

# 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 profiles allow parallel acoustic or vibration 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 for vibration: RMS, PEAK, VDV, MTWV). 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. All required weighting filters (e.g.: A, C,  $W_k$ ,  $W_o$ ,  $W_p$ ) 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 can be remotely controlled and measurement results can be downloaded to PC using the RS 232 (GPRS) or IrDA interfaces. It can be offered with GPRS modem, LAN & WLAN connection module. Together with SvanPC+\_RC remote communication software, these interfaces provide easy remote access to instrument settings & data over internet and local area network.

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 its powering.

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
- Time-domain signal recording
- FFT real-time analysis (1600 lines in up to 20.0 kHz band)
- All weather measurements with SA 203 microphone protection kit
- Reverberation Time measurements
- Advanced data logger including spectra logging
- USB memory stick providing almost unlimited logging capacity
- Acoustic dose meter function
- Advanced trigger and alarm functions
- USB 1.1 Host & Client interfaces (real-time PC "front end" application supported)
- RS 232 for modems support (GPRS, Ethernet, WLAN)
- 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 - $L_n$ ( $L_1$ - $L_{99}$ ), $L_{Max}$ , $L_{Min}$ , $L_{Peak}$<br>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<br>1/3 octave* real-time analysis, Type 1, IEC 61260 (option)<br>Acoustic dosimeter* meeting IEC 61252 with SV 25_2 microphone (option)<br>FFT* real-time analysis, 1600 lines, up to 20.0 kHz band (option)<br>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<br>Time constants: Slow, Fast, Impulse  |
| Microphone           | 7052H, 20 mV/Pa, prepolarised 1/2" condenser microphone with SV 12L IEPE preamplifier  |
| Sound Field          | Free-field or diffuse-field selectable (digital filter)  |
| Measurement Range    | Total Dynamic Range: 15 dBA RMS ÷ 140 dBA Peak<br>Linearity Range: 25 dBA RMS ÷ 140 dBA Peak   |
| Dynamic Range        | 100 dB (both in Low and High ranges)   |
| Internal Noise Level | Less than 15 dBA RMS   |
| Frequency Range      | 0.5 Hz ÷ 20 kHz; microphone dependent, with 7052H 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<br>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<br>1/3 octave* real-time analysis, Type 1, IEC 61260 (option)<br>FFT* real-time analysis, 1600 lines, up to 20.0 kHz band (option)<br>RPM* rotation speed measurement parallel to the vibration measurement (option) |
| Filters                | HP1, HP3, HP10, Vel1, Vel3, Vel10, VelMF, Dil1, Dil3, Dil10, KB,<br>$W_k$ , $W_c$ , $W_d$ , $W_j$ , $W_m$ , $W_b$ , $W_g$ (ISO 2631), $W_h$ (ISO 5349) (option)  |
| RMS & RMQ Detectors    | Digital True RMS & RMQ detectors with Peak detection, resolution 0.1 dB<br>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<br>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)<br>Extended 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)**<br>Four AA rechargeable batteries (not included) operation time > 16 h (4.8 V / 2.6 Ah)**<br>SA 17A external battery pack (option) operation time > 24 h**<br>External power supply 6 V DC ÷ 24 V DC (1.5 W)<br>USB interface 500 mA HUB |
| Environmental Conditions | Temperature from -10 °C to 50 °C<br>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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