

SVAN979

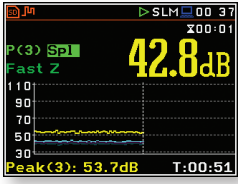
Sound & Vibration Analyser



INSTRUMENTATION FOR SOUND & VIBRATION MEASUREMENTS

SVAN979 Sound & Vibration Analyser

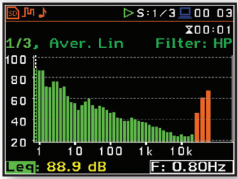
IEC 61672-1 Sound Level Meter



Sound level meter: Leq, LMax, LMin, LPeak, Spl, SEL, Statistics, Time History

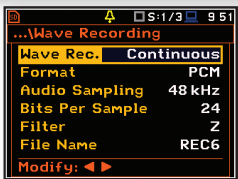
The SVAN979 is a type approved class 1 sound level meter designed for wide range of engineering applications. Sound level meter is basic instrument's mode allowing to measure and store all necessary acoustic results including SPL, Leq, Max, Min and Peak. All these results can be calculated with three different frequency weightings simultaneously (profiles). Information about fluctuation of 4 results: Peak, Leq, Min and Max, for each profile, can be also recorded as time history with adjustable logging step from 2 ms. For the hand-held applications SVAN979 provides pause function with capability of erasing unwanted results.

Frequency analysis



The SVAN979 instrument is equipped with 1/1 and 1/3 octave real-time analysis as well as FFT. In the sound level meter mode the statistic analysis in 1/1 or 1/3 octaves is also available. Frequency analysis is an essential tool for sound & vibration engineers. Depending on an application it can be more or less detailed. For advanced applications that require the narrow band frequency analysis, SVAN979 offers the 1/6* or 1/12* octave real-time analysis.

Time domain signal recording



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

Building acoustics tools

The frequency analysis is a critical tool in building acoustics measurements. Depending on the application, frequency analysis can be done in 1/1 octave or 1/3 octave spectra. SVAN979 records the time history of spectra with milliseconds logging step. It enables one to calculate RT60 results as well as sound insulation results.

Additionally SVAN979 offers the functionality of a signal generator which is capable of generating pink noise, white noise or a selected sine wave. The signal generator works together with the RT 60 function which is calculated in 1/1 or 1/3 octave bands.

The SVAN979 is also capable of making STIPA measurements. Speech-intelligibility is a key issue in human to human communications in applications such as evacuation systems, telecommunications, public announcement systems (e.g. train stations, airports) or rooms used for education etc.

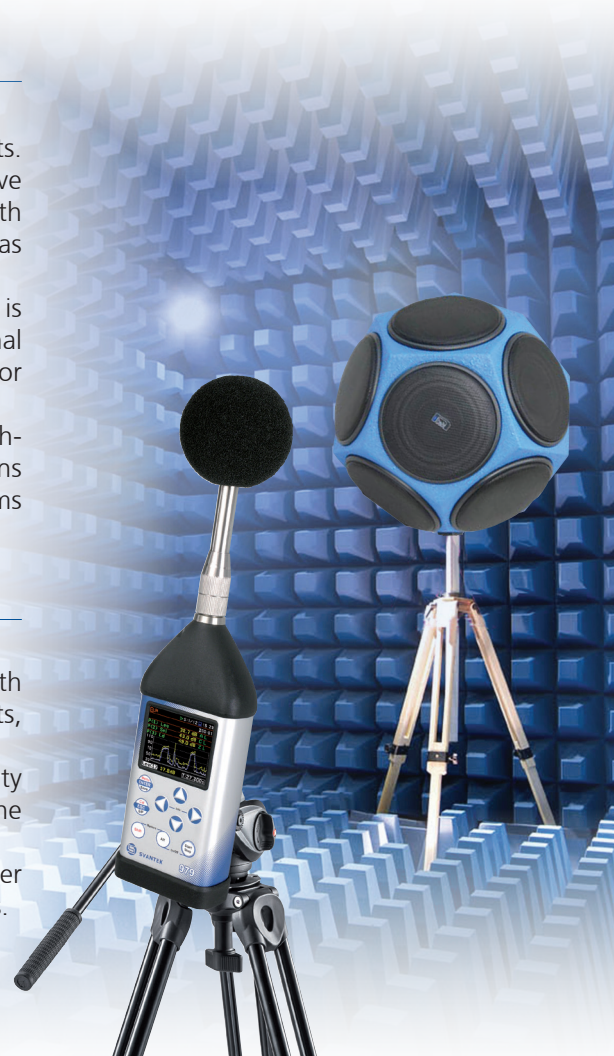
SvanMobile Application

SvanMobile is an application for Android devices that uses the Bluetooth connection to control the SVAN979. It allows the user to trigger measurements, edit settings, rename files and view the results remotely.

