SVAN 977
Sound & Vibration Analyser

SVAN 977 is a new generation Type 1 sound & vibration level meter and analyser. Instrument is intended to general acoustic & vibration measurements, environmental monitoring, occupational health and safety monitoring. Exceptional hardware design enables ultra sound measurements in 40 kHz band.

SVAN 977 provides broadband results with all required weighting filters and also offers an incredible time history logging capability providing broad band results and spectra with adjustable double (long and short) logging steps. Audio recording can be performed simultaneously to time history logging as a separate wave file or as audio events inside time history files. This solution enables noise sources recognition and further data post-processing. Manual and automatic triggering of audio recording is also available. Measurement results are recorded in three acoustic or vibration profiles which means that every measurement is simultaneously performed with 3 different filters (e.g. A, C, Z) and 3 different detector time constants (e.g. Fast, Slow, Impulse). Each profile provides significant number of results (like for sound Leq, LMax, LMin, LPeak, Spl, SEL or RMS, PEAK, MAX, in case of vibration measurements).

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

Computational power of digital signal processor used in SVAN 977 instrument can, simultaneously to the meter mode, perform real-time 1/1 or 1/3 octave analysis including statistical calculations. Functions such as real-time FFT analysis and Rotation Speed Measurement are also available. Highly developed user interface uses networks like GPRS, Ethernet, WLAN or ZigBee™ for remote data download and settings configuration. Built-in Bluetooth™ interface together with smart-phone application SvanMobile, extends measurement capabilities with all features offered by smart-phones such as text/voice comments, photo, video, GPS position etc.

Instrument is powered from four AA standard or rechargeable NiMH batteries (separate charger is required). The powering of the instrument from the External DC power source or USB interface is also provided. Robust and light weight design accomplishes the exceptional features of this new generation instrument.

FEATURES

- Type 1 IEC 61672:2002 sound level measurements
- Dedicated for:
  - general acoustic measurements
  - environmental noise monitoring
  - occupational health and safety noise monitoring
  - ultra sound 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
- FFT real-time analysis
- Time-domain signal recording & audio events recording
- Reverberation time measurements
- Advanced Data Logger including spectral analysis
- MicroSD card providing almost unlimited logging capacity
- Bluetooth™ interface
- Remote communication (GPRS, Ethernet, WLAN, ZigBee™)
- Acoustic dose measurements
- All weather microphone protection kit designed for community and airport noise monitoring
- OLED color display with super brightness and contrast
- All weather microphone protection SA 203A
- Hand held, light weight and robust case
- TNC input connector
- Easy in use

SVANTEK
continuous innovation

INSTRUMENTATION FOR SOUND & VIBRATION MEASUREMENTS

TECHNICAL SPECIFICATIONS

SOUND LEVEL METER & ANALYSER

Standards	Type 1: IEC 61672-1:2002
Meter Mode	SPL, L_{eq}, SEL, L_{den}, L_{tm3}, L_{tm5}, Statistics - L_n (L1-L99), L_{Max}, L_{Min}, L_{Peak} Simultaneous measurement in three profiles with independent set of filters and detectors
Analyser	1/1 or optional 1/3 octave[1] real-time analysis meeting Type 1 requirements of IEC 61260 FFT [1] real-time analysis 1600 lines, up to 20.0 kHz band (option) Reverberation time analysis in 1/3 octave bands (RT 60 option)
Weighting Filters	A, C , Z
RMS Detector	Digital True RMS detector with Peak detection, resolution 0.1 dB Time constants: Slow, Fast, Impulse
Microphone	ACO 7052E, 38 mV/Pa, prepolarised 1/2" condenser microphone
Preamplifier	SV 12L IEPE preamplifier
Total dynamic measurement range	15 dBA - 133 dBA (typical from noise floor to the maximum level)
Linear operating range	25 - 133dBA (in accordance to IEC 61672)
Internal Noise Level	less than 15 dBA RMS
Frequency Range	10 Hz ÷ 20 kHz
Statistics	Ln (L1-L99), complete histogram in meter mode
Data Logger	Time-history logging of summary results, spectra with adjustable double (long and short) logging steps
Audio Events Recording	Audio records to time history data or wav format on demand with selectable band and recording period

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 optional 1/3 octave[1] real-time analysis FFT[1] real-time analysis 1600 lines, up to 20.0 kHz band (option) RPM[1] rotation speed measurement parallel to the vibration measurement (option)
Filters	HP1, HP3, HP10, Vel1, Vel3, Vel10, VelMF, 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 ÷ 22.4 kHz (transducer dependent)

BASIC DATA

Input	IEPE type (TNC connector)	
Self-vibration Monitoring	Built-in	
Dynamic Range	110 dB	
Frequency Range	0.5 Hz ÷ 22.4 kHz, sampling rate 48 kHz	
Data Logger[1]	Time-history logging with adjustable double (long and short) logging steps	
	Time-domain signal recording and audio events recording function	
	both to micro SD card or USB Memory Disk	
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) or external USB Memory Stick (not included)	
Interfaces	USB 1.1 Client, USB 1.1 Host, Bluetooth, RS 232 (with SV 55 option), IrDA (option)	
	GPS time synchronisation and positioning	
	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 (option)	operation time > 24 h (option)[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	

[1]each function parallel to the meter mode [2]depends on instrument 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:

SVANTEK

ISO 9001 CERTIFIED

SVANTEK Sp. z o. o.
ul. Strzygłowska 81
04-872 WARSAW, POLAND
phone/fax (+48) 22 51 88 320, (+48) 22 51 88 312
http://www.svantek.com e-mail: office@svantek.com.pl