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Svantek Catalogue





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 25 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.

SVANTEK's accredited laboratory employs state-of-the-art calibration technology and instrumentation, which when combined with the highest level of design and manufacturing knowledge, can provide its customers with the latest in ISO/IEC 17025 calibration certified products.



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SVAN 979 Sound & Vibration Analyser

The SVAN 979 is our flagship sound & vibration analyser. Your first impression will be formed by the amazing OLED display which offers excellent visibility in all light conditions. The instrument's lightweight and durable aluminium housing not only allows for a firm grip but also protects the valuable electronic device from damage and all forms of electromagnetic interference.

The SVAN 979 can take measurements over a very wide dynamic range - over 110dB. Its high-quality GRAS 40AE microphone can measure frequency ranges as low as 3 Hz. Other microphones can be used with the device, should you want to measure very low frequencies or very high levels of noise. The microphone preamplifier has also been reinforced with a collar to protect it against mechanical damage. One amazing feature of the SVAN 979 is that if you disconnect the microphone preamplifier, you can use the instrument to take vibration measurements - simply by connecting up a cable and a vibration sensor.

The SVAN 979 has an extensive range of hardware and firmware add-ons that includes built-in Bluetooth, a windscreen infrared detector, direct connections to GPS module, 3G or WiFi modem and the a unique built-in vibration shock sensor that warns the user whenever the instrument itself is exposed to vibrations that may disrupt measurements.

Two USB ports allow for the instrument to simultaneously connect to a GPS module and communicate with a computer. The USB port also allows for audio streaming where the data being transferred to a computer and written in the form of a WAV file suitable for further analysis.

Usage of so many advanced features at the same time is possible because the instrument has two high-speed digital signal processors. As a result, the SVAN 979 is capable of taking measurements at 2 ms intervals, which are logged simultaneously to an audio recording (with 48kHz sampling rate, 24 bits) while also performing frequency analysis in real time. Only the SVAN 979 can meet such a challenge.

Setting up such advanced measurements can sometimes be very complicated but not with the SVAN 979. The instrument's intuitive menu structure of this instrument has been designed to make the measurement experience a pleasure.

Features

- Class 1 IEC 61672-1:2002 sound level measurements (PTB type approval 21.21/13.06)
- General vibration measurements (acceleration, velocity and displacement)
- Three parallel independent profiles
- 1/1, 1/3 octave real-time analysis
- 1/6, 1/12 octave real-time analysis (optional)
- FFT analysis 1600 lines in selectable frequency band
- Time-domain signal recording
- Advanced data logger including spectra logging and audio-events recording
- Reverberation time measurements
- Pure tone detection (optional)
- Advanced trigger and alarm functions
- User programmable band-pass filters (optional)
- Windscreen and extension cable auto detection
- Built-in vibration shock sensor
- MicroSD card
- Options for 3G, LAN & WLAN remote communication or GPS time synchronisation
- Bluetooth & SvanMobile app for measurement tracking
- Super contrast (10000:1) colour OLED display
- Built-in signal generator
- All-weather microphone protection SA 279 (optional)
- Hand held, light weight and robust case



Sound Level Meter & Analyser

Standards	Class1: IEC 61672-1:2002 (PTB approval 21.21/13.06)
Meter Mode	Elapsed time, Lxy (SPL), Lxeq (LEQ), Lxpeak (PEAK), Lxymax (MAX), Lxymmin (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 option) 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 Time constants: Slow, Fast, Impulse
Microphone	GRAS 40AE, 50 mV/Pa, prepolarised 1/2" condenser microphone
Preamplifier	SV 17 Voltage type (support 200V 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

Vibration Level Meter & Analyser

Standards	ISO 10816-1
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 meeting Class 1 IEC 61260 1/6 or 1/12 octave ¹ real-time analysis meeting Class 1 IEC 61260 (optional) FFT ¹ 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 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

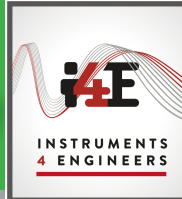
Input	LEMO 7-pin: Direct AC, Direct AC with 200 V polarisation, Direct DC or IEPE type with TEDS
Self-vibration Monitoring	Built-in
Dynamic Range	115 dB
Frequency Range	0.5 Hz ÷ 22.4 kHz, sampling rate 48 kHz
Data Logger ¹	Time-history logging with logging step down to 2 millisecond, Time-domain signal 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	32 MB non-volatile flash type, micro SD card 8 GB (included)
Interfaces	USB 1.1 Client, USB 1.1 Host, Bluetooth, RS 232 (with optional SV 55), IrDA (optional) GPS time synchronisation and positioning (optional) Extended I/O - AC output (1 V Peak) or Digital Input/Output (Trigger – Pulse)
Power Supply	Four rechargeable AA batteries operation time > 16 h (4.8 V / 2.6 Ah) ² SA 17A external battery pack (option) 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	305 x 79 x 39 mm (with microphone and preamplifier)
Weight	Approx. 0.6 kg with batteries

¹works together with the meter mode

²dependent on instrument operation mode

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SVAN 977 Sound & Vibration Analyser



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The SVAN977 belongs to the next generation of Class 1 sound & vibration instruments and is designed to meet the requirements of both environmental monitoring and occupational health and safety applications. Its exceptional hardware design enables the measurement of ultrasound frequencies in the 40 kHz band.

The SVAN977 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 or vibration profiles which enables measurements to be taken with 3 different filters (e.g. A, C, Z) as well as 3 different detector time constants (e.g. Fast, Slow, Impulse). Audio recordings for noise source recognition and data post-processing can be performed simultaneously with time-history logging. Additionally, the powerful DSP (digital signal processor) in the SVAN977 instrument can perform real-time 1/1 or 1/3 octave analysis including statistical calculations. Other functions like FFT and RT 60 analysis are also available as options.

With the latest software the SVAN977 can send an alarm via SMS text message or email whenever user-defined threshold levels are exceeded. The system is flexible enough to alert different people depending on the day of the week or the time of day.

The data is stored on a microSD card and can be easily downloaded to a PC using SvanPC++ or Supervisor software over USB connection.

Features

- Class 1 IEC 61672-1:2002 sound level measurements
- Three parallel independent profiles
- Ultrasound measurements in 40 kHz band with optional microphone
- 1/1 octave real-time analysis
- 1/3 octave real-time analysis (optional)
- Reverberation time measurements (optional)
- FFT analysis (optional)
- Time-domain signal recording & audio events recording (optional)
- Remote communication (optional)
- Bluetooth™ interface (version dependent)
- Advanced noise monitoring alarms (optional)



Sound Level Meter & Analyser

Standards	Class 1: IEC 61672-1:2002
Meter Mode	Elapsed time, L _{xy} (SPL), L _{xeq} (LEQ), L _{xpeak} (PEAK), L _{xymax} (MAX), L _{xymin} (MIN), LR (ROLLING LEQ), Ovl (OVERLOAD), L _{xye} (SEL), LN (LEQ STATISTICS), L _{den} , L _{EPd} , L _{tm3} , L _{tm5} Simultaneous measurement in three profiles with independent set of filters (x) and detectors (y)
Analyser	1/1 octave ¹ or optional 1/3 octave ¹ real-time analysis, up to 40.0 kHz band, meeting Class 1 requirements of IEC 61260 FFT ¹ real-time analysis 1600 lines, up to 40.0 kHz band (optional) Reverberation time analysis in 1/3 octave bands (RT 60 option)
Weighting Filters	A, B, C, Z
RMS Detector	Digital True RMS detector with Peak detection, resolution 0.1 dB Time constants: Slow, Fast, Impulse
Microphone	ACO 7052E, 35 mV/Pa, prepolarised 1/2" condenser microphone
Preamplifier	SV 12L IEPE preamplifier
Linear Operating Range	25 dBA - 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)
Dynamic Range	> 110 dBA RMS
Internal Noise Level	less than 15 dBA RMS
Frequency Range	up to 40 kHz (microphone dependent)
Statistics	L _n (L ₁ -L ₉₉), complete histogram in meter mode
Data Logger ¹	Time-history logging of summary results, spectra with two adjustable logging steps
Audio Events Recording	Audio records to time-history data or WAV format with selectable band and recording period (optional)

Vibration Level Meter & Analyser

Standards	ISO 10816-1
Meter Mode	RMS, Max, Peak, Peak-Peak Simultaneous measurement in three profiles with independent filter sets and detectors
Analyser	1/1 octave ¹ or optional 1/3 octave ¹ real-time analysis, up to 40.0 kHz band, meeting Class 1 requirements of IEC 61260 FFT ¹ analysis 1600 lines, up to 40.0 kHz band (optional) RPM ¹ rotation speed measurement parallel to the vibration measurement (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
Time Constants	from 100 ms to 10 s
Accelerometer (optional)	Any IEPE accelerometer
Measurement Range	Transducer dependent
Frequency Range	up to 40 kHz (transducer dependent)
Data Logger ¹	Time-history logging of summary results, spectra with two adjustable logging steps
Time-domain Signal Recording	Continuous or triggered time-domain signal recording to WAV format (optional)

General Information

Input	IEPE type (TNC connector)
Dynamic Range	> 110 dB
Frequency Range	up to 22.4 kHz (sampling rate 48 kHz) or 44.0 kHz (sampling 96 kHz)
Display	Super contrast (10000:1) OLED 2.4" colour display (320 x 240 pixels)
Memory	MicroSD card 4 GB (included)
Interfaces	USB 2.0 Client, Bluetooth (optional), 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 > 16 h (6 V / 2 Ah) ² Four rechargeable AA batteries operation time > 16 h (4.8 V / 2.6 Ah) ² (not included) 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	305 x 79 x 39 mm (with microphone and preamplifier)
Weight	Approx. 0.6 kg with batteries

¹works together with the meter mode

²dependent on instrument operation mode

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SVAN 958A 4-Channel Sound & Vibration Analyser

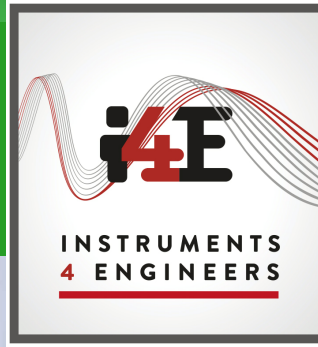
The SVAN958A is a 4-channel sound & vibration analyser designed to provide simultaneous sound and vibration measurements. Each of the four input channels can be independently configured for sound or vibration detection with different filters and RMS detector time constants giving users an enormous amount of flexibility with their measurements.

The real advantage of SVAN958A is its capability of performing advanced analyses simultaneously. In practice this allows the user to make broad-band measurements such as Leq, RMS, Max, Min, Peak together with 4-channel analysis such as FFT or 1/3 octave bands. One exceptional feature is that the device can make 4-channel time-domain signal recordings in WAV format.

All measurements can be stored in the non-volatile 32 MB internal memory or on a USB pen-drive and can be easily downloaded to a PC with SvanPC++ software.

The SVAN958A with RS 232 interface (SV55) is offered with 3G modem or LAN & WLAN connections. Together with SvanPC++_RC remote communication software, these interfaces provide easy remote access to the instrument settings & data over the Internet or local area network.

The instrument is powered by four AA standard or rechargeable batteries or by the external DC power source or USB port. The robust case and lightweight design finish the exceptional features of this new generation instrument.



