

SVAN 977

Sound & Vibration Analyser

The SVAN 977 is the next generation of Class 1 sound & vibration instruments and is designed to meet the needs of both environmental monitoring and occupational health and safety monitoring specialists. Its exceptional hardware design also enables the measurement of ultrasound frequencies in the 40 kHz band.

The SVAN 977 provides broad-band results with all standard weighting filters and also offers an incredible time-history logging capability providing broad-band results and spectra with adjustable logging steps.

Audio recording can be performed simultaneously with time-history logging as either a separate wave file or as an audio events inside time-history files. This solution enables noise source recognition and data post-processing. Manual and automatic triggering of audio recording is also available. Measurement results are recorded in three acoustic or vibration profiles enabling measurements to be performed with

3 different filters (e.g. A, C, Z) and 3 different detector time constants (e.g. Fast, Slow, Impulse).

Measurement data is stored on a microSD card and can be easily downloaded to a PC using SvanPC++ software over either USB or RS 232 interfaces.

The powerful DSP (digital signal processor) used in the SVAN 977 instrument can simultaneously operate in meter mode and perform 1/1 or 1/3 octave real-time analysis including statistical calculations. Additional functions like FFT analysis and Rotation Speed Measurement are also available.

The instrument is powered by four AA standard or rechargeable NiMH batteries (separate charger is required), from an external DC power source or USB interface. The robust and light weight design accomplishes the exceptional features of this instrument.

Features

- Class 1 IEC 61672 sound level measurements
- Dedicated for:
 - general acoustic measurements
 - environmental noise monitoring
 - ultrasound measurements in 40 kHz band
 - general vibration measurements (acceleration, velocity and displacement)
 - hand-arm vibration measurements
- Three parallel independent profiles
- 1/1 or 1/3 octave real-time analysis (option)
- FFT analysis (optional)
- Time-domain signal recording & audio events recording (option)
- Reverberation time measurements (option)
- Advanced Data Logger including spectral analysis
- MicroSD card providing almost unlimited logging capacity
- Bluetooth™ interface (version dependent)
- All weather microphone protection kit designed for community and airport noise monitoring (option)
- OLED color display with super brightness and contrast
- Hand held, light weight and robust case
- Easy to use



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Technical Specification

Sound Level Meter & Analyser

Standards	Class 1: IEC 61672-1:2002
Meter Mode	SPL, L_{eq} , SEL, L_{den} , L_{tm3} , L_{tm5} , Statistics - L_n (L_1 - L_{99}), L_{Max} , L_{Min} , L_{Peak}
Analysers	Simultaneous measurement in three profiles with independent set of filters and detectors 1/1 or optional 1/3 octave** real-time analysis meeting class 1 requirements of IEC 61260 FFT** analysis 1600 lines, up to 40.0 kHz band (option) 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 Measurement Range	15 dBA RMS - 140 dBA Peak (typical from noise floor to the maximum level)
Internal Noise Level	less than 15 dBA RMS
Frequency Range	10 Hz ÷ 20 kHz*
Statistics	L_n (L_1 - L_{99}), complete histogram in meter mode

*up to 40 kHz with a different microphone, e.g. GRAS 40AM

Vibration Level Meter & Analyser

Standards	ISO 10816-1
Meter Mode	RMS, MAX, Peak, Peak-Peak
Analysers	Simultaneous measurement in three profiles with independent set of filters and detectors 1/1 or optional 1/3 octave** real-time analysis FFT** analysis 1600 lines, up to 40.0 kHz band (option) RPM** rotation speed measurement parallel to the vibration measurement (option)
Filters	Acceleration: HP1, HP3, HP10; Velocity: Vel1, Vel3, Vel10, VelMF; Displacement: Dil1, Dil3, Dil10
RMS Detector	Digital True RMS detector with Peak detection, resolution 0.1 dB Time constants: from 100 ms to 10 s
Accelerometer (option)	Any IEPE accelerometer
Measurement Range	Transducer dependent
Frequency Range	0.5 Hz ÷ 40 kHz (transducer dependent)

Basic Data

Input	IEPE type (TNC connector)
Self-vibration Monitoring	Built-in
Dynamic Range	> 110 dB
Data Logger ¹	Time-history logging with adjustable logging steps Time-domain signal recording and audio events recording function to microSD card (option)
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 SV 55 option) 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)*** Four rechargeable AA batteries operation time > 16 h (4.8 V / 2.6 Ah)*** SA 17A external battery pack (option) operation time > 24 h (option)*** External power supply 6 V/500 mA DC ÷ 15 V/250 mA DC
Environmental Conditions	USB interface 500 mA HUB 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

** each function parallel to the meter mode *** depends on instrument's operation mode

Continuous product development and innovation are the policy of our company. Therefore, we reserve the right to change the specifications without prior notice.

DISTRIBUTOR: