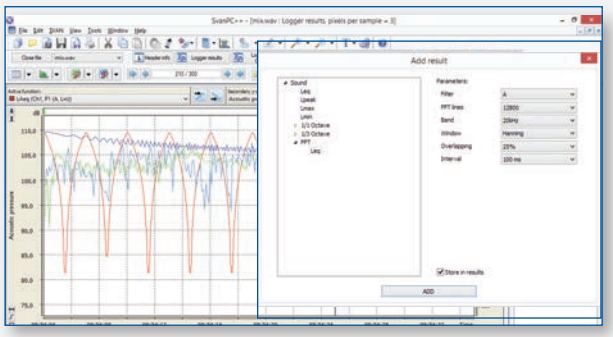


SvanPC++ offers the Wave Analyser that is designed for analysis of wave files from Svantek's noise or vibration instruments. The module provides calculation of overall results such as Leq, Lmax, Lmin, Lpeak as well as 1/3 octave and FFT calculations. The module has been designed to make calculations from a selected number of wave files enabling for example a tonality analysis from 24 wave files in a single operation.

Features

- New intuitive user interface
- Post-processing of a series of wave files
- Compatibility with tools of SvanPC++_EM
- Noise statistics calculation
- Tonality calculation
- Machine vibration analysis (FFT)
- Calculation of 1/1, 1/3, 1/6 and 1/12 octave spectrum
- Applying filters to the raw signal
- Sound engineering
- Noise statistics calculation





Specifications

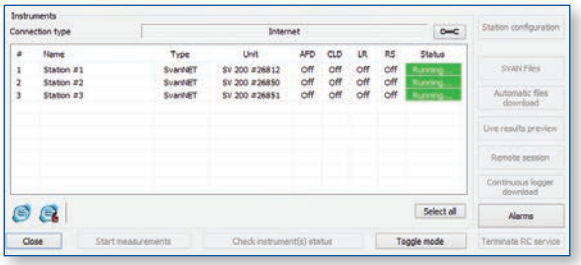
Wave sampling frequencies	51,2 kHz, 48 kHz, 6 kHz ; bits/sample: 8, 16, 24, 32
Sound filters	A, C, Z, G
Vibration filters	HP1, HP3, HP10, Vel1, Vel3, Vel10, Dil1, Dil3, Dil10, VelMF, WBxy, WBz, Wm, WBc, Wv, Wh, HA, Wk, Wd, Wc, Wj, Wg, KB, Wb, BL Wm, BL Wv, BL Wh, BL Wk, BL Wd, BL Wc, BL Wj, BL Wg, BL Wb
Detectors	Linear (true RMS), F, I, S, 100 ms, 125 ms, 200 ms, 500 ms, 1 s, 2 s, 3 s, 5 s, 10 s
Broadband results (sound)	Leq, Lpeak, Lmax, Lmin
Broadband results (vibration)	RMS, PEAK, MAX, MIN, P-P
Results integration period	from 1 ms
Spectrum analysis	1/1, 1/3, 1/6, 1/12, FFT
Octave band analysis bandwidth	1/1: 1 Hz – 16 KHz, 1/3: 0.8 Hz – 20 kHz
FFT window functions	Simple: Rectangle, Bartlett, Parzen, WelchHann (Hanning), Exact Blackman, Nuttal, Blackman, Nuttal Blackman-Harris, Flat top, Cosine, Kaiser-Bessel, Parametric: Triangle, Hamming, Cosine, Blackman, Gaussian, Tukey, Kaiser (Kaiser-Bessel), Exponential
FFT number of analysis points	1024, 2048, 4096, 8192, 16384, 32768, 65536, 131072
FFT overlap	0 – 99 %

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.