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Features

- 4-channel, 20 kHz real-time, simultaneous sound and vibration analyser
- Sound measurements Class 1, IEC 61672:2002
- Human vibration measurements
- Ground / building vibration mode
- Advanced trigger and alarm functions
- Advanced data logger
- Time domain signal recording to USB disk (optional)
- 1/1 and 1/3 octave real-time analysis (optional)
- FFT analysis up to 1600 lines in selectable band (optional)
- FFT cross spectra (optional)
- Acoustic dose meter function (optional)
- Reverberation time measurements (optional)
- Sound intensity measurements (optional)

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Vibration Level Meter & Analyser

Standards	ISO 8041:2005, ISO 10816-1, DIN 4150-2, DIN 4150-3
Meter Mode	RMS, VDV, MTVV or Max, Peak, Peak-Peak
Analysers (optional)	Simultaneous measurement in up to four channels with independent set of filters and detector constants 1/1 octave real-time analysis ² , 15 filters with centre frequencies from 1 Hz to 16 kHz (Class 1, IEC 61260) 1/3 octave real-time analysis ² , 45 filters with centre frequencies from 0.8 Hz to 20 kHz (Class 1, IEC 61260) FFT analysis ² up to 1600 lines with Hanning, Kaiser-Bessel or Flat Top window FFT cross spectra ² measurements
Filters	RPM ² rotation speed measurements parallel to the vibration measurement (1 ÷ 99999) 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 & RMQ Detectors	Digital true RMS & RMQ detectors with Peak detection, resolution 0.1 dB
Time Constants	from 100 ms to 10 s
Accelerometer (optional)	SV 84 triaxial vibration accelerometer dedicated for ground/ building vibration measurement (1 V/g) SV 38 triaxial accelerometers for Whole-Body measurements (1 V/g MEMS type)
Measurement Range	Accelerometer dependent, SV 84 accelerometer: 0.0005 ms ⁻² RMS ÷ 50 ms ⁻² Peak
Frequency Range	0.5 Hz ÷ 20 kHz; accelerometer dependent, with SV 84: 0.5 Hz ÷ 3700 Hz

Sound Level Meter & Analyser

Standards	Class 1: IEC 61672-1:2002
Meter Mode	Elapsed time, Lxy (SPL), Lx _{eq} (LEQ), Lx _{peak} (PEAK), Lx _{ymax} (MAX), Lx _{ymin} (MIN), OVI (OVERLOAD), Lx _{ye} (SEL), LN (LEQ STATISTICS), Lden, LEPd, Ltm3, Ltm5 Simultaneous measurement in three profiles per channel (up to 4 channels) with independent set of filters (x) and detectors (y)
Analysers (optional)	1/1 octave real-time analysis ² , 15 filters with centre frequencies from 1 Hz to 16 kHz (Class 1, IEC 61260) 1/3 octave real-time analysis ² , 45 filters with centre frequencies from 0.8 Hz to 20 kHz (Class 1, IEC 61260) Reverberation Time analysis ² in 1/3 octave bands (RT 60) FFT real-time analysis ² up to 1600 lines with Hanning, Kaiser-Bessel or Flat Top window FFT cross spectra ² measurements Sound Intensity measurements
Weighting Filters	A, C, Z and G (infra-sound)
RMS Detector	Digital true RMS detector with Peak detection, resolution 0.1 dB
Time Constants	Slow, Fast, Impulse
Microphone (optional)	MK 255, 50 mV/Pa, prepolarised 1/2" condenser microphone
Preamplifier (optional)	SV 12L IEPE 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 - LEMO 4-pin & channel 4 - TNC connector)
Dynamic Range	100 dB, 4 x 20 bits A/D converters
Frequency Range	0.5 Hz ÷ 20 kHz, sampling rate 48 kHz
Data Logger	Time-history logging to internal memory or USB memory stick Time-domain signal recording on USB memory stick (optional)
Display	Super contrast (10000:1) OLED 2.4" colour display (320 x 240 pixels)
Memory	32 MB non-volatile flash type, external USB memory stick (not included)
Interfaces	USB 1.1 Client, USB 1.1 Host, optional SV 55 RS 232 interface Extended I/O - AC output (1 V Peak) or Digital Input/Output (Trigger / Pulse)
Power Supply	Four AA batteries (alkaline) operation time > 10 h (6.0 V / 1.6 Ah) ¹ Four AA rechargeable batteries (not included) operation time > 14 h (4.8 V / 2.6 Ah) ¹ SA 17A external battery pack (optional) operation time > 24 h ¹ 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 Humidity up to 90 % RH, non-condensed
Dimensions	140 x 82 x 42 mm
Weight	510 grams with batteries

¹ depending on the instrument mode

² function works together with the meter mode

The SV 38 is a MEMS based triaxial accelerometer designed for whole-body seat vibration measurements with the SVAN 958A four-channel analyser.

The seat-pad meets ISO 8041:2005 and ISO 2631-1 requirements so it can be used for seat and seat-back vibration measurements.

For the periodic verification, the accelerometer can be easily removed from the seat pad and installed on a shaker with a dedicated SA 38 adapter (optional).

The ISO 8041 in-situ check before and after measurement can be performed with an SV111 vibration calibrator without the necessity of removing accelerometer from the seat-pad.



Technical Specifications

Performance:

Number of Axes	3
Sensitivity ($\pm 5\%$)	100 mV/(ms ⁻²) at 15.915 Hz
Measurement Range	0.01 ms ⁻² RMS \div 50 ms ⁻² PEAK
Frequency Response (by design guideline, ± 3 dB)	0.1 Hz \div 100 Hz
Resonant Frequency	5 kHz (MEMS transducer)
Electrical Noise	< 316 μ V RMS, HP1 weighting

Electrical:

Supply Current (IEPE)	1 mA \div 10 mA (2.5 mA typ.) per channel
Supply Voltage (IEPE)	22 V \div 30 V (28 V typ.)
Bias Voltage (IEPE)	15.3 V \pm 0.5 V
Output Impedance	51 Ohms
Charge / Discharge Time Constant (start-up time)	30 sec. typ.
TEDS Memory	Installed (Channel 1)

Environmental Conditions:

Maximum Vibration	100 000 ms ⁻² shock survival for MEMS sensor
Temperature Coefficient	<+0.012 dB/°C
Temperature	from -10 °C to +50 °C
Humidity	up to 90 % RH, non-condensed

Physical:

Sensing Element	MEMS
Cable	integrated 1.4 meters long
Connector	LEMO 4-pin plug (SVAN 958A compatible)
Dimensions	236 mm diameter; thickness from 3.6 mm to 12 mm
Weight	550 grams (including cable and rubber cushion)

Accessories:

SA 38 (optional)	Calibration adapter
SC 39S (optional)	Cable LEMO 4-pin socket to three BNC plugs, 0.7 meter

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SV 84 Ground Vibration Accelerometer

The SV84 is a low-noise, hermetically sealed triaxial piezoelectric accelerometer designed to monitor building and ground vibrations with SVAN958A analyser.

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

The signal ground is insulated from the mounting surface and outer case to prevent ground loops.



Technical Specifications

Performance:

Number of Axes	3
Sensitivity ($\pm 5\%$)	100 mV/(ms ⁻²) ~ 1000 mV/g
Measurement Range	0.0005 ms ⁻² RMS \div 50 ms ⁻² Peak
Frequency Response (± 3 dB)	0.2 Hz \div 3 700 Hz
Resonant Frequency	16 kHz
Residual Noise (1 Hz, 24°C)	2.0 μ g RMS
Residual Noise (1 kHz, 24°C)	6.3 μ g RMS

Electrical:

Supply Current (IEPE)	2 mA \div 10 mA
Supply Voltage (IEPE)	22 V \div 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 ms ⁻² 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
Weight	275 grams
Mounting Thread	M6
Material Housing & Connector	Stainless steel

Accessories:

SA 207B	Mounting base for building and ground vibration (optional)
SC 281	Cable M12 to Amphenol (SV 212_x), 5 meters (optional)
SC 282	Cable M12 to LEMO 4-pin (SVAN 958A), 5 meters (optional)
SA 154	Calibration adapter (optional)

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SVAN 974 Vibration Analyser

The SVAN 974 is a vibration level meter and analyser designed to measure vibrations from machinery. The instrument uses the SV80 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 for 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.

Features

- Vibration analyser that supports IEPE and Charge type accelerometers
- FFT analysis
- Built-in machine filter (10 Hz ÷ 1 kHz) complying to ISO 10816
- Three independent profiles - parallel acceleration, velocity and displacement measurements
- 1/1 or 1/3 octave real-time analysis (optional)
- Time-domain signal recording to WAV format (optional)
- Advanced data logger including spectral analysis
- MicroSD card
- RPM measurement (optional)
- Advanced trigger function
- OLED colour display with super brightness and contrast
- Handheld, light weight and robust case
- Easy to use



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Vibration Level Meter

Standards	ISO 10816
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 Analyser¹

Data Logger	Time-history logging including spectra
FFT	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 (optional)	Real-time analysis, 15 filters with centre frequencies from 1 Hz to 16 kHz meeting Class 1: IEC 61260
1/3 Octave (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	Time-domain signal recording to WAV format
Recording (optional)	

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 4 GB included (slot supports 4 GB ÷ 16 GB cards)
Interfaces	USB 1.1 Client, 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)
Weight	Approx. 390 grams including batteries (without accelerometer)

¹vibration analyser works together with vibration level meter

²depending on operation mode

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SV 80 General Purpose Vibration Accelerometer

The SV 80 is an industry standard IEPE accelerometer offered to SVAN 974. It is an ideal choice for walk-around vibrations measurement in the rugged environments of industrial machinery monitoring, such as pumps, motors or fans. The accelerometer is mounted on a vibrating surfaces with the mounting magnet.

The design of SV80 features the low electronic noise and wide temperature operating range.



Technical Specifications

Performance:

Number of Axes	1
Sensitivity ($\pm 5\%$)	10 mV/(ms ⁻²) ~ 100 mV/g
Measurement Range	0.01 ms ⁻² RMS ÷ 500 ms ⁻² 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 μ g RMS
Residual Noise (1 Hz to 25 kHz, 24°C)	300 μ g 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 ms ⁻² Peak
Thermal Sensitivity Coefficient	0.07 %/°C F.S.
Operating Temperature Range (recommended)	from -10 °C to +50 °C
Humidity / Enclosure	IP67, epoxy sealed

Physical:

Connector	TNC socket, top radially mounted
Weight	40 grams
Mounting Thread	10-32 UNF 2B

Accessories:

Mounting Stud	10-32 to M5 (included)
SA 27/10-32	Mounting magnet base (optional)
SC 27	Coil cable TNC plug – TNC plug, 2 meters (optional)

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SV 81 General Purpose Vibration Accelerometer

The SV81 is an IEPE piezoelectric accelerometer offered to SVAN974. 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.



Technical Specifications

Performance:

Number of Axes	1
Sensitivity ($\pm 5\%$)	50 mV/(ms ⁻²) ~ 500 mV/g
Measurement Range	0.002 ms ⁻² RMS ÷ 100 ms ⁻² PEAK
Frequency Response (by design guideline, ± 3 dB)	0.2 Hz ÷ 3 700 Hz
Resonant Frequency	16 kHz
Residual Noise (1 Hz, 24°C)	2.4 μ g RMS
Residual Noise (1 Hz to 25 kHz, 24°C)	25 μ g RMS
Transverse Response Sensitivity (20 Hz, 50 m/s ²)	< 5 %

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 ms ⁻² Peak
Thermal Sensitivity Coefficient	0.1 %/°C F.S.
Operating Temperature Range (recommended)	from -10 °C to +50 °C
Humidity / Enclosure	IP67, epoxy sealed

Physical:

Connector	TNC socket, top radially mounted
Weight	44 grams
Mounting Thread	10-32 UNF 2B

Accessories:

Mounting Stud	10-32 to M5 (included)
SA 27/10-32	Mounting magnet base (optional)
SC 27	Coil cable TNC plug – TNC plug, 2 meters (optional)

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SV 200 Noise Monitoring Station

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SV200 is a fully integrated solution for permanent noise monitoring applications. It measures and stores data suitable for automated reports, advanced post-processing analysis and records audio events for noise source recognition.

