

# SVAN 957 Sound & Vibration Analyser

The SVAN 957 is all digital, Type 1 sound & vibration level meter along with analyser. Instrument is intended to general acoustic and vibration measurements, environmental monitoring, occupational health and safety monitoring.

Three acoustic or vibration profiles allow parallel measurements with independently defined filters and RMS detector time constants. Each profile provides significant number of results (e.g. for sound:  $L_{eq}$ ,  $L_{Max}$ ,  $L_{Min}$ ,  $L_{Peak}$ ,  $Spl$ , SEL or RMS, PEAK, VDV, MTVV in the case of vibration measurements). Advanced time history logging for each profile provides complete information about measured signal in non-volatile 32 MB internal memory or external USB Memory Stick and can be easy downloaded to any PC using USB interface and SvanPC+ software.

All required weighting filters (e.g.: A, C,  $W_k$ ,  $W_v$ ,  $W_f$ ) including the latest ISO 2631-1&2 standard are available with this instrument. RMQ detector enables direct measurement of the Vibration Dose Value (VDV). Using computational power of its digital signal processor

the SVAN 957 instrument can, simultaneously to the meter mode, perform real time 1/1 or 1/3 octave analysis including statistical calculations, acoustic dose measurements, FFT analysis and Reverberation Time measurements. The time history logging of 1/1 octave, 1/3 octave and FFT analysis is provided. The time domain signal recording on the external USB memory stick is also available.

Fast USB 1.1 interface (12 MHz) creates real time link for the PC "front-end" application of the SVAN 957 instrument. Instrument can be remotely controlled and measurement results can be downloaded to a PC using the RS 232 or IrDA interfaces.

Instrument is powered from four AA standard or rechargeable batteries

(separate charger is required). The External DC power source or USB interface can be also used for powering the instrument.

Robust, hand held case and light weight design accomplish the exceptional features of this new unusual instrument.

## FEATURES

- Type 1 sound level measurements meeting IEC 61672:2002
- General vibration measurements (acceleration, velocity and displacement) and HVM meeting ISO 8041:2005 standard
- Three parallel independent profiles
- 1/1 and 1/3 octave real time analysis
- Acoustic dose meter function
- FFT real time analysis (1920 lines in up to 22.4 kHz band)
- Reverberation Time measurements
- Advanced Data Logger including spectra logging
- USB Memory Stick providing almost unlimited logging capacity
- Time domain signal recording
- Advanced trigger and alarm functions
- USB 1.1 Host & Client interfaces (real time PC "front end" application supported)
- RS 232 and IrDA interfaces
- Integration time programmable up to 24 h
- Power supply by four AA rechargeable or standard batteries
- Hand held, light weight and robust case
- Easy in use



# 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 - $L_n$ ( $L_1$ - $L_{99}$ ), $L_{Max}$ , $L_{Min}$ , $L_{Peak}$ Simultaneous measurement in three profiles with independent set of filters and detector time constants
Analyser	1/1 octave* real time analysis, Type 1, IEC 61260 (option) 1/3 octave* real time analysis, Type 1, IEC 61260 (option) Acoustic dosimeter* meeting IEC 61252 with SV 25 microphone (option) FFT* real time analysis, 1920 lines, up to 22.4 kHz band (option) Reverberation Time analysis in 1/3 octave bands (RT 60 option)
Weighting Filters	A, C and Z
RMS Detector	Digital True RMS detector with Peak detection, resolution 0.1 dB Time Constants: Slow, Fast, Impulse
Microphone	SV 22, 50 mV/Pa, prepolarised 1/2" condenser microphone with SV 12L IEPE preamplifier
Measurement Range	Total Dynamic Range: 17 dBA RMS ÷ 140 dBA Peak Linearity Range: 24 dBA RMS ÷ 140 dBA Peak
Dynamic Range	100 dB (both in Low and High ranges)
Internal Noise Level	less than 17 dBA RMS
Frequency Range	0.5 Hz ÷ 20 kHz; microphone dependant, with SV 22 microphone: 10 Hz ÷ 20 kHz,

## VIBRATION LEVEL METER & ANALYSER

Standards	ISO 8041:2005 and ISO 10816-1
Meter mode	RMS, VDV, MTVV or MAX, Peak, Peak-Peak Simultaneous measurement in three profiles with independent set of filters and detector time constants
Analyser	1/1 octave* real time analysis, Type 1, IEC 61260 (option) 1/3 octave* real time analysis, Type 1, IEC 61260 (option) FFT* real time analysis, 1920 lines, up to 22.4 kHz band (option) RPM* rotation speed measurement parallel to the vibration measurement (option)
Filters	HP1, HP3, HP10, Vel1, Vel3, Vel10, VelMF, Dil1, Dil3, Dil10, KB, $W_k$ , $W_c$ , $W_d$ , $W_j$ , $W_m$ , $W_b$ , $W_g$ (ISO 2631), $W_h$ (ISO 5349) (option)
RMS & RMQ Detectors	Digital True RMS & RMQ detectors with Peak detection, resolution 0.1 dB Time Constants: from 100 ms to 10 s
Accelerometer (option)	Dytran 3185D general purpose accelerometer with 100 mV/g sensitivity
Measurement Range	Accelerometer dependent, with Dytran 3185D accelerometer: 0.003 ms <sup>-2</sup> RMS ÷ 500 ms <sup>-2</sup> PEAK
Frequency Range	0.5 Hz ÷ 20 kHz; accelerometer dependent, with Dytran 3185D accelerometer: 2 Hz ÷ 10 kHz

## BASIC DATA

Input	IEPE type (TNC connector)
Frequency Range	0.5 Hz ÷ 20 kHz, sampling rate 48 kHz
Data Logger*	Time History logging to internal memory or USB Memory Stick Time domain signal recording on USB Memory Stick (option)
Display	LCD 128 x 64 pixels plus icons with backlighting
Memory	32 MB non-volatile flash type, external USB Memory Stick (not included)
Interfaces	USB 1.1 Client, USB 1.1 Host, RS 232 (with SV 55 option), IrDA (option) External I/O - AC output (1 V Peak) or Digital Input/Output (Trigger - Pulse)
Power Supply	Four AA batteries (alkaline) operation time > 12 h (6.0 V / 1.6 Ah)** Four AA rechargeable batteries (not included) operation time > 16 h (4.8 V / 2.6 Ah)** SA 17A external battery pack (option) operation time > 24 h** External power supply 6 V DC ÷ 15 V DC (1.5 W)
Environmental Conditions	Temperature from -10 °C to 50 °C Humidity up to 90 % RH, non-condensed
Dimensions	338 x 82 x 42 mm (with microphone and preamplifier)
Weight	0.6 kg with batteries, microphone and preamplifier

\* each function parallel to the meter mode \*\* with USB 1.1 Host function not active and backlight off

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



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