SvanPC++ Remote Communication Module

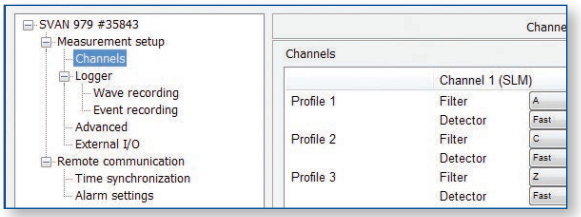
Remote Communication Centre

Remote communication is one of the most important features of unattended monitoring systems. On the PC side communication it is handled by the SvanPC++ Remote Communication Module that offers advanced features such as automatic data download station configuration, CSV and HTML data publishing as well as FTP upload. The heart of the module is the Remote Communication Centre that gives access to all functionalities as well as all monitored stations.



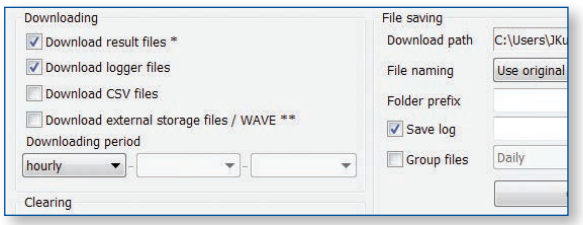
Station Configuration

Station Configuration functionality enables the remote configuration of measurement parameters of noise & vibration monitoring stations. In addition it supports the configuration of settings for advanced alarming.



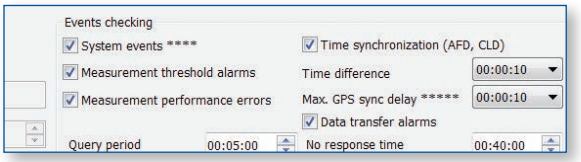
Automatic Data Download

Two main download functions are: 'SVAN Files' for manual operations and 'Automatic files download' for programmed data download.
The Automatic files download can export the downloaded data into HTML or CSV format and upload it to a FTP server. The functionality is based on Windows™ service and works independently to other applications.



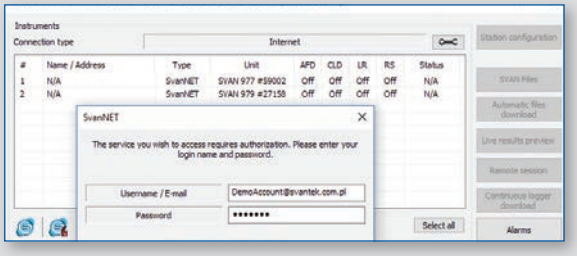
Alarms

SvanPC++_RC is able to send e-mail alarms based on level thresholds or system events (e.g. low battery). The functionality works independently to those alarms that are configured in the monitoring station.



SvanNET connection

The SvanNET simplifies connection between the PC and monitoring station. The solution is based on a relay server supporting 3G connection. In addition to connection support, the SvanNET provides information about monitoring stations. For status checks the SvanPC++_RC gives a direct access to the unique SvanNET account associated with the monitoring station.



SvanNET

On-line Monitoring Solutions

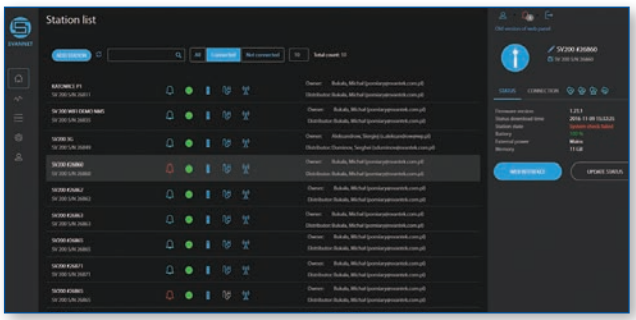
SVANTEK
monitoring systems

SvanNET

SvanNET is an on-line solution that supports multi-point connection with Svantek's noise & vibration monitoring stations. To ensure the reliability and data security the SvanNET has been located on the Microsoft Azure™, the cloud platform working through global network of Microsoft-managed data centers.