The SV200 with 3G modem can send an alarm via sms text message or e-mail whenever user-defined threshold levels are exceeded. The advanced alarms function allows to combine triggers based on time, noise threshold, meteo conditions or spectrum. The system is flexible enough to alert different people depending on the day of the week or the time of day. The built-in web server gives access to measurement data, settings and real-time results stored in the SV200 monitoring station via any Internet enabled device.

The SV200 is using the electrostatic actuator to perform the remote system checks. The advantage of using electrostatic actuator method is check of the complete measurement path including the microphone's membrane. The system check is performed during the measurements and detected errors are signaled to the user by SMS text message and e-mails.

The SV200 is small, lightweight and can easily be installed by a single person.

Features

- 'All in one' design for portable, mobile and permanent noise monitoring installations
- Rugged housing protects the system against harsh outdoor conditions (IP65)
- Integrated electrostatic actuator for full system verification
- IEC 61672 Class 1
- Auto-calibration
- Internal 3G or Wi-Fi modem
- Large windscreen for high wind speeds
- Low power consumption & Li-Ion battery powered operation providing true flexibility for both short and long term measurements
- Web server for system configuration
- 16 GB data storage
- Advanced alarms based on time, noise threshold, meteo conditions or spectrum
- Weather monitoring module SV 205B or Vaisala WXT 520 (optional)



Sound Level Meter & Analyser

Standards	Class 1: IEC 61672-1:2002, Class 1: IEC 61260:2002
Weighting Filters	A, C, Z
Time Constants	Slow, Fast, Impulse
RMS Detector	Digital True RMS detector with Peak detection, resolution 0.1 dB
Microphone	Microtech Gefell MK 255, 50 mV/Pa, prepolarised 1/2" condenser microphone
Preamplifier	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
Dynamic Range	115 dB
Frequency Range	3.5 Hz ÷ 20 kHz
Meter Mode Results	Elapsed time, L _{xy} (SPL), L _{xeq} (LEQ), L _{xpeak} (PEAK), L _{xymin} (MAX), L _{xymin} (MIN), L _{xye} (SEL), LN (LEQ STATISTICS), L _{den} , L _{EPd} , L _{tm3} , L _{tm5} 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 ³	Real-time analysis meeting class 1 requirements of IEC 61260 (4 Hz ÷ 16 kHz)
1/3 Octave Analysis ³	Real-time analysis meeting class 1 requirements of IEC 61260 (3.15 Hz ÷ 20 kHz)
Data Logger ³	Logging of summary results, spectra and weather data with logging step down to 1 second and time history of selected parameters with short logging step down to 2 millisecond
Audio Events Recording ³	Time domain records to wav file format on demand with selectable bandwidth and recording period

General Information

Ingress Protection Rating	IP 65
Inputs	Power supply LEMO 3-pin, extended I/O port LEMO 9-pin
Remote System Check	Built-in electrostatic actuator, triggered either manually or automatically
Memory	Micro SD card 16 GB (non-removable)
Display & Keyboard	External controller with 2.4" OLED colour display and keyboard (optional)
Communication Interfaces	USB 3G modem (included in SV 200_3G) Wi-Fi / LAN module (included in SV 200_WiFi)
Power Supply	Li-Ion rechargeable battery (non-removable) Operation time on battery (14.4 V / 3.1 Ah) SV 200 (modem off) 45 hours SV 200_3G 29 hours ¹ SV 200_WiFi (LAN mode) 20 hours SV 200_WiFi (WiFi mode) 17 hours Solar Panel (not included) MPPT voltage 17.0 V ÷ 20.0 V AC power supply (included) Input 100 ÷ 240 VAC, output +24 VDC 2.5 A, IP 66 housing External DC source (not included) voltage range 10.5 V – 24 V, e.g. 12 V or 24 V accumulator ⁴
Environmental Conditions	Temperature from -30 °C ² to 50 °C Humidity up to 99 % RH
Physical Characteristics	Dimensions 700 mm length; 70 mm diameter excluding windscreen (windscreen diameter 130 mm) Weight Approx. 2.8 kg

¹ meter mode, time history logging step 1 second, 3G modem transmission 10 % of the measurement time

² only with external powering

³ function operates together with sound level meter mode

⁴ 15 V required for internal battery recharging



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SV 211 Noise Monitoring Station

The SV211 is a portable monitoring system housed in a waterproof case dedicated for periodic outdoor measurements. The system can be used with either the SVAN977 or SVAN979 which can easily be removed from the case and used as handheld sound level meters. The SV211 is powered by a high capacity rechargeable battery which is mounted in the case and can be charged from an external DC power source such as a mains-powered charger or a solar panel.

The outdoor microphone kit can easily be installed on a mast with standard mounting threads. For measurement at 4 meters height a special mast with a set of guy-ropes is also available.

An optional extra for the SV211 system is our SV205A weather monitoring module which measures temperature, air pressure, humidity, wind speed and direction and also detects a rainfall.

The SV211 supports direct communication via 3G and WiFi which enables full remote control over the measurements.

Features

- Waterproof protective case for SVAN 977 or SVAN 979
- Options for remote communication (3G, LAN & WLAN)
- Meteorological module for temperature, pressure, humidity, rain detection, wind speed and wind direction (optional)
- Optional microphone outdoor protective kit
- Powered by an internal battery, DC power supply or solar panel (optional)
- Internal controller (optional)

Technical specifications

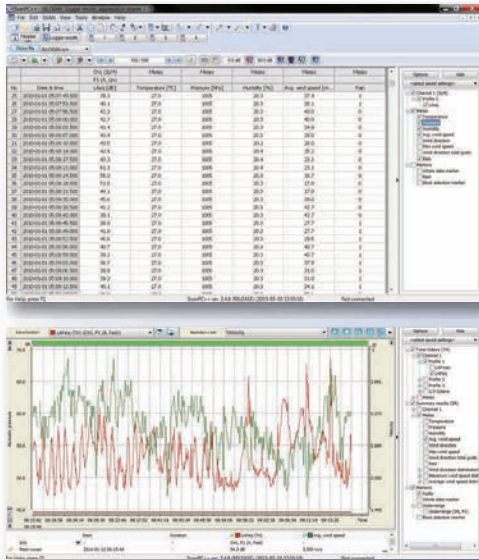
Remote Communication	3G modem (optional) LAN & WLAN module (optional)
Power Supply	Battery recharging 15 V ÷ 30 V (waterproof connector) DC power supply 11 V ÷ 30 V (waterproof connector) Internal battery 33 Ah (12 V)
Environmental Conditions	Temperature -10 °C ÷ +50 °C
Dimensions	420 x 340 x 210 mm (without antenna and cables)
Weight	Approximately 19 kg including battery

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SV 205A / SV 205B Weather Monitoring Modules

Weather conditions have a significant influence on noise measurements. Therefore, Svantek monitoring stations are equipped with interfaces for meteo sensors. With the optional SV205A (dedicated for SV211 and SV212) or SV205B (dedicated for SV200) weather station, the noise monitoring station can measure wind speed, wind direction, temperature, humidity, atmospheric pressure and detect rain. Weather data is stored in parallel to the noise measurements.



Features

- Portable, designed for permanent monitoring installations
- Robust construction
- Wind speed & direction simultaneously
- Integrated with Svantek monitoring systems
- Weather data written to Svantek data files
- No separate powering required

Technical specifications

Temperature Range	-40 °C ÷ 124 °C (±0.3 °C)
Ambient Pressure Range	150 hPa ÷ 1150 hPa (±5 hPa)
Humidity	0 % ÷ 100 % (±2 %)
Wind Speed	0 m/s ÷ 60 m/s (±2 %)
Wind Directions	0° ÷ 359° (±3°)
Rain Detector	on/off

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SV 212 Noise & Vibration Monitoring Station

Noise & Vibration Monitoring Kit

The SV212 is an easy to install and cost effective system for noise and vibration monitoring. The portable and battery powered system can be used for a variety of monitoring applications including construction site monitoring, tunneling and blasting. This portable system works great in noise & vibration monitoring applications related to construction sites and road traffic. The SV212 is protected from weather conditions by a waterproof case with locking capabilities. This solution makes the system portable allowing it to be moved from one place to another easily. An internal battery is able to power the whole system up to 10 days without recharging. Alternatively the SV212 can be powered from an external DC power source or solar panels.

Ground Vibration Mode in SVAN 958A

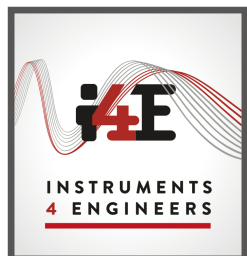
The ground vibration mode in the SVAN958A has been developed for both short- and long-term monitoring applications. It measures triaxial velocity and acceleration in parallel and calculates Peak Particle Velocity and Vibration Dose value simultaneously. In addition to logging overall values and frequency 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. Measurements are performed according to BS and DIN standards. FFT is used for dominant frequency determination and comparison with the BS and DIN norm curves and the Peak Velocity spectrum is recorded.

Options for Remote Communication

Remote control of the SV212 is available either over 3G or Local Internet connection (LAN, WLAN). Data transmission is fully supported by SvanPC++_RC Remote Communication software. Remote communication allows the user to set up the instrument and download data from monitoring systems placed in the field. Remote alarms that send messages via e-mails and text messages (SMS) are also implemented (3G version only).

Key Features

- Tri-axial vibration & noise measurement
- Root Mean Square (RMS) acceleration time history logger
- Peak Particle Velocity (PPV) assessment
- Vibration Dose Value (VDV) time history logger
- Two profiles per channel for simultaneous acceleration and velocity assessment
- Weighting filters comply to ISO 2631, BS 6472 and BS 7385
- KB filter according DIN 4150 and DIN 45669
- Simultaneous FFT analysis and WAV recording according to DIN 4150 -3 standard (option)
- Options for remote communication (3G, LAN & WLAN)
- Advanced alarm triggers combined with SMS and e-mail notification (option)



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Vibration Level Meter & Analyser

Meter Mode	RMS, VDV, MTVV or Max, Peak, Peak-Peak, Vector, A(8), Dose, ELV, EAV
Profiles Per Channel	2
Analyser (optional)	FFT analysis up to 1600 lines in a selectable frequency band Time domain signal recording to WAV format
Filters In Profile 1	HP1, HP3, HP10, VEL1, VEL3, VEL10, VELMF, DIL1, DIL3, DIL10, KB, W_k , W_d , W_c , W_f , W_m , W_h , W_g , W_b , W_v
Filters In Profile 2	VEL1, VEL3, VEL10
RMS & RMQ Detectors	Digital true RMS & RMQ detectors with Peak detection, resolution 0.1 dB Time constants: from 100 ms to 10 s
Accelerometer (optional)	SV 84 triaxial high sensitivity (1 V/g)
Measurement Range	with SV 84: 0.0005 ms ⁻² RMS ÷ 50 ms ⁻² PEAK
Frequency Range	0.5 Hz ÷ 20 kHz; accelerometer dependent with SV 84: 0.5 Hz ÷ 3 700 Hz

Sound Level Meter

Standards	Class 1: IEC 61672-1:2002
Profiles Per Channel	3
Meter Mode	Elapsed time, L _{xy} (SPL), L _{xeq} (LEQ), L _{xpeak} (PEAK), L _{xymax} (MAX), L _{xymin} (MIN), Ovl (OVERLOAD), L _{xye} (SEL), LN (LEQ STATISTICS), L _{den} , L _{EPd} , L _{tm3} , L _{tm5} Simultaneous measurement in three profiles per channel (up to 4 channels) with independent set of filters (x) and detectors (y)
Weighting Filters	A, C, Z, 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"
Preamplifier (optional)	SV 12L detachable
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 microphone: 3.5 Hz ÷ 20 kHz



SvanPC++ Remote Communication Module

Remote communication is one of the most important features of unattended monitoring systems. On the PC side communication is handled by the powerful SvanPC++_RC software package that 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 noise & vibration monitoring stations as well as configuration of advanced alarms in the SV200 and SVAN 977 to combine triggers based on time with noise thresholds.

