SVAN 977
Sound & Vibration Analyser
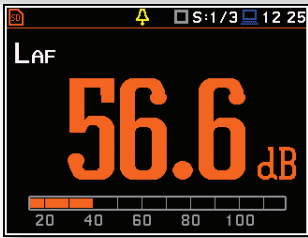
1/3, Aver. Lin   Filter: HP
Leq: 58.0 dB   F: 0.80Hz

SVANTEK

INSTRUMENTATION FOR SOUND & VIBRATION MEASUREMENTS

SVAN977 Sound & Vibration Analyser

IEC 61672-1 Sound Level Meter

Sound level meter: Leq, LMax, LMin, LPeak, Spl, SEL, Statistics, Time History
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 profiles which enable 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).

Vibration level meter*
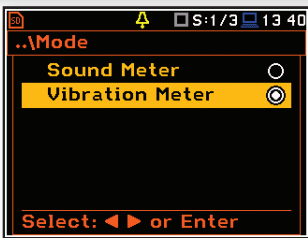
Vibration level meter: RMS, PEAK, PEAK-PEAK, MAX, Time History
Vibration level meter is basic instrument's mode allowing to integrate and record all necessary vibration results including RMS, MAX, Peak, Peak-Peak. All these results can be calculated with three different frequency weightings simultaneously (profiles). Information about fluctuation of 4 results: RMS, Peak, Peak-Peak, Max can be also recorded as time history.

Ultrasound measurements*
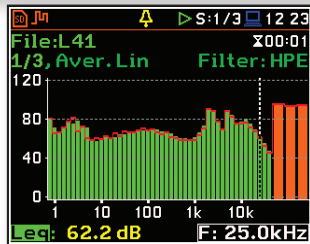
With a special microphone and 1/3 octave or FFT analysis SVAN977 provides analysis of the ultrasounds up to 40 kHz. The ultrasound band is normally considered as the frequency range above 20 kHz. Ultrasound is used in a number of industrial processes such as cleaning, drilling or welding. It is also used in hospitals for medical procedures.
Any direct eye contact with the ultrasound source can results in loosing the eyesight. On the other hand high-level ultrasonic components (above 20 kHz) are capable of causing damage to the hearing. Limits of permissible ultrasound levels are usually expressed in terms of Leq and Max values specified in 1/3 octave bands for 20 kHz, 25 kHz, 31.5 kHz and 40 kHz.

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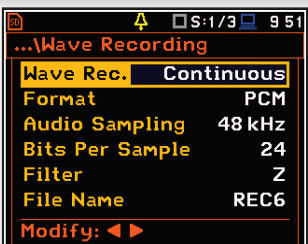
Time signal recording means recording the raw signal samples with defined frequency up to 48 kHz. Analysis of the raw signal is used whenever frequency analysis is not sufficient. Post-processing of wave files such as calculation of tonality is available in SvanPC++ program.
Time signal is recorded in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

SvanMobile Application*
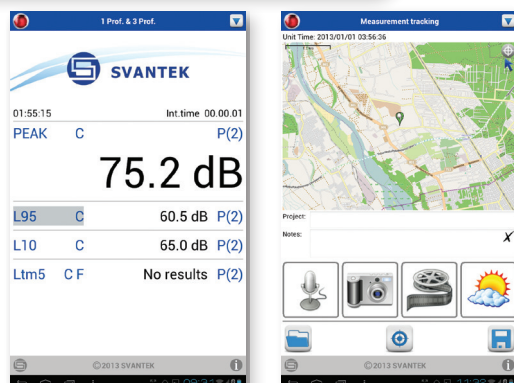
SvanMobile is an application for Android devices that uses the Bluetooth connection to control the SVAN977. It allows the user to trigger measurements, edit settings, rename files and view the results remotely.
Anyone who makes measurements in the environment will appreciate the ability of SvanMobile 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 SVAN977 can be used for outdoor noise monitoring. The SV277 outdoor noise monitoring kit allows an unattended noise measurements without recharging the battery, during which measurement data can be automatically downloaded to remote PC via 3G or WiFi transmission. To extend the SV277 operational time in field, battery can be recharged from solar panel or external DC power source allowing continuous noise monitoring.

Advanced alarms*
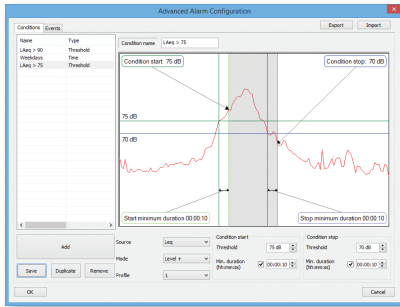
The SVAN977 with 3G modem can send an alarm via sms text message or e-mail whenever user-defined threshold levels are exceeded. The advanced alarms function allows to combine triggers based on time, noise threshold, meteo conditions or spectrum. The system is flexible enough to alert different people depending on the day of the week or the time of day.

Remote communication*

Nowadays remote configuration and data downloading is a standard whenever unattended noise or vibration monitoring is conducted. For this reason SVAN977 has been designed to cooperate with external 3G modem that uses 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 SVAN977 in case of 3G communication. The SvanNET allows the usage of all types of SIM cards with the SVAN977 modem regardless if they have public or private IP. The connection over the SvanNET allows users to use a mobile phone or tablet to check the status of the noise monitoring station. SvanNET connection is also supported by the SvanPC++_RC application.

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

SVAN 977 Technical Specifications

Sound Level Meter & Analyser

Standards	Class 1: IEC 61672-1:2002
Meter Mode	Elapsed time, Lxy (SPL), Lxeq (LEQ), Lxpeak (PEAK), Lxymax (MAX), Lxymin (MIN), LR (ROLLING LEQ), Ovl (OVERLOAD), Lxye (SEL), LN (LEQ STATISTICS), Lden, LEPd, Ltm3, Ltm5
	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)
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 and 1/1 or 1/3 octave analysis
Data Logger[1]	Time-history logging of summary results, spectra with two adjustable logging steps
Audio Events Recording[1]	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[1]	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 > 12 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	340 x 79 x 39 mm (with microphone and preamplifier)	
Weight	Approx. 0.6 kg with batteries	

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

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Therefore, we reserve the right to change the specifications without prior notice.

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