Multipoint Monitoring

To support noise & vibration monitoring SvanNET provides on-line connection services such as web interface, access to data files in the monitoring station or status alarms. The monitoring checklist includes measurement status, alarms indication, power source including battery charge, external power information as well as the GSM signal strength.
SvanNET is an on-line solution which means it doesn't require software installation and is accessible through a web browser. The responsive design enables use of SvanNET on various devices such as smartphones or tablets.



SvanNET On-line Connectivity Service

The **SvanNET** is an on-line web service that supports the multi-point connection with Svantek monitoring stations.

Connectivity service offers management and gives full control of the monitoring system using any web browsing device like a mobile phone, tablet or PC.

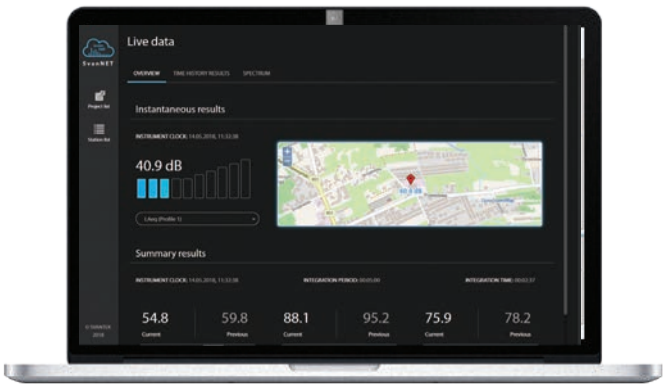
The web user interface is **easy to use and intuitive** to operate.
One of the main tasks of SvanNET is **monitoring of the status** of Svantek monitoring stations (e.g. battery, memory).

The SvanNET can be accessed through the web browser or **dedicated application** for Android and iOS platforms.

The SvanNET allows usage of all types of **SIM cards** in Svantek Monitoring stations modem regardless if they have public or private IP.

The on-line preview template provides **current results, time-history** graphs as well as information on **status** of monitoring points.

The on-line preview template provides **current results, time-history** graphs as well as information on **status** of monitoring points.

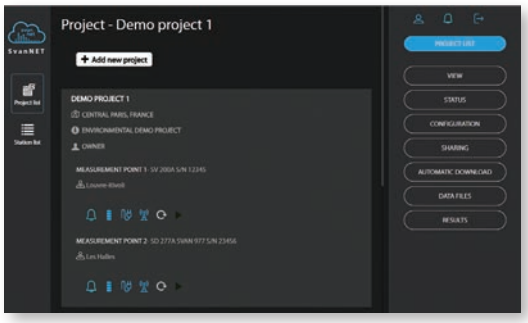


Link to Svantek Monitoring Systems

SvanNET is a cloud server supporting Internet connection to the family of monitoring stations: **SV 258 PRO, SV 27x PRO, SV 200A and SV 307.** Once a sim card is inserted in the monitoring station, it automatically connects to SvanNET.

SvanNET Projects

SvanNET Projects is a payable extension offering fully automated management of multi-point noise and vibration monitoring task. Tools such as Automatic Files Download, Data Storage, Advanced Alarms, Data Sharing and Reporting enable unattended monitoring. The functionality of SvanNET Projects allows to group monitoring stations so that alarms and reports are defined for each project separately. The data files are also grouped automatically in accordance with Project assignments.



Automatic Files Download (AFD)

The Automatic Files Download maintains the remote connection with monitoring stations and downloads the measurement data for each project separately. The AFD ensures that data is safely downloaded and shared before clearing the memory in the monitoring stations. The Automatic Files Download can be integrated as the content provided for customized websites - it can export data to FTP server both in the original Svantek format or converted to the CSV text format. The uploaded data can be easily used as the user's website content.