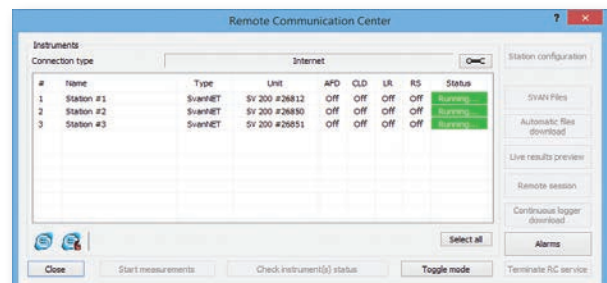
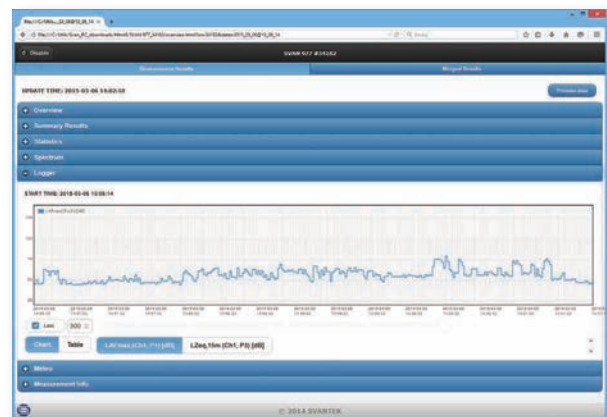
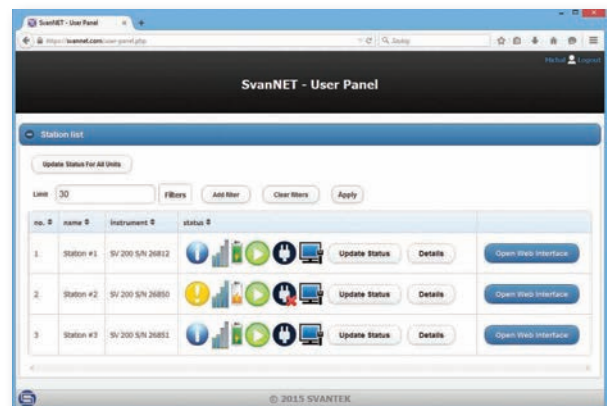
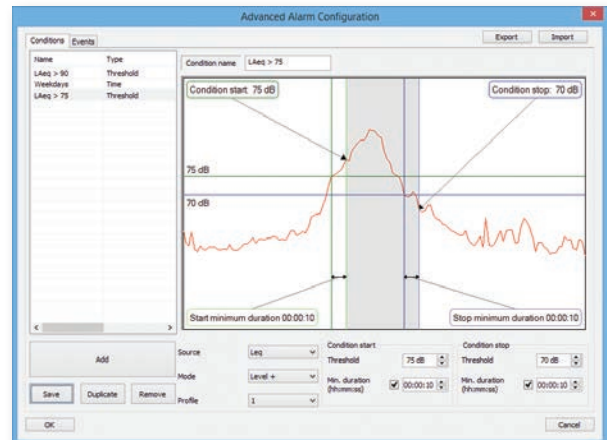
Thanks to SvanNET relay server, the SvanPC++_RC module can connect with multiple monitoring stations with 3G modems regardless if they have public or private IP. Connection over SvanNET allows users to download files and reconfigure the noise monitoring station using SvanPC++_RC module.

Features

- On-demand and automatic remote data download
- Measurement status monitoring
- Remote system configuration
- On-line data publishing
- Alarming
- SvanNET connections
- Advanced alarms configuration
- System checks
- Microsoft Windows™ service run mode

Technical specifications

Supported Connection	GPRS / 3G modem Wi-Fi / LAN (MOXA™) Bluetooth™ USB ZigBee
Supported Operations	On-demand and automatic remote data download Measurement status monitoring, system check, alerting Remote system configuration CSV and HTML data publishing



SvanPC++ Environmental Monitoring Module

SvanPC++ Environmental Monitoring is designed for post-processing of data recorded by Svantek instruments. 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.

Features

- Advanced search tools for noise event recognition
- Data recalculation or removal from the time-history
- EM calculator - a powerful tool that allows data recalculation in defined time periods with selectable time steps. Each calculation scenario can be saved and recalled with a single button click
- Reference spectrum importing, time history results comparison
- Reporting tool - report templates (Microsoft Word™ required)
- Projects - for combining data from multiple files, data comparison and saving the views on data

Technical specifications

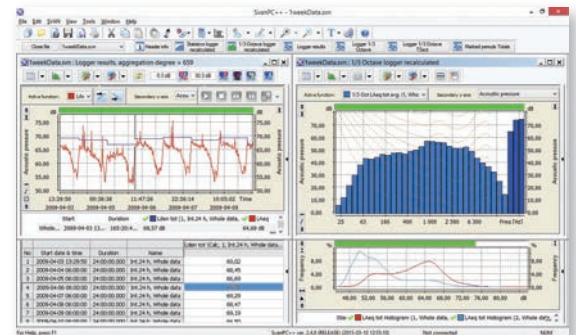
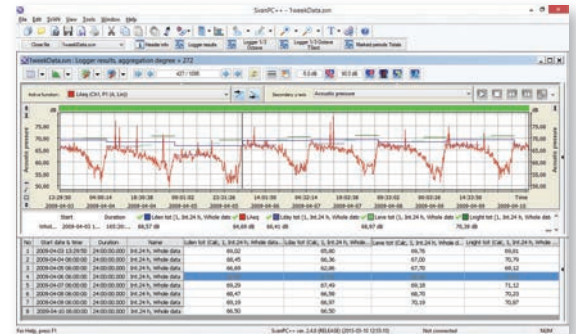
Data Analysis

& Recalculations

- Lx_{eq} (LEQ), L_{xpeak} (PEAK), L_{xmax} (MAX), L_{xmin} (MIN), L_{x_{se}} (SEL), max(L_{peak}), L_{tm5}, L_{VA}, EPNL
- Vibration Total RMS, Total VDV, Vector (RMS & Peak), min(RMS), max(RMS), max(Max), max(MTVV), max(Peak)
- Statistics (LN, histogram)
- Day / evening / night noise level
- Markers for event identification
- Spectrum averaging, min, max, statistics, band recalculation, filter recalculation, comparison
- Noise criterion and Noise rating
- Peak and harmonics detection in FFT result files
- Tonality analysis based on FFT or 1/3 octave result files
- Impulsivity analysis according to UNI/BS 9432:2002

Data Management

- Projects (results, views, calculations, pictures and other files)
- Time history data adjustments
- Saving views on data
- Reporting with schemes (Microsoft Word™ required)



Blocks/markers generator (Step 1 - Specify time range for searching)

Period: ☐ Whole data, ☐ By cover, ☐ By cover (inverted) Length [y: days/h:mm:ss.ms]: 24:00:00.000, 00:16:30.500, 23:43:28.500

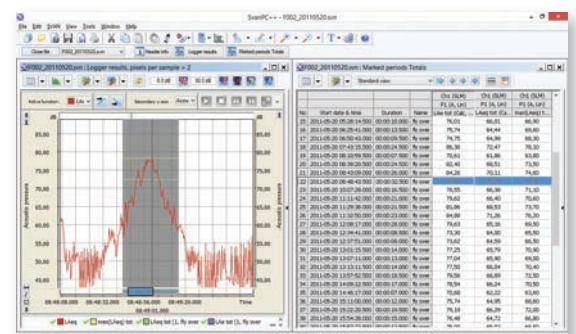
☒ Time period Start [h:mm:ss.ms]: 06:00:00 Stop [h:mm:ss.ms]: 22:00:00

☒ Day of week: ☒ Mon, ☒ Tue, ☒ Wed, ☒ Thu, ☒ Fri, ☒ Sat, ☒ Sun

☐ Month: ☐ Jan, ☐ Feb, ☐ Mar, ☐ Apr, ☐ May, ☐ Jun, ☐ Jul, ☐ Aug, ☐ Sept, ☐ Oct, ☐ Nov, ☐ Dec

☒ Date: Start: 2015-01-12 00:00:00 Stop: 2015-01-21 23:59:59

< Previous Next > Zakończ Anuluj Pomoc



SVAN 971 Sound Level Meter

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The SVAN 971 is an extremely small Class 1 Sound Level Meter with options for 1/1 & 1/3 octave analysis.

The instrument brings unprecedented state of the art technology to an SLM of this size. The instrument's user interface makes both configuration and measurement easier than ever before. 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 the necessary weighting filters as well as 1/1 octave or 1/3 octave band filters. It also offers time-history logging providing broad-band results and spectra with adjustable logging steps.

The audio events recording function works together with sound level meter mode.

The data are stored on a microSD card and can be easily downloaded to a PC using the Supervisor software.

Key features

- Small, pocket size design
- Class 1 IEC 61672 type approved (PTP)
- 1/1 & 1/3 octave real-time analysis (optional)
- Large measurement range
- Self-vibration detection
- Dosimeter function (optional)
- Audio events recording (optional)
- Voice comments before and after measurement
- Statistical analysis
- Automatic calibration start
- High contrast colour OLED display
- Screen automatically rotates when instrument turned
- IP 65 rating
- Easy and friendly user interface



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Sound Level Meter

Standards	Class 1: IEC 61672-1:2002
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	ACO 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)
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
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 ¹	Ln (L _i -L ₉₉), complete histogram in meter mode
Data Logger ¹	Time-history logging of summary results, spectra with adjustable double logging steps down to 100 ms
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

Noise Dosimeter

Dosimeter Mode Results ¹ (optional)	Lxy (SPL), Lxeq (LEQ), Lxpeak (PEAK), Lxymax (MAX), Lxymin (MIN), DOSE, DOSE_8h, PrDOSE, LAV, Lxye (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
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Sound Analyser

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

General Information

Ingress Protection Rating	IP65 (excluding microphone)
Input	Preamplifier (60 UNS thread)
Memory	MicroSD card 4 GB (removable & upgradeable)
Display	Colour 96 x 96 pixels OLED type
Keyboard	8 push buttons
Communication Interfaces	USB 2.0 client SV 75 RS 232 cable (optional) or 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 (depending on usage) USB interface 100 mA HUB
Environmental Conditions	Temperature from -10 °C to 50 °C 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

¹function operates together with sound level meter mode

SV 104 Noise Dosimeter

The SV 104 is a first noise dosimeter on a market with option for 1/1 octave band filters that allows the most accurate selection of hearing protectors and audio events recording, a very useful feature in identification of noise sources.

We have designed the SV 104 to make noise dosimetry measurements easier. Firstly the voice comment feature replaces necessity of identifying the dosimeter with different kind of stickers. Secondly, a single large measurement range of 55 dB to 140 dB enables measurement in all kinds of working environment. But mostly the auto-calibration is what makes the SV 104 an easy in use. Once the SV 104 detects calibration signal it calibrates automatically saving the calibration data together with the measurement file, both before and after measurement.

Typically the noise dosimeter is worn by the worker on a shoulder which makes it vulnerable accidental shocks, knocks or even fall-downs. To avoid microphone damages on the SV 104 we've used a shock resistant MEMS microphone. Additionally an inbuilt tri-axial accelerometer detects all shocks and vibrations that influence noise measurement results. All those unwanted events are marked in the results time history so they can be easily excluded from dose calculation.

The distinguishing feature of SV 104 is the color OLED display that can be easily read even in full daylight or in the dark.

The user interface is very friendly to use which makes setting up and using the instrument easier than ever. User has a choice from multiple setup files that can be configured through the included "Supervisor" software. All measurement data is stored on the integral 8GB memory which gives a vast amount of storage.

