

# SVAN 971

Class 1  
Sound Level Meter



# SVAN 971 Sound Level Meter

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

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

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

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

The **OLED DISPLAY** is a full color and high contrast so it can be used in a sunlight or even at night. The OLED technology doesn't use back-light giving SVAN 971 more battery operating time. The size of display is a perfect compromise between power savings and visibility.



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

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

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

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

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

## About SVAN 971

The SVAN 971 is a Class 1 sound level meter in accordance to IEC 61672. The instrument is extremely small but offers unprecedented state of the art technology. For those who do not need to alter the measurement settings, the SVAN 971 has an extremely simple operational mode with only Start/Stop controls. This means that the SVAN 971 is the ideal choice for many applications including industrial noise measurement for health and safety, short term environmental noise monitoring and general noise measurements for acoustic consultants or technical engineers. The instrument is easily calibrated in the field using an acoustic calibrator as the calibration begins

automatically when the microphone is inserted into the calibrator. The instrument also includes a built-in vibration sensor that provides information about vibrations that could influence the measurements. The SVAN 971 measures broad-band results with all necessary weighting filters as well as 1/1 octave or 1/3 octave band filters. It also offers time-history logging with two adjustable logging steps. The audio events recording allows to listen and recognize noise sources. The data are stored on a microSD card and can be easily downloaded to a PC using the Supervisor or SvanPC++ software.



## What's inside the SVAN 971 kit?

The kit consists of SVAN 971 Class 1 sound level meter with detachable preamplifier SV 18 and high quality omni-directional ACO SV 7052E microphone, compliant to IEC61094-4. The list of accessories includes: SA 22 windscreen, 8 GB microSD card, four AAA batteries, USB cable, and CD with user manual. Each SVAN 971 has its factory calibration certificate and 36 months warranty card.



## PC Software for SVAN 971

**Supervisor** software supports data download, instrument configuration and provides complete set of tools for determination of occupational noise exposure from noise level measurements in accordance to all standards using TWA and DOSE such as OSHA, ACGIH, MSHA, NR-15 or NHO-01. The data files from the SVAN 971 can be used for calculation of all required measurement results and uncertainties in accordance to the three measurement strategies described in ISO 9612.

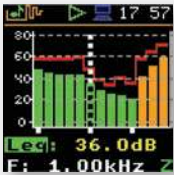


**SvanPC++** is a PC software supporting functions such as measurement data downloading from instruments to PC, measurement setups creation, basic Leq/RMS recalculation, measurement results in text, table and graphical form of presentation, export data to a spread sheet or text editor applications. New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

## Optional functions



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



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



**DOSIMETER** option provides results such as: DOSE, DOSE\_8h, PrDOSE, LAV, LAE (SEL), LAE8 (SEL8), PLAE (PSEL), E, E\_8h, LEPd, PTC PEAK COUNTER), PTP (PEAK THRESHOLD %), ULT (UPPER LIMIT TIME), TWA, PrTWA, Lc-a and the selection of exchange rate between 2, 3, 4, 5, 6. It can be activated at any time by ordering the activation code.

## Optional accessories to SVAN 971



SC91  
Microphone  
Extension Cable



SA 271  
Microphone  
Outdoor  
Protection Kit



SM 271 LITE  
Outdoor  
Monitoring  
Case



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



SA 420B  
Tripod Up To  
4 m Height



## SVAN 971 Technical Specifications

Standards	Class 1: IEC 61672-1:2013, Class 1: IEC 61260-1:2014 (Type Approved)
Weighting Filters	A, B, C, Z, LF
Time Constants	Slow, Fast, Impulse
RMS Detector	Digital True RMS detector with Peak detection, resolution 0.1 dB
Microphone	ACO SV 7052E, 35 mV/Pa, prepolarised 1/2" condenser microphone
Preamplifier	SV 18 detachable (60 UNS thread)
Linear Operating Range	25 dBA RMS ÷ 140 dBA Peak (in accordance to IEC 61672)
Dynamic Measurement Range	15 dBA RMS ÷ 140 dBA Peak (typical from noise floor to the maximum level)
Internal Noise Level	Less than 15 dBA RMS
Dynamic Range	>110 dB
Frequency Range	10 Hz ÷ 20 kHz
Meter Mode Results	Elapsed time, Lxy (SPL), Lxeq (LEQ), Lxpeak (PEAK), Lxymax (MAX), Lxymin (MIN), where x - weighting filter A/ B/ C/ Z; y - time constant Fast/ Slow/ Impulse LR (ROLLING LEQ OPTION), Ovl (OVERLOAD), Lxye (SEL), LN (LEQ STATISTICS), Lden, LEPd, Ltm3, Ltm5
Dosimeter Mode Results	Lxy (SPL), Lxeq (LEQ), Lxpeak (PEAK), Lxymax (MAX), Lxymin (MIN), DOSE, (optional) DOSE_8h, PrDOSE, LAV, Lxye (optional) (SEL), Lxye8 (SEL8), PLxye, (PSEL), E, E_8h, LEPd, PTC (PEAK COUNTER), PTP (PEAK THRESHOLD %), ULT (UPPER LIMIT TIME), TWA, PrTWA, Lc-a Exchange Rate 2, 3, 4, 5, 6
Measurement Profiles	Simultaneous measurement in three profiles with independent set of filters (x) and detectors (y)
Statistics <sup>1</sup>	Ln (L1-L99), complete histogram in meter mode
Data Logger <sup>1</sup>	Time-history logging of summary results, spectra with two adjustable logging steps down to 100 ms
1/1 Octave Analysis <sup>1</sup> (optional)	Real-time analysis meeting Class 1 requirements of IEC 61260, centre frequencies from 31.5 Hz to 16 kHz
1/3 Octave Analysis <sup>1</sup> (optional)	Real-time analysis meeting Class 1 requirements of IEC 61260, centre frequencies from 20 Hz to 20 kHz
Audio Recording <sup>1</sup> (optional)	Audio events recording, trigger and continuous mode, 12 kHz sampling rate, wav format
Voice Comments	Audio records on demand, created before or after measurement, added to measurement file
Memory	MicroSD card 16 GB (removable & upgradeable up to 128 GB)
Display	Colour 96 x 96 pixels OLED type
Keyboard	8 push buttons
Communication Interfaces	USB 2.0 client SV 76 RS 232 cable with external power supply connector (optional)
Power Supply	Four AAA alkaline or rechargeable NiMH batteries (not included) operation time 16 h ÷ 24 h <sup>2</sup> USB interface 100 mA HUB
Environmental Conditions	Temperature from -10 °C to 50 °C (14 °F to 122 °F) Humidity up to 95 % RH, non-condensed
Physical Characteristics	Dimensions 232.5 mm x 56 x 20 mm (including microphone and preamplifier) Weight Approx. 225 grams with batteries (Approx. 8.20 oz)

<sup>1</sup>function parallel to the meter mode

<sup>2</sup>depending on configuration and environmental conditions

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