Advanced Alarms

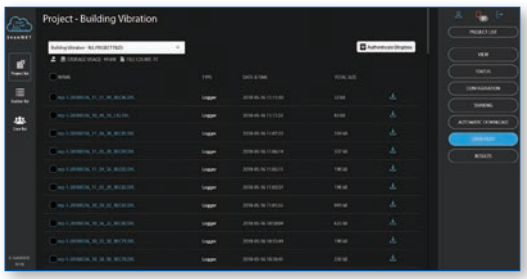
The SvanNET Projects tools are capable to analyse data files downloaded by AFD in order to generate **E-mail Alarms** based on exceeding the level thresholds in specified time periods (e.g. Leq for day and night). System is flexible enough to alert different people depending on the day of the week or the time of day.

Data Storage

The main advantage of SvanNET Data Storage is a quick access to the measurement data that can be conveniently browsed and downloaded by the time range. The data is stored on the Microsoft Azure™ cloud platform ensuring reliable connection on the global scale.

Data Sharing

Data Sharing allows access to selected Projects to other SvanNET users. Multiple levels of security (MLS) for different users account offers possibility to limit the access to three levels: Administrator, Manager and User.



On-line Data Publishing

The SvanNET offers data preview in the form of a customized website with the public or restricted access. The preview website can be customized with the custom logo and individual project name. The preview content such as map, current results or time history step can be configured in SvanNET interface that works as the Content Management System (CMS).
The access to the preview can be publicly open or be protected by the password.

SvanNET Projects – Building Vibration Interface

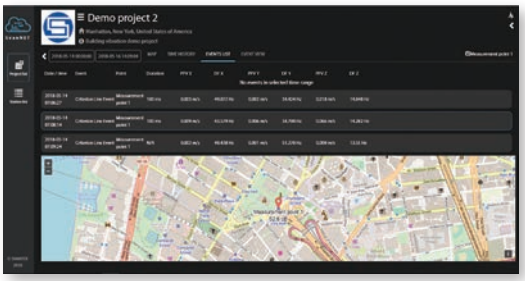
SvanNET Projects provide a dedicated user interface that supports measurement methods based on Peak Particle Velocity and Dominant Frequency. Results are presented in the form of PPV time history (background data) and Event List. Each vibration event containing PPV value and its dominant frequency, the wave form and FFT spectrum can be easily printed in the form of a report.

PPV Time History

SvanNET Data Storage provides a quick access to the Building Vibration measurement data and can be conveniently browsed by the time range. The Peak Particle Velocity time history from number of points can displayed together with position of measurement points on a map.

Events List

Whenever the vibration criteria are exceeded the building vibration monitoring station records an Event indicating the highest PPV value and its dominant frequency. SvanNET automatically downloads the Events from monitoring stations together with FFT analysis and waveform associated with each Event.



Vibration Event Analysis

SvanNET Projects provide tools for a displaying and comparison of vibration velocity measurements with reference curves in accordance to commonly used standards such as DIN 4150-3 or BS 7385-2 that use Peak Particle Velocity and Dominant Frequency method.

Building Vibration Reports

SvanNET creates reports in a very fast and easy way. The user selects an event and the measurements data are automatically grouped into form of the report. The PDF or MS Word™ report is generated with a single click on the export button.

SvanMobile Application for Smartphones

The **SvanMobile** application supports Svantek noise and vibration dosimeters equipped with the **Bluetooth®** interface.

Application working on **Android** platforms is easy to install and intuitive to operate.

The user interface allows to preview results in the form of **time-history plots** as well as numerical values.

The application enables to add **PHOTOS** and **VOICE** comments to the measurement projects.

The size of the display of a mobile device makes it convenient to display **SPECTRUM** views such as 1/3 octave analysis.

SvanMobile supports **markers** added to the time-history of measurement results for an easy identification of noise or vibration events.

Measurement Tracking

The automatic Measurement Tracking tool automatically adds records containing the time, location and weather. The data is acquired automatically using the Android device's location services.
The Measurement Tracking tool serves for enclosing additional comments in the form of notes, voice recordings, photos, video clips using the mobile phone capabilities.