Features

- Noise Dosimeter conforming to IEC 61252
ANSI S1.25-1991
- Class 2 according to IEC 61672
- Measurements according to ISO 9612
- Measurement range 55 dBA RMS ÷ 140 dBA Peak
- 1/1 octave real-time analysis (optional)
- Three parallel measurement profiles
- Audio events recording during measurement (optional)
- Voice comments before and after measurement
- Built-in accelerometer for vibration shock detection
- Large 8 GB memory
- USB 2.0 interface for data download and battery recharging
- OLED colour display with super brightness and contrast
- Easy in use predefined setups
- Operational time > 40 hours
- Extremely compact, light weight and robust case



Noise Dosimeter

Standards	IEC 61252 ed1.1 (2002); ANSI S1.25-1991 (R2007); Class 2 IEC 61672-1 ed2.0 (2013)
Weighting Filters	A, C and Z
Time Constants	Slow, Fast, Impulse
Exchange Rates	2, 3, 4, 5, 6
Measurement results	Elapsed time, Lxy (SPL), Lx _{eq} (LEQ), Lx _{peak} (PEAK), Lx _{ymax} (MAX), Lx _{ymin} (MIN), Lc-a DOSE, DOSE_8h, PrDOSE, LAV, Lxye (SEL), Lxye8 (SEL8), PLxye, (PSEL), E, E_8h, LEPd, PTC (PEAK COUNTER), PTP (PEAK THRESHOLD %), ULT (UPPER LIMIT TIME), TWA, PrTWA, LN (LEQ STATISTICS), OVL (OVERLOAD TIME %)
Measurement Profiles	3
Microphone	SV 27 MEMS microphone, 1/2" housing with built-in TEDS functionality for the automatic calibration
Measurement Range	55 dBA RMS ÷ 140.1 dBA Peak
Frequency Range	20 Hz ÷ 10 kHz
Dynamic Range	95 dB
Data Logging ¹	Summary results for the measurement time Time-history logging of Leq/Max/Min/Peak with 1s logger step
Voice Comments	Audio records on demand, created before or after measurements, added to measurement file
Audio Recording ¹ (optional)	Audio events recording, trigger and continuous mode, 12 or 24 kHz sampling rate, WAV format
1/1 Octave ¹ (optional)	Real-time analysis in octave band filters, Class 1, IEC 61260 9 filters with centre frequencies from 31.5 Hz to 8 kHz

General Information

Display	colour OLED 128 x 64 pixels
Ingress protection	IP 65
Memory	8 GB
Interfaces	USB 2.0 client or Infrared (docking station compatible)
Keyboard	3 push buttons
Power Supply	Ni-MH rechargeable cells operation time > 40 hours ² USB interface 500 mA HUB
Environmental Conditions	Temperature from -10 °C to 50 °C Humidity up to 90 % RH, non-condensed
Dimensions	88 x 49.5 x 19.2 mm
Weight	121 grams

¹function operates together with noise dosimeter mode
²dependent on instrument operation mode



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SV 104IS Intrinsically Safe Noise Dosimeter

The SV 104IS is the intrinsically safe noise dosimeter presenting features such as 1/1 octave band real-time analysis and audio events recording functions.

This personal dosimeter has a robust 1/2" MEMS microphone enabling easy calibration using most commonly available acoustic calibrators. The new microphone has a large dynamic range of the 90 dB which allows to measure noise from 60 dBA to 140 dBA. The long list of microphone advantages includes also the auto-calibration feature and TEDS memory that stores the calibration info in the microphone itself. The auto-calibration means performing the acoustic calibration automatically once the microphone is inserted into the calibrator.

The SV 104IS is a cable-free dosimeter and is typically attached to the user's shoulder, close to the ear using the mounting clips supplied. All results are clearly displayed on the amazing OLED screen which offers excellent visibility even in full daylight or darkness.

The instrument works with Svantek's health and safety software package, "Supervisor", that provides various tools for data analysis and reporting. The docking station supports data transfer to the PC through the infrared interface as well as handles the battery charging. Rechargeable batteries of SV 104IS are able to power the instrument up to 50 hours.

Key features

- Intrinsic safety in accordance with ATEX and IECEx
- Noise Dosimeter conforming to IEC 61252 and ANSI S1.25-1991
- Class 2 sound level meter in accordance with IEC 61672
- Measurement range 60 dBA RMS ÷ 140 dBA Peak
- Automatic calibration start (auto-calibration)
- Vibration shocks detection and recording
- Three parallel measurement profiles
- Voice comments recording
- $L_{(C-A)}$ calculation
- 1/1 octave real-time analysis (option)
- Audio events recording (option)
- OLED colour display with super brightness and contrast
- Easy in use predefined setups
- Operational time > 50 hours
- Extremely compact, light weight and robust case



Noise Dosimeter



Standards	IEC 61252 ed1.1 (2002); ANSI S1.25-1991 (R2007); Class 2 IEC 61672-1 ed2.0 (2013) ATEX: EN 50303:2000, EN 60079-0:2012, EN 60079-11:2012, EN 60079-26:2007; certificate number: FTZU 14 ATEX 0055X IEC 60079-0 ed6.0 (2011), IEC 60079-11 ed6.0 (2011), IEC 60079-26 ed2 (2006); certificate number IECEx FTZU 15.0001X Hazardous locations markings: I M1 Ex ia I Ma II 1G Ex ia IIC T4 Ga
Weighting Filters	A, C and Z
Time Constants	Slow, Fast, Impulse
Exchange Rates	2, 3, 4, 5, 6
Measurement Results	Elapsed time, Lxy (SPL), Lxeq (LEQ), Lxpeak (PEAK), Lxymax (MAX), Lxymmin (MIN), Lc-a, DOSE, DOSE_8h, PrDOSE, LAV, Lxye (SEL), Lxye8 (SEL8), PLxye, (PSEL), E, E_8h, LEPd, PTC (PEAK COUNTER), PTP (PEAK THRESHOLD %), ULT (UPPER LIMIT TIME), TWA, PrTWA, LN (LEQ STATISTICS), OVL (OVERLOAD TIME %)
Measurement Profiles	3
Microphone	SV 27IS MEMS microphone, 1/2" housing
Measurement Range	60 dBA RMS ÷ 140.1 dBA Peak
Frequency Range	20 Hz ÷ 10 kHz
Dynamic Range	90 dB
Data Logging ¹	Summary results for the measurement time and time-history logging of Leq/Max/Min/Peak with adjustable logger step down to 1 s
Voice Comments	Audio records on demand, created before or after measurement, added to measurement file
Audio Recording ¹ (optional)	Short audio events recording on trigger
1/1 Octave ¹ (optional)	Single channel 1/1 octave real-time analysis and spectra logging, 9 filters with centre frequencies from 31.5 Hz to 8 kHz

General Information

Display	OLED 128 x 64 pixels
Ingress protection	IP 65
Memory	64 MB
Interface	Infrared (docking station required)
Keyboard	3 push buttons
Power Supply	Li-Ion rechargeable cell ² operation time 50 hours ³
Environmental Conditions	Temperature from -10 °C to 50 °C Humidity up to 90 % RH, non-condensed
Dimensions	88 x 49.5 x 19.2 mm
Weight	117 grams with batteries

¹function works with the acoustic dosimeter mode

²docking station required for battery recharging

³dependent on configuration

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SV 102+ Dual-Channel Acoustic Dosimeter

The SV 102+ is a dual-channel noise dosimeter designed to measure noise exposure in accordance with the ISO 9612 as well as record MIRE (microphone in real ear) measurements in accordance with ISO 11904-1.

Unlike single channel noise dosimeters, the two channel SV 102+ allows for noise exposure levels to be assessed simultaneously on both sides of the head. This is particularly important when a worker is exposed to noise coming from a dominant directional source where the placing of a microphone on only one side of the head might understate the true levels of noise exposure.

The SV 102+ uniquely features 1/3 octave analysis, which is required for MIRE methodology. MIRE measurement takes sound measurements from the ear and performs a one-third octave band analysis. The SV 102+ can perform such analyses by using a special microphone probe SV25S placed at the entrance of the ear canal. MIRE can be used to measure noise exposure in situations where normal dosimetry methods are inappropriate such as in a telephone call centre where the sound comes from headphones.

All SVANTEK dosimeters, including the SV 102+, have the ability to perform 1/1 octave analyses and record audio events. The 1/1 octave analysis is the most accurate method of determining the correct level of hearing protection in accordance with ISO 4869-2 while simultaneous audio recording allows the user to capture and eliminate false sounds that affect the noise exposure levels.



Features

- Dual-channel acoustic dosimeter conforming to IEC 61252 and ANSI S1.25-1991
- Dual-channel measurement in accordance to ISO 9612
- Dual-channel MIRE measurement to ISO 11904-1
- Dual-channel 1/1 or 1/3 octave real-time analyser (optional)
- Single measurement range 45 dBA RMS ÷ 141 dBA Peak
- MIRE measurement technique with SV 25S
- Three parallel independent profiles per channel
- Audio Events Recording to microSD card (optional)
- Automatic calibration thanks to the TEDS technology
- USB interface
- OLED colour display with super brightness and contrast

Dosimeter/SLM/Analyser

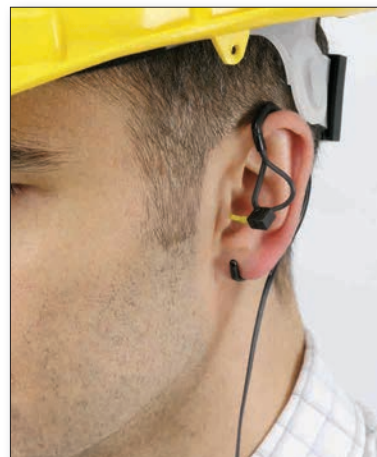
Standards	IEC 61252; ANSI S1.25-1991; Class 2: IEC 61672:2002, ISO 11904-1
Acoustic Dosimeter Mode	Lxy (SPL), Lxeq (LEQ), Lxpeak (PEAK), Lxymax (MAX), Lxymin (MIN), DOSE, DOSE_8h, PrDOSE, LAV, Lxye (SEL), Lxye8 (SEL8), PLxye, (PSEL), E, E_8h, LEPd, PTC (PEAK COUNTER), PTP (PEAK THRESHOLD %), ULT (UPPER LIMIT TIME), TWA, PrTWA, Lc-a
SLM 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)
Weighting Filters	A, C and Z
RMS Detector	Digital true RMS detector with Peak detection, resolution 0.1 dB Time constants: Slow, Fast, Impulse
Microphone	SV 25D, Class 2, ceramic microphone, 1/2" housing with built-in preamplifier & integrated cable SV 25S, special microphone with dedicated probe for Microphone-In-Real-Ear technique (option) SV 25D and SV 25S have built-in TEDS functionality for the automatic calibration
Measurement Range	45 dBA RMS ÷ 141 dBA Peak (with SV 25D microphone)
Frequency Range	20 Hz ÷ 20 kHz, sampling rate 48 kHz
Dynamic Range	100 dB
Data Logger ¹	Time-history logging of Leq/Lmax/Lmin/Peak/Lav results to internal memory with time step down to 100 millisecond to microSD card
Audio Recorder ¹	Time-domain signal events recorder (option)
Dual-channel Mode	Dual-channel measurement mode with second microphone SV 25D or SV 25S
1/1 Octave ¹	Dual-channel 1/1 octave real-time analysis and spectra logging, 10 filters with centre frequencies from 31.5 Hz to 16 kHz, Type 1: IEC 61260 (optional)
1/3 Octave ¹	Dual-channel 1/3 octave real-time analysis and spectra logging, 31 filters with centre frequencies from 20 Hz to 20 kHz, Type 1, IEC 61260 (optional)

General Information

Input	2 x LEMO 2-pin, Direct
Display	Colour 160 x 128 pixels OLED type
Memory	MicroSD card 4 GB (removable & upgradeable)
Interfaces	USB 1.1 Client, Extended I/O - AC output (1 V Peak) / Digital Output (Alarm trigger) / Digital Input (Input trigger)
Power Supply	Two AA batteries (alkaline) operation time > 16 h (3.0 V / 1.6 Ah) ² Two rechargeable batteries (not included) operation time > 20h (2.4 V / 2.6 Ah) ² USB interface 150 mA HUB
Environmental Conditions	Temperature from -10 °C to 50 °C Humidity up to 90 % RH, non-condensed
Dimensions	95 x 83 x 33 mm (without microphones)
Weight	260 grams with batteries (without microphones)

¹function works together with acoustic dosimeter mode / meter mode

²dependent on instrument operation mode



SV 100A Whole-Body Vibration Dosimeter

The new SV100A is a wireless whole-body vibration exposure meter suitable for whole-body measurements in accordance with ISO 2631-1, both on the seat and seat-back.

