DECIBELÍMETRO SVAN 977

Descrição:

The SVAN 977 is the next generation of Type 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 ultra sound frequencies in the 40 kHz band. The SVAN 977 provides broadband results with all the standard weighting filters and also offers an incredible time history logging capability providing broadband results and spectra with adjustable double (long and short) logging steps.

Audio recording can be performed simultaneously with time history logging as either a separate wave file or as 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 µSD 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 real-time 1/1 or 1/3 octave analysis including statistical calculations. Additional functions like real-time FFT analysis and Rotation Speed Measurement are also available.

The highly developed user interface works on networks like GPRS, Ethernet, WLAN or ZigBee™ for both remote data download and settings configuration. The built-in Bluetooth™ interface together with smart-phone application, SvanMobile, extends measurement capabilities with all the features offered by smart-phones including text/voice comments, photo, video, GPS position etc.

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 next generation instrument.

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FEATURES

- Type 1 IEC 61672:2002 sound level measurements
- Dedicated for:
  · general acoustic measurements
  · environmental 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™)
- All weather microphone protection kit designed for
  community and airport noise monitoring
- OLED color display with super brightness and contrast
- Hand held, light weight and robust case
- TNC input connector
- Easy in use

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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, 35 mV/Pa, prepolarised 1/2" condenser microphone
Preamplifier	SV 12L IEPE preamplifier
Total dynamic measurement range	15 dBA RMS - 140 dBA Peak (typical from noise floor to the maximum level)
Linear operating range	25 dBA RMS - 140 dBA Peak (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	
Total Dynamic Range	>120 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)	
Interfaces	USB 2.0 Client, Bluetooth (optional), RS 232 (with SV 75 option)	
	Extended I/O - AC output (1 V Peak) or Digital Input/Output (Trigger – Pulse)	
Power Supply	Four AA batteries	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 ºC to 50 ºC
	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