GET IT ON Google Play

Control the measurement using your mobile phone!

SvanMOBILE is an Android application for devices running on Android platform extending functionalities of SVAN 977A and SVAN 979. SvanMOBILE allows to link measurement files from sound level meter to media files from smartphones such as photos, video or audio recordings. Anyone who makes measurements in the environment will appreciate the fact that SvanMobile can be used to automatically add weather data and GPS position to report on the measurement. To communicate with SVAN 977A / 979 the Bluetooth® interface is used.

Smart solutions for Building Acoustics

One big advantage of SVANTEK sound & vibration instruments is their ability to make building acoustics measurements. Their high accuracy along with millisecond spectra logging allows users to perform all the measurements necessary to obtain facade, airborne or impact sound insulation results. SVANTEK instruments are proving to be invaluable for the measurement of building acoustics with their predefined setups making measurement at multiple points easy and fast. Both the sound level meter (e.g. SVAN 977A or SVAN 979) and the sound source can be controlled remotely with the dedicated smartphone application.

CLASS 1 TYPE APPROVED Sound Level Meter and Analyser with the superior technical specifications.

RT60 functionality in the instrument is the fast verification of results on site. Calculation of RT60 values is based on 1/1 or 1/3 octave logging results.

Frequency analysis is a critical tool in building acoustics measurements. Depending on the application, frequency analysis can be done in 1/1 octave spectra or 1/3 octave spectra. SVANTEK devices record the time history of spectra with millisecond logging step enables the calculation of RT 60 results.

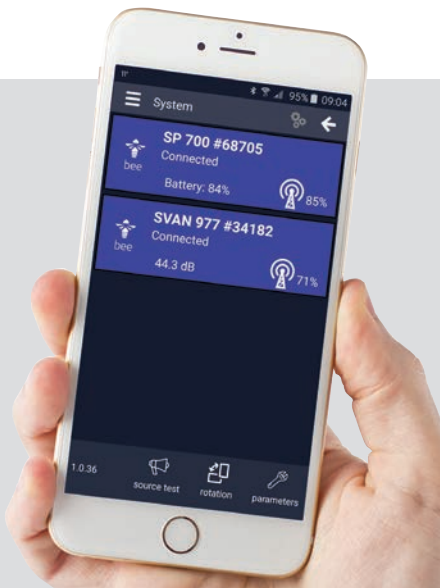
When dealing with **facade insulation** it is necessary to evaluate the background noise on the building surroundings. The effective and low-cost solution to this requirement is a waterproof portable monitoring kit set-up to do periodical measurements of the environment. When required, the SVANTEK instrument can be locked into the protective case and placed in a suitable position for outdoor noise measurement.

The flagship of the SVANTEK range is the SVAN 979 which offers the added functionality of a **signal generator** which is capable of generating pink noise, white noise or a selected sine wave.

Built-in **Bluetooth®** interface provides additional advantages such as device configuration by usage of a smartphone or tablet with Android platform and **Building Acoustic Assistant** application.

Use Drone to control your sound sources remotely!

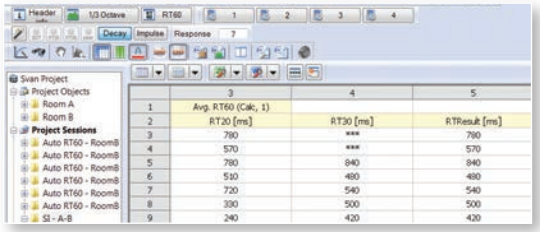
The DRONE is a Universal System Interface (USI) that allows to connect external devices such as Svantek's sound level meters and peripherals (e.g. sound source) to the Building Acoustic application. External devices can connect to a DRONE through a Bluetooth®, analog output or with a cable using the serial interface. Once connected, the smartphone application will start and stop the signal from sound sources automatically.



