# SVAN 947
## Sound & Vibration Analyser

