

# SVAN 958

## Four Channels Sound & Vibration Analyser

The SVAN 958 is all digital, four channels 20 kHz signal analyser including Type 1 sound level meter (meeting IEC 61672) and vibration meter (meeting ISO 8041). It is an ideal choice for the "Human Vibration" (according to the ISO 2631-1,2&5 and ISO 5349-1&2 standards) and noise measurements in the occupational health and safety monitoring tasks. All required weighting filters, along with the necessary accessories for triaxial Whole-Body and triaxial Hand-Arm vibration measurements are available with this instrument.

Each of four channels can work simultaneously with independently configured input (transducer type), filters and RMS detector time constants (e.g. simultaneous three axis measurement of the Whole-Body vibration and noise dose).

Three profiles allow parallel measurements with independently defined filters and RMS detector time constants in each sound channel. Each profile/channel provides "multidimensional" analysis of measured signal (like  $L_{eq}$ ,  $L_{Max}$ ,  $L_{Min}$ ,  $L_{Peak}$ , SPL, SEL in the case of sound measurements or RMS, Peak, Peak-Peak, VDV, MTVV in the case of vibration measurements). Advanced time history logging, in non-volatile 32 MB internal memory, provides very powerful measurement capability. USB Memory Stick extends this facility almost unlimitedly. Results can be easily downloaded to any PC using standard USB (or RS 232 or IrDA) interface and SvanPC+ software.

Using computational power of its digital signal processor the SVAN 958 instrument can perform advanced frequency analysis simultaneously to the meter mode:

- real time four channels 1/1 octave or 1/3 octave analysis including statistical calculations

- four channels FFT analysis including cross spectra

- sound intensity measurements.

Reverberation Time measurements, noise dose meter and rotation speed measurements are also available for SVAN 958.

The time domain signal recording on the external USB memory stick is also available as an exceptional feature!

Fast USB 1.1 interface (12 MHz) creates real time link for the PC "front-end" application of the SVAN 958. Instrument can be fully remotely controlled.

Instrument is powered by four AA standard or rechargeable batteries (separate charger is required). The powering of the instrument from the External DC power source or USB interface is also provided.

Robust case and light weight design accomplish the exceptional features of this new generation instrument.

## FEATURES

- Four channels, 20 kHz real time, simultaneous sound and vibration measurements
- FFT real time analysis up to 1600 lines in 20.0 kHz band
- 1/1 and 1/3 octave real time analysis
- Human Vibration measurements meeting ISO 8041:2005 including VDV and MTVV
- Noise measurements Type 1, IEC 61672:2002
- Acoustic dose meter function
- Sound Intensity measurements
- Reverberation Time measurements
- Time domain signal recording
- FFT cross spectra
- Advanced Data Logger including spectral analysis
- USB Memory Stick providing almost unlimited logging capability
- Advanced trigger and alarm functions
- USB 1.1 Client and USB Host, RS 232 and IrDA interfaces
- Integration time programmable up to 24 h
- Powered by four AA standard or rechargeable batteries
- Easy in use, hand held, light weight and robust case



# TECHNICAL SPECIFICATIONS

## VIBRATION LEVEL METER & ANALYSER

Standards	ISO 8041:2005
Meter mode	RMS, VDV, MTVV or MAX, Peak, Peak-Peak
Analyser (option)	Simultaneous measurement in up to four channels with independent set of filters and detector constants
	1/1 octave* real time analysis, 15 filters with centre frequencies from 1 Hz to 16 kHz (Type 1, IEC 61260)
	1/3 octave* real time analysis, 45 filters with centre frequencies from 0.8 Hz to 20 kHz (Type 1, IEC 61260)
	FFT* real time analysis up to 1600 lines with Hanning, Kaiser-Bessel or Flat Top window
	FFT* cross spectra measurements
Filters	RPM* rotation speed measurements parallel to the vibration measurement (1 ÷ 99999) and more...
	$W_d, W_k, W_c, W_j, W_m, W_b, W_g$ (ISO 2631), $W_h$ (ISO 5349), HP1, HP3, HP10, Vel1, Vel3, Vel10, VelMF, Dil1, Dil3, Dil10, KB
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)	SV 39A/L seat accelerometer (100 mV/g sensitivity) for Whole-Body measurements SV 50 set for Hand-Arm measurements (Dytran 3023M2 accelerometer, 10 mV/g sensitivity) Other IEPE accelerometers
Measurement Range	Accelerometer dependent, SV 39A/L seat 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 3023M2: 2 Hz ÷ 10 kHz

## 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 per channel (up to four channels) with independent set of filters and detector time constants
Analyser (option)	1/1 octave* real time analysis, 15 filters with centre frequencies from 1 Hz to 16 kHz (Type 1, IEC 61260)
	1/3 octave* real time analysis, 45 filters with centre frequencies from 0.8 Hz to 20 kHz (Type 1, IEC 61260)
	Reverberation Time analysis in 1/3 octave bands (RT 60)
	FFT* real time analysis up to 1600 lines with Hanning, Kaiser-Bessel or Flat Top window
	FFT* cross spectra measurements
Weighting Filters	Standard: A, C, Z and G
	Sound Intensity Measurements and more...
RMS Detector	Digital True RMS detector with Peak detection, resolution 0.1 dB Time Constants: Slow, Fast, Impulse
Microphone (option)	SV 22, Type 1, 50 mV/Pa, prepolarised 1/2" condenser microphone with SV 12L preamplifier SV 25, Type 2, dose meter, ceramic 1/2" microphone with integrated preamplifier
Measurement Range	Total Dynamic Range: 17 dBA RMS ÷ 140 dBA Peak Linearity Range: 24 dBA RMS ÷ 140 dBA Peak
Frequency Range	0.5 Hz ÷ 20 kHz; microphone dependent, with SV 22 microphone: 10 Hz ÷ 20 kHz

## BASIC DATA

Input	IEPE type (channels 1, 2, 3 - LEMO 4 pin & channel 4 - TNC connector)	
Dynamic Range	100 dB, 4 x 20 bits A/D converters	
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 (option: SV 55 required), IrDA (option) Extended I/O - AC output (1 V Peak) or Digital Input/Output (Trigger / Pulse)	
Power Supply	Four AA batteries (alkaline)	operation time > 10 h (6.0 V / 1.6 Ah)**
	Four AA rechargeable batteries (not included)	operation time > 14 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	140 x 82 x 42 mm	
Weight	510 grams with batteries	

\*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.



**SVANTEK**

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