Anyone who makes measurements in the environment will appreciate the ability of SvanMobile to automatically add weather data and GPS position to the measurement report.

SvanMobile also allows to link measurement files from the sound level meter to media files from the smartphone such as photos, video or audio recordings.

*Function requires optional software or hardware accessories. For more information contact Svantek distributor or check ordering information on svantek.com website.



Outdoor noise monitoring kit*

With optional accessories SVAN979 can be used for outdoor noise monitoring. The SV 279 outdoor noise monitoring kit allows an unattended noise measurements, during which measurement data can be automatically downloaded to remote PC via 3G transmission. To extend the SV 279 operational time in field, battery can be recharged from solar panel or external DC power source allowing continuous noise monitoring.

ISO 1996-2 Tonality*

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

Remote communication*

Nowadays remote configuration and data downloading is a standard whenever unattended noise or vibration monitoring is conducted. For this reason SVAN979 has been designed to cooperate with external 3G modem that use popular SIM cards. Using Internet connection the instrument communicates with dedicated software installed on your PC (SvanPC++ Remote Communication module). The SvanPC++_RC module supports configuration of the monitoring station, configuration of advanced alarms that combine triggers based on time with noise thresholds as well as advanced features such as automatic data download, CSV and HTML data publishing or FTP upload.

SvanNET connection*

SvanNET is a relay server supporting connection between PC and SVAN979 in case of 3G communication. The SvanNET allows the usage of all types of SIM cards with the SVAN979 modem regardless if they have public or private IP. The connection over the SvanNET is fully supported by the SvanPC++ Remote Communication module for automatic control of the noise monitoring station.

Vibration level meter

Vibration level meter: RMS, PEAK, PEAK-PEAK, MAX, Time History

One amazing feature of the SVAN979 is that if you disconnect the microphone preamplifier, you can use the instrument to take vibration measurements - simply by connecting a cable* and a vibration sensor*. Vibration level meter is basic instrument's mode allowing to integrate and record all necessary vibration results including RMS, MAX, Peak, Peak-Peak. All these results can be calculated with three different frequency weightings simultaneously (profiles). Information about fluctuation of 4 results: RMS, Peak, Peak-Peak, Max can be also recorded as time history in a logger file.



*Function requires optional software or hardware accessories. For more information contact Svantek distributor or checkordering information on svantek.com website.

SVAN979 Technical Specifications

Sound Level Meter & Analyser

Standards	Class1: IEC 61672-1:2013 (IEC 61672-1:2002 PTB approval 21.21/13.06)
Meter Mode	Elapsed time, Lxy (SPL), Lx _{eq} (LEQ), Lx _{peak} (PEAK), Lx _{ymax} (MAX), Lx _{ymin} (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
Detector 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)
Total Dynamic Range	12 dBA RMS ÷ 140 dBA Peak (typical from noise floor to the maximum level)
Internal Noise Level	less than 12 dBA RMS
Frequency Range	3.15 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 1/6 or 1/12 octave ¹ real-time analysis (optional) FFT ¹ real-time analysis 1600 lines, up to 20.0 kHz band RPM ¹ rotation speed measurement parallel to the vibration measurement (optional) User programmable second order band pass filters ¹ (optional)
Filters	HP1, HP3, HP10, Vel1, Vel3, Vel10, VelMF, Dil1, Dil3, Dil10, Wh
RMS Detector	Digital True RMS detector with Peak detection, resolution 0.1 dB
Detector Time constants	From 100 ms to 10 s
Accelerometer (optional)	Any IEPE accelerometer
Measurement Range	Transducer dependent
Frequency Range	0.5 Hz ÷ 22.4 kHz (transducer dependent)

General Information

Input	LEMO 7-pin: Direct AC, Direct AC with 200 V polarisation, Direct DC or IEPE type with TEDS
Self-vibration Monitoring	Built-in
Dynamic Range	115 dB
Frequency Range	0.5 Hz ÷ 22.4 kHz, sampling rate 48 kHz
Data Logger 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 NiMH AA rechargeable batteries (included) operation time > 8 h ÷ 12 h (4.8 V / 2.6 Ah) ² SA 17A external battery pack (optional) operation time > 24 h ² External power supply 6 V/500 mA DC ÷ 15 V/250 mA DC USB interface 500 mA HUB
Environmental Conditions	Temperature from -10 °C to 50 °C Humidity up to 90 % RH, non-condensed
Dimensions	305 x 79 x 39 mm (with microphone and preamplifier)
Weight	Approx. 0.6 kg with batteries

¹function works together with meter mode

²depends on instrument operation mode

Our Company's policy is based upon continuous product development and innovation.
Therefore, we reserve the right to change the specifications without any prior notice whatsoever.

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