The SV100A Bluetooth interface enables current results to be previewed on a smartphone or tablet using our Assistant application. The smartphone app also signal an alarm when set vibration limits are exceeded.

Force sensors that installed in SV100A automatically detect a driver presence enabling real daily exposure calculations for the period of time when there is a contact with the vibrating surface.

The device is equipped with both RMS and RMQ detectors which allows the calculation of Daily Vibration Exposure A(8) based on RMS and VDV simultaneously.

All measurement results are stored in a large 8GB internal memory which allows continuous recording over long periods. The 2.0 USB interface allows fast data download and is also used for battery recharging.

The SV 100A is fully configurable with Supervisor software. It can quickly and easily be setup for all the weighting filters required by ISO standards for the estimation of the effects of vibration on health, comfort, perception and motion sickness. The dedicated Whole-Body Vibration Exposure panel within Supervisor software makes reporting extremely easy.

Features

- Whole-body Vibration Exposure Meter complying to ISO 8041
- Wireless instrument with rechargeable battery
- Unattended measurement of seat-pad or seat-back vibration
- Bluetooth communication
- Dedicated application for smartphones
- Auto-detection of the operator/driver
- Weighting filters complying to ISO 2631-1
- Calculation of A(8) Daily Exposure
- Results both in m/s^2 and exposure points
- Large 8 GB memory
- USB 2.0 interface
- OLED colour display and push-buttons
- Operational time > 24 hours
- Easy to use predefined setups
- Extremely compact, lightweight and robust



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Vibration level meter

Standards	ISO 8041:2005, ISO 2631-1, 2 & 5
Meter Mode	aw (RMS), awmax (RMS MAX), VDV, MaxVDV, awv (VECTOR), A(8) Daily Exposure, ELV Time (TIME LEFT TO LIMIT) EAV Time (TIME LEFT TO ACTION), MTVV, Max, Peak, Peak-Peak,
Filters	Wd, Wk, Wm, Wb (ISO 2631) and corresponding Band Limiting filters Wf for motion sickness measurements according to ISO 2631 (optional)
RMS & RMQ Detectors	Digital true RMS & RMQ detectors with Peak detection, resolution 0.1 dB
Measurement Range	0.01 ms ⁻² RMS ÷ 157 ms ⁻² PEAK
Frequency Range	0.1 Hz ÷ 180 Hz
Data Logger	Time-history data including meter mode results and spectra
Time-Domain Signal ¹	Simultaneous 3-channel time-domain signal recording (optional)
Recording	
Analyser ¹	1/1 octave real-time analysis meeting Class 1: IEC 61260 (optional) 1/3 octave real-time analysis meeting Class 1: IEC 61260 (optional)

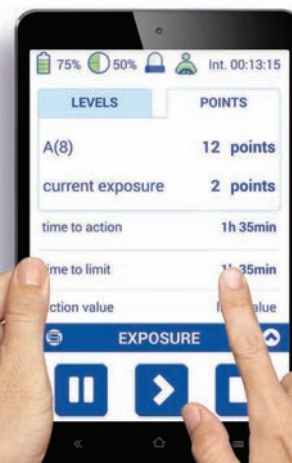
General Information

Accelerometer	Built-in tri-axial MEMS based
Display	OLED 128 x 32 pixels
Memory	8 GB non-removable
Interfaces	USB 2.0 client, Bluetooth™
Keyboard	4 push buttons
Power Supply	
	Ni-MH rechargeable cells _____ operation time > 24 hours ²
	USB interface _____ 500 mA HUB
Environmental Conditions	
	Temperature _____ from -10 °C to 50 °C
	Humidity _____ up to 90 % RH, non-condensed
Dimensions	Ø 235mm x 12 mm
Weight	0.5 kg

¹function works together with vibration level meter

²dependent on instrument configuration

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SV 103 Hand-Arm Vibration Dosimeter

The SV 103 is the world's first personal hand-arm vibration exposure meter. The instrument meets ISO 8041:2005 and is the ideal choice for making measurements according to ISO 5349 and European Directive 2002/44/EC.

The SV 103 significantly decreases the measurement uncertainty related to the estimation of daily exposure time as the instrument is attached to the user's arm and is small enough to take daily vibration exposure measurements without interfering with normal working activities.

The SV 103 uses the SV 107 moulded hand-held adaptor designed in accordance to ISO standards. The SV 107 has tri-axial MEMS-based accelerometer and contact force sensors so it can detect when the user is actually holding vibrating tools. This solution allows automatic calculation of real daily exposure value for the period when the hand was in contact with the vibrating tool. Very important feature of the SV 107 is its robustness. The MEMS technology means the SV 107 is extremely robust, shock resistant, uses very low power and is free of the DC-shift effect that adversely affects systems based on piezoelectric accelerometers.

The SV 103 is powered using rechargeable batteries charged through the USB interface which also enables easy interconnection between the instrument and a PC. The measurement data is safely stored in the large 8 GB memory. The instrument works with "Supervisor" software that offers dedicated calculator of A(8) daily exposure value and reporting templates.

Features

- Personal Daily Vibration Exposure Meter complying to ISO 8041
- Measurement under gloves
- Tri-axial accelerometer complying to ISO 5349
- Contact force measurement
- 1/1 or 1/3 octave real-time analysis (optional)
- Time-domain signal recording (optional)
- Large 8 GB memory
- USB 2.0 interface
- OLED colour display with super brightness and contrast
- Operational time > 24 hours



Vibration meter

Standards	ISO 8041:2005, ISO 5349-1:2001; ISO 5349-2:2001;
Meter Mode	ahw (RMS), ahv (VECTOR), Max, Peak, Peak-Peak A(8) Daily Exposure, ELV (TIME TO LIMIT), EAV (TIME TO ACTION) Simultaneous measurement in three channels
Filters	W_h (ISO 5349) and corresponding Band Limiting filter
RMS Detector	Digital true RMS detector with Peak detection, resolution 0.1 dB
Measurement Range	$0.2 \text{ ms}^{-2} \text{ RMS} \div 2000 \text{ ms}^{-2} \text{ PEAK}$
Frequency Range	$1 \text{ Hz} \div 2000 \text{ Hz}$
Data Logger	Time-history data including meter mode results and spectra
Time-Domain Recording ¹	Simultaneous 3-channel time-domain signal recording (optional)
Analyser ¹	1/1 octave real-time analysis meeting Class 1: IEC 61260 (optional) 1/3 octave real-time analysis meeting Class 1: IEC 61260 (optional)
Accelerometer	detachable SV 107 tri-axial accelerometer with hand straps in accordance to ISO 5349

General Information

Display	colour OLED 128 x 64 pixels
Memory	8 GB non-removable
Sampling rate	6 kHz
Interfaces	USB 2.0 client
Keyboard	4 push buttons
Power Supply	Ni-MH rechargeable cells operation time > 24 hours ² USB interface 500 mA HUB
Environmental Conditions	Temperature from -10 °C to 50 °C Humidity up to 90 % RH, non-condensed
Dimensions	88 x 49.5 x 19.2 mm (instrument without accelerometer, cable and mounting adapter)
Weight	150-160 grams with SV 107 accelerometer and one of vibration contact adapters

¹function operates together with vibration level meter

²dependent on instrument configuration



SV 106 6-Channel Human Vibration Analyser

The SV 106 is a six-channel human vibration meter fully meeting requirements of ISO 8041:2005 standard.

Thanks to six channels, the SV 106 enables simultaneous measurements with two tri-axial accelerometers. For hand-arm vibration measurements in accordance with ISO 5349-1 & 2 the SV 106 uses SV 150 or SV 105A accelerometers. For ISO 2631-1 whole-body vibration measurements the SV 38V seat-pad accelerometer is used.

The RMS, Peak, Peak-Peak, VDV, MTVV or vibration exposure results such as A(8) are available with this instrument. In addition to vibration exposure results, the SV 106 can perform real-time 1/1 or 1/3 octave analysis. The results are stored to built-in microSD card and can be easily downloaded to PC using USB interface.

The time-domain signal recording function enables raw data recording for the post-processing purposes such as dose calculation in accordance with ISO 2631-5.

Features

- Human Vibration measurements meeting ISO 8041:2005, ISO 2631-1, 2 & 5 (including VDV and MTVV) and ISO 5349-1 & 2
- Six channels for acceleration and two channels for static force measurements
- Hand-Arm measurements:
 - SV 105A integrated tri-axial accelerometer including hand straps
 - SV 105AF integrated tri-axial accelerometer with force sensors including hand straps
 - SV 150 tri-axial accelerometer with adapter for direct attaching to hand-held power tools
- Whole-Body measurements:
 - Low power seat accelerometer SV 38V
- A(8) daily exposure automatic calculation
- Each acceleration channel with two profiles
- 1/1 or 1/3 octave real-time analysis (optional)
- Time-domain signal recording (optional)



Vibration Level Meter & Analyser

Standards	ISO 8041:2005; ISO 2631-1:1997; ISO 2631-2:2003; ISO 2631-5:2004; ISO 5349-1:2001; ISO 5349-2:2001
Meter Mode	ahw (RMS HAND-ARM), ahv (VECTOR HAND-ARM), aw (RMS WHOLE-BODY), awmax (RMS MAX WHOLE-BODY), VDV, MaxVDV, awv (VECTOR WHOLE-BODY), A(8) Daily Exposure, ELV Time (TIME LEFT TO LIMIT), EAV Time (TIME LEFT TO ACTION) MTVV, Max, Peak, Peak-Peak,
Filters in Profile (1)	Wd, Wk, Wm, Wb, Wc, Wj, Wg, Wf (ISO 2631), Wh (ISO 5349)
Filters in Profile (2)	HP, KB, Vel3 (for PPV measurement) and Band Limiting according to ISO 8041
RMS & RMQ Detectors	Digital true RMS & RMQ detectors with Peak detection, resolution 0.1 dB
Measurement Range	Transducer dependent: 0.01 ms ⁻² RMS ÷ 50 ms ⁻² Peak (with SV 38V and Wd filter) 0.1 ms ⁻² RMS ÷ 2000 ms ⁻² Peak (with SV 105A and Wh filter)
Frequency Range	0.1 Hz ÷ 2 kHz (transducer dependent)
Data Logger	Time-history data including meter mode results and spectra
Time-Domain Recording ¹	Simultaneous x, y, z time-domain signal recording, sampling frequency 6 kHz (optional)
Analyser ¹	1/1 octave real-time analysis with centre frequencies from 0.5 Hz to 2000 Hz (optional) 1/3 octave real-time analysis with centre frequencies from 0.4 Hz to 2500 Hz (optional)
Accelerometer (optional)	SV 38V tri-axial accelerometer for Whole-Body measurements SV 105A integrated tri-axial accelerometer including hand straps SV 105AF integrated tri-axial accelerometer with force sensors including hand straps SV 150 tri-axial accelerometer with adapter for direct attaching to hand-held power tools SV 151 tri-axial accelerometer for SEAT transmissibility measurements SV 84 tri-axial IEPE accelerometer for ground / building vibration measurements

General Information

Input	2 x LEMO 5-pin: six channels Direct or IEPE type and 2 channels for force transducers
Dynamic Range	90 dB
Force Range	0.2 N ÷ 200 N (dedicated channels for force transducers)
Sampling Rate	6 kHz
Memory	Internal 16 MB non-volatile memory 4 GB Micro SD card included (micro SD flash card slot supports cards up to 16 GB)
Display	Super contrast (10000:1) OLED 2.4" colour display (320 x 240 pixels)
Interfaces	USB 1.1 Client, Extended I/O - AC output (1 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 operation time > 16 h (4.8 V / 2.6 Ah) ² (not included) 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)
Weight	Approx. 390 grams including batteries (without accelerometer)

¹function operates together with vibration level meter
²with one SV 38V tri-axial accelerometer in meter mode



Hand-Arm Vibration Accelerometers

The SV 105A, SV 105AF and SV 150 are accelerometers for hand-arm vibration measurements with the SV 106 human vibration analyser. The accelerometers have a built-in memory (TEDS) containing information about the sensitivity that is automatically transferred to the SV 106 instrument.