Smart solutions for Building Acoustic

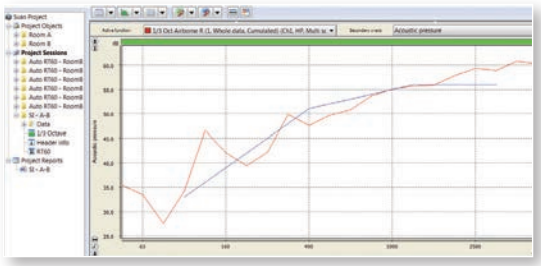
SvanPC++ Building Acoustic Module

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.



On-site Sound insulation calculation

The sound insulation calculation is done automatically once the data files are assigned to rooms in Building Acoustics Assistant application. Our instruments are suitable for all series of ISO 16283 standards for laboratory and field measurements of sound and impact insulation. The ISO 717 rating of sound insulation in buildings and of building elements is automatically calculated and included in the report templates.



Building Acoustics Application for Smartphones

The **BA Assistant** application supports Svantek sound level meters equipped with the **Bluetooth®** interface, e.g. SVAN 977 and SVAN 979

Application working on **Android** platforms is easy to install and intuitive to operate.

The user interface allows to preview results in the form of **time-history plots** as well as numerical values.

The application enables to add **PHOTOS** and **VOICE** comments to the measurement projects.

The size of the display of a mobile device makes it convenient to display **SPECTRUM** views such as 1/3 octave analysis.

Sound insulation measurement

The Building Acoustics smartphone application guides the user through the sound insulation measurement procedure 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. Sound insulation results are calculated on-site by the BA application .
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.

SP 95 Impact Ball for Building Acoustics

SP 95 Impact Ball is used for sound insulation testing in light weight structures where a standard (tapping machine) impact sound source would create too much impact force. It has been designed in accordance to ISO 10140-5 and ISO 16283-2 standards.

The use of SP 95 Impact Ball is very easy - it is dropped vertically in a free fall from height of 100 cm to the surface of the floor. In practise SP 95 can be used to assess soft impacts related to human disturbance, such as children jumping.

Used for sound insulation testing in light weight structures where a standard (tapping machine) impact sound source would create too much impact force.

Used for low frequency impact noise insulation tests in the octave bands from 31.5 Hz to 500 Hz.

Meets ISO 10140-5 and ISO 16283-2 standards.

Mass 2.5 kg and convenient size allows easy transportation and carrying.

Comfortable carrying bag included

Easy to clean using water

SP 95 Technical Specifications

Standards	ISO 10140-5: 2011 ISO 16283-2: 2015
Material	Silicone rubber
Diameter	180 mm
Weight	2.5 kg

Impact force exposure level in each octave band of the heavy-soft impact source

Octave band center frequency Hz	Impact force exposure level L_{FE} dB re 1 N
31.5	39.0 +/- 1.0
63	31.0 +/- 1.5
125	23.0 +/- 1.5
250	17.0 +/- 2.0
500	12.5 +/- 2.0

ISO/IEC 17025
Accredited Calibration Services

Accredited calibration services

- Sound level meters to IEC 61672
- Acoustic calibrators to IEC 60942
- Band-pass filters to IEC 61260
- Noise dosimeters (noise exposure meters) to IEC 61252
- Vibration level meters
- Human vibration level meters to ISO 8041
- Vibration calibrators
- Vibration transducers to ISO 16063-21

We guarantee:

- Qualified & fully dedicated staff
- Highest level of competence
- State-of-the-art calibration equipment
- Patterns and equipment in accordance to International System of Units (SI)
- Integrity, impartiality and confidentiality
- Competitive pricing
- Short lead times
- Direct contact with repair service department

Proudly distributed by:

SVANTEK Sp. z o. o.
ul. Strzygłowska 81, 04-872 WARSAW, POLAND
phone/fax (+48) 22 51 88 320, (+48) 22 51 88 312
http://www.svantek.com e-mail: office@svantek.com.pl