The SV 150 is designed to be mounted on the tool being measured whilst the SV 105A and SV 105AF should be worn directly on the operator's hand. The SV 105AF also features a force sensors to detect the contact and to exclude periods of time when the tool is not in use. All three accelerometers have high shock resistance, no DC-shift effect and consume much less energy than IEPE / ICP sensors.



SV 150

SV 105A

SV 105AF

Performance:

Number of Axes	3	3	3
Sensitivity ($\pm 5\%$)	0.661 mV/ms ⁻² at 79.58 Hz	0.661 mV/ms ⁻² at 79.58 Hz	0.661 mV/ms ⁻² at 79.58 Hz
Measurement Range	2000 ms ⁻² PEAK	2000 ms ⁻² PEAK	2000 ms ⁻² PEAK
Frequency Response	0 Hz ÷ 1500 Hz	0 Hz ÷ 1500 Hz	0 Hz ÷ 1500 Hz
Resonant Frequency	16.5 kHz (MEMS transducer)	16.5 kHz (MEMS transducer)	16.5 kHz (MEMS transducer)
Electrical Noise	< 0,14 ms ⁻² RMS, Wh weighting	< 0,14 ms ⁻² RMS, Wh weighting	< 0,14 ms ⁻² RMS, Wh
Force Range	n/a	n/a	200 N

Electrical:

Supply Current	< 5.0 mA	< 5.0 mA	< 5.0 mA
Supply Voltage	3.3 V ÷ 5.5 V	3.3 V ÷ 5.5 V	3.3 V ÷ 5.5 V
Bias Voltage	1,5 V \pm 0.1 V	1.5 V \pm 0.05 V	1.5 V \pm 0.05 V
Output Impedance	51 Ohms	51 Ohms	51 Ohms
Charge / Discharge Time Constant	30 sec. typ	30 sec. typ	30 sec. typ
TEDS Memory	installed (power supply pin)	installed (power supply pin)	installed (power supply pin)

Environmental Conditions:

Maximum Vibration	100 000 ms ⁻² shock survival for MEMS	100 000 ms ⁻² shock survival for MEMS	100 000 ms ⁻² shock survival for MEMS
Temperature Coefficient	< +/- 0.02 %/°C	< +/- 0.02 %/°C	< +/- 0.02 %/°C
Temperature	from -10°C to +50°C	from -10 °C to +50 °C	from -10 °C to +50 °C
Humidity	up to 90 % RH, non-condensed	up to 90 % RH, non-condensed	up to 90 % RH, non-condensed

Physical:

Sensing Element	MEMS	MEMS	MEMS
Cable	integrated 1.4 meters	integrated 1.4 meters	integrated 1.4 meters
Connector	LEMO 5-pin plug (SV 106 compatible)	LEMO 5-pin plug (SV 106 compatible)	LEMO 5-pin plug (SV 106 compatible)
Dimensions	15.5mm x 15.5 mm x 15.5mm	69.6 mm x 31.4 mm thickness from 8.3 mm to 15 mm	69.6 mm x 31.4 mm thickness from 8.3 mm to 15 mm
Weight	20 grams (without cable)	50-60 grams (including cable and one of the vibration contact adapters)	50-60 grams (including cable and one of vibration contact adapters)

Accessories:

Calibration Adapter (optional)	SA 155	SA 105A	SA 105A
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Whole-body Vibration Accelerometers

The SV38V and SV 151 are accelerometers for whole-body vibration measurements with the SV 106 human vibration analyser. The accelerometers have a built-in memory (TEDS) containing information about the sensitivity that is automatically transferred to the SV 106 instrument.

In accordance with ISO 2631-1 seat accelerometers such as SV38V are placed on the operator's seat either on the seat-rest. For the SEAT transmissibility measurements the small size SV 151 is placed on the vehicle floor.



SV 151

SV 38V

Performance:

Number of Axis	3	3
Sensitivity ($\pm 5\%$)	5.81 mV/ms ⁻² at 15.915 Hz	50 mV/ms ⁻² at 15.915 Hz
Measurement Range	160 ms ⁻² PEAK	0.01 ms ⁻² RMS \div 50 ms ⁻² PEAK
Frequency Response	0 Hz \div 500 Hz	0.1 Hz \div 125 Hz
Resonant Frequency	5.5 kHz (MEMS transducer)	5.5 kHz (MEMS transducer)
Electrical Noise	< 0,066 ms ⁻² RMS, BL Wb weighting	< 0.005 ms ⁻² RMS, HP1 weighting

Electrical:

Supply Current	< 5.0 mA	< 5.0 mA
Supply Voltage	3.3 V \div 5.5 V	5.2 V \div 16 V
Bias Voltage	1.5 V \pm 0.1 V	2.5 V \pm 0.05 V
Output Impedance	51 Ohms	51 Ohms
Charge / Discharge Time Constant	30 sec. typ	30 sec. typ
TEDS Memory	installed (power supply pin)	installed (power supply pin)

Environmental Conditions:

Maximum Vibration	100 000 ms ⁻² shock survival for MEMS	100 000 ms ⁻² shock survival for MEMS
Temperature Coefficient	< \pm 0.01 %/°C	< \pm 0.01 %/°C
Temperature	from -10°C to +50°C	from -10 °C to +50 °C
Humidity	up to 90 % RH, non-condensed	up to 90 % RH, non-condensed

Physical:

Sensing Element	MEMS	MEMS
Cable	integrated 1.4 meters	integrated 1.4 meters
Connector	LEMO 5-pin plug (SV 106 compatible)	LEMO 5-pin plug (SV 106 compatible)
Dimensions	15.5mm x 15.5 mm x 15.5mm	236 mm diameter; thickness from 3.6 mm to 12 mm
Weight	20 grams (without cable)	550 grams (including cable and cushion)

Accessories:

Calibration Adapter (optional)	SA 155	SA 38
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Supervisor Software

Supervisor is a software package for health and safety specialists. The package supports all Svantek instruments for the health and safety market.

The Supervisor is designed to meet the needs of different users. In the case of simple applications that only require the analysis of the main results such as LAeq, LAFmax and Lcpeak, the program offers quick previews and reporting without the necessity of opening data files. More advanced applications are handled within sessions where the user can choose the type of analysis to be performed. Those who draw up noise or vibration reports on a daily basis will appreciate the report templates, which once created can be applied to different sets of measurement files.

Each instrument that is connected to Supervisor is remembered together with information such as the uploaded settings, the firmware version, as well as the calibration validity date and instrument clock time. When data is downloaded, they are automatically categorised by measurement time and assigned to the instrument's serial number.

Key features

- Easy to use, intuitive interface
- Easy measurement database management and browsing
- Convenient and fast report generation with templates
- Powerful tools for data analysis
- Easy installation including sample measurement files

Main applications

- Noise dosimetry
 - Data presentation with reference to limits
 - ISO 9612 noise exposure calculations
 - ISO 4869-2 hearing protection selection
 - What-if analysis
- Vibration exposure calculation in accordance with:
 - ISO 5349-2 for hand-arm vibration
 - ISO 2631-1 for whole-body vibration
- Sound level measurements
 - Time history recalculations with the possibility to remove the disturbances
 - 1/1 and 1/3 octave band sound analysis



Hand-Arm Vibration Exposure Calculation in accordance with ISO 5349-2

Hand-Arm vibration exposure (ISO 5349-2)

Add user Add task

[-] Zbychu
[-] Drill
[-] DRILL1.SVN
[-] DRILL2.SVN
[-] DRILL3.SVN

Show exposure: levels

User	Exposure duration	RMS (X)	RMS (Y)	RMS (Z)	AEQ	Partial exposure	Time to reach EAV	Time to reach ELV
Task	hh:mm	m/s ²	m/s ²	m/s ²	m/s ²	m/s ² A(8)	hh:mm	hh:mm
[+] Drill	00:00	5.389	10.012	5.489	12.618	0.364	01:00	04:02
File name: DRILL1 (Ch1-3)		5.662	12.274	5.929	14.757	0.426	00:13	00:55
File name: DRILL2 (Ch1-3)		5.630	9.386	5.236	12.134	0.350	00:20	01:21
File name: DRILL3 (Ch1-3)		4.831	7.852	5.272	10.617	0.307	00:26	01:46
Total duration:	00:00							
Daily exposure								
User						m/s ²		
Zbychu						0.364		

ISO 5349-2 gives practical guidelines in accordance with ISO 5349-1 of how to take hand transmitted vibration measurements at the workplace. These kinds of measurements are possible with the SV 106 human vibration analyser or SV 103 hand-arm vibration dosimeter. The data downloaded into the Supervisor database are assigned either to a particular user or to a task while all calculations are performed automatically. The measurements are recorded in m/s² and are directly comparable to the limits laid down by European Directive 2002/44/EC. It is also possible to convert these units into Points, which are widely used within the health & safety sector. All the information displayed within the panel window can be printed in the report.

Whole-Body Vibration Exposure Calculation in accordance with ISO 2631-1

Whole-Body vibration exposure (ISO 2631-1)

Add user Add task

[-] John
[-] Car

Mode: A[B] calculator

Show exposure: levels

User	Exposure duration	RMS (X)	RMS (Y)	RMS (Z)	Partial exposure (X)	Partial exposure (Y)	Partial exposure (Z)	Time to reach EAV	Time to reach ELV
Task	hh:mm	m/s ²	m/s ²	m/s ²	m/s ² A(8)	m/s ² A(8)	m/s ² A(8)	hh:mm	hh:mm
[+] Car	04:00	0.079	0.065	0.237	0.078	0.064	0.167	>24:00	>24:00
Total duration:	04:00								
Total exposure (X) Total exposure (Y) Total exposure (Z)									
					m/s ² A(8)	m/s ² A(8)	m/s ² A(8)		
					0.078	0.064	0.167		
Daily exposure									
User							m/s ²		
John							0.167		

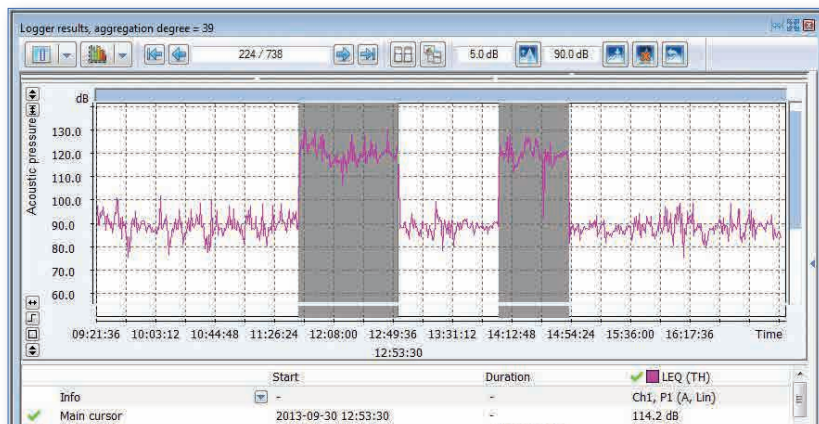
The ISO 2631-1 standard defines the general methodology to assess whole-body vibration exposure. These measurements can be performed with the SV 106 human vibration analyser or the SV 100A whole-body vibration dosimeter. The measurements downloaded into the Supervisor database are assigned either to a particular user or to a task while all calculations are performed automatically. The measurements are recorded in m/s² and are directly comparable to the limits laid down by European Directive 2002/44/EC. It is also possible to convert these units into Points, which are widely used within the health & safety sector. By clicking on Mode, you can switch to calculations based on VDV which is often necessary when the vibration is characterized as impulsive.

Supervisor Applications

Simulation of changes of noise source emission

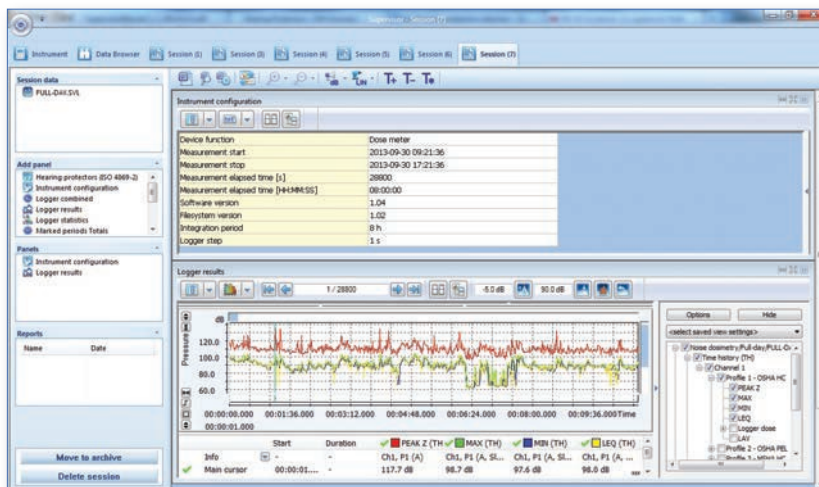


The Supervisor software gives tools to simulate hypothetical situations in which the noise differs from that which was measured. When selecting a data block it is possible to shift the data up or down for any given dB value. It is also possible to simulate a situation where noise is equal to a given dB level or completely removed from time history. The altered data is recalculated automatically and both the original and recalculated results are shown so as to answer the question "What if".



What if			V/DOSE V/DOSE_SH V/DOSE V/LAV V/LEQ V/SPL V/TWA V/PSL V/LEPd V/E V/EBH
LEQ time history source	Channel	Profile	
File name	Ch1	P1 - OSHA HC (A, Slow)	
Apply logger deletions, shifts & dips	Yes		
Parameters	Original value	New value	
Threshold [dB]	80.0	80.0	-
Criterion level [dB]	90.0	90.0	-
Exchange rate	5	5	-
Projected time [hh:mm]	08:00	08:00	-
Function name	Original value	Recalculated value	
DOSE	80.5 %	80.5 %	
DOSESH	80.5 %	80.5 %	
PDOSE	80.5 %	80.5 %	
LAV	88.5 dB	88.5 dB	
LEQ	90.7 dB	90.7 dB	
SPL	135.3 dB	135.3 dB	
TWA	88.5 dB	88.5 dB	
PSL	90.7 dB	90.7 dB	
LEPd	90.7 dB	90.7 dB	
E	3.7 dB	3.7 dB	
EBH	3.7 dB	3.7 dB	

Reporting: What You See is What You Get!



Supervisor creates reports in a very fast and easy way. The user selects a file and opens it by double click. The measurements are automatically grouped into context panels which can be opened and closed with a single click. The panels can be arranged with the drag & drop. Then you only need to click on the MS Word™ icon to print a report. The report layout can be saved at any time as a template and used for other files.

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Noise exposure recalculations in accordance with ISO 9612

User	T _m	T _{m,j}	T _m	L _{p,AeqTm}	L _{p,shum}	ΔL _{p,AeqTm}
John	Duration of task: m	Duration of samples ...	Average duration of ...	LEQ for task: m	Noise exposure level ...	LEQ values difference
Task	hh:mm	hh:mm;hh:mm;...	hh:mm	dB	dB	dB
[-] Drill	08:00		08:00	96.5	96.5	15.4*
File name:	T1-1: 2013-09-27 15:13:32			96.5		
File name:	T1-1: 2013-09-27 15:23:32			102.1		
File name:	T1-1: 2013-09-27 15:33:32			96.1		
File name:	T1-1: 2013-09-27 15:43:32			99.3		
File name:	T1-1: 2013-09-27 15:53:32			88.7		
		T _e	08:00			*exceeds 3dB
		Effective duration of...				
					L _{eq,sh}	U(L _{eq,sh})
					Daily noise exposure ...	Expanded uncertainty
					User:	dB
					John	96.5
						5.6

Measurement strategies...

Please select measurement strategy:

Strategy 1: Task-based measurement

Strategy 2: Job-based measurement

Strategy 3: Full-day measurement

The Supervisor software provides complete tool for determination of occupational noise exposure from noise level measurements. The Supervisor provides automatic calculation of all required measurement results and uncertainties in accordance to three measurement strategies described in ISO 9612: task-based, job-based and full-day.

Hearing protection selection in accordance with ISO 4869-2

Mode	Protectors database	Manage database
File	Channel	
T1-1	Ch1	
Protector	Protector	
[-] SNR method:		
L _c [dB]	117.0	
SNR [dB]	40	
Current L _A [dB]	77	Good
		Compare protectors
[-] HML method:		
L _A [dB]	112.0	
L _c [dB]	117.0	
H [dB]	30	
M [dB]	33	
L [dB]	35	
Current L _A [dB]	78	Good
		Compare protectors

Workers should wear hearing protectors if the noise or sound level at the workplace exceeds 85 decibels. The selection of hearing protectors depends on a noise level in the working environment. Therefore the selection of suitable hearing protector should be based on noise measurement. Each hearing protector has attenuation characteristics expressed in units of three methods:

- SNR** Single Number Rating,
- HML** High, Medium and Low frequency method, using A-weighted and C-weighted sound measurements in the calculation
- OCTAVES** the most accurate method requiring measurement in 1/1 octave bands

The Supervisor supports all three methods allowing users to build up the hearing protectors data base. The calculation is done automatically with selection of data files containing noise results required by selected method.

SV 30A, SV 33, SV 34 Acoustic Calibrators

An acoustic calibrator is a device which produces an acoustic pressure of defined level and frequency. In other words, an acoustic calibrator provides a template of acoustic pressure. By using such a reference we can check the accuracy of the measurements taken by the sound level meter and adjust them if a drift error in the sensitivity is detected. For this reason the norms and standards require the measurement channel to be calibrated before and also after each measurement session to verify the results.

Svantek calibrators are based on the reference microphone and microprocessor controlled signal source including digital 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 levels.

The accuracy of acoustic calibrator should match the class of the sound level meter. A Class 1 or Class 2 calibrator should be used, depending on the class of instrument.

Features

- SV 30A & SV 33 class 1 sound calibrators in accordance with IEC 60942:2003
- SV 34 class 2 sound calibrator in accordance with IEC 60942:2003
- Frequency 1 kHz
- 94 dB or 114 dB levels (SV 30A)
- 114 dB level (SV 33, SV 34)
- Built-in 1/2" reference microphone (SV 30A)
- Built-in 1/2" MEMS reference microphone (SV 33, SV 34)
- Microphone presence detection (SV 30A)
- Built-in temperature and static pressure compensation
- Automatic power off
- Dimensions 65 x 65 x 70 mm
- Robust housing



SV 30A

SV 33

SV 34

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 Accuracy	± 0.3 dB	± 0.3 dB	± 0.5 dB
Frequency Accuracy	± 0.2 %	± 0.2 %	± 0.2 %
Total Harmonic Distortion (THD)	< 0.25 % 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 7 s, max 10 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"
Storage Temperature Range	-25 °C ÷ +70 °C	-25 °C ÷ +70 °C	-25 °C ÷ +70 °C
CE Classification	EMC: EN 50081-1, EN 50082-1 Safety: EN 61010-1:2001	EN 61010-1: 2010 EN 61326-1:2006 EN 55022:2010 EN 60942:2003	EN 61010-1: 2010 EN 61326-1:2006 EN 55022:2010 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	23 °C	23 °C
Atmospheric Pressure	101.3 kPa	101.3 kPa	101.3 kPa
Humidity	30 % ÷ 80 % RH	30 % ÷ 80 % RH	30 % ÷ 80 % RH
Effective Microphone Load Volume	250 mm ³ for microphone type B&K 4134	250 mm ³ for microphone type B&K 4134	250 mm ³ for microphone type B&K 4134

Power supply:

Battery Type	2 x LR03 (IEC) / AAA (ANSI) alkaline batteries	2 x LR03 (IEC) / AAA (ANSI) alkaline batteries	2 x LR03 (IEC) / AAA (ANSI) alkaline batteries
Continuous Operating Time	40 hours for 94 dB level, 30 hours for 114 dB level	30 hours	30 hours
Stand-by Period	around two years (auto switch ON / OFF)	around two years (auto switch OFF)	around two years (auto switch OFF)
Minimal Voltage Requirements	2.1 V	2.1 V	2.1 V



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 prior to and following a measurement or series of measurements to check that an instrument is working correctly. The calibrator is based on a built-in tri-axial reference accelerometer and computer-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 SV111 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 select the level of calibration from 1 m/s² to 10 m/s². 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 adaptors 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.

Features

- Self-contained portable vibration calibrator
- Low frequency calibration at 15.92 Hz with maximum payload of 1kg!
- Easy calibration of all types of vibration transducers for acceleration, velocity and displacement at 15.92 Hz; 79.6 Hz; 159.2 Hz and 636.6 Hz
- In-field accelerometer checks according to ISO 8041
- Built-in reference accelerometer
- Cross-axes/transverse vibration detection
- Complete seat-accelerator calibration
- Automatic fault detection
- Display showing frequency, magnitude and errors
- Automatic power off with timer
- Robust design
- Rechargeable battery
- Ready and easy to use in the field



Technical Specifications



Calibration Signal Parameters

Vibration Accelerations (RMS in m/s ²)	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)	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)	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 $\pm 3\%$
Frequency Error	Less than $\pm 0.05\%$
Transverse Vibration	Less than 10% of the main direction
Harmonic Distortion	< 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	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 12 mm

Working Conditions

Temperature Range	-10 °C ÷ 50 °C
Humidity Range	25% ÷ 85%

Power Supply

Battery Type	Rechargeable 6 V/12 Ah
Continuous Operating Time	Up to 20 hours
Automatic Switch Off	From 5 to 60 minutes adjustable
Charging Time	Less than 10 hours
Power Supply for Charger	15 W; 8÷24 V

Overall Weight and Dimensions

Weight	8.2 kg (incl. battery)
Dimensions	395 x 270 x 194 mm

Optional Adapters

SA 111	seat accelerometer adapter for SV 38, SV 38V, SV 100 (included)
SA 105A	adapter for SV 105A (option)
SA 155	adapter for SV150 and SV151 (option)
SA 38	adapter for SV 101 (option)
SA 40	adapter for SV 207A, Dytran 3233A, SV 39A, Dytran 3143M1 (option)
SA 44	adapter for SV 50, Dytran 3023M2 (option)
SA 154	adapter for SV 84 (option)

Note: accelerometers shown on photos are not the part of SV111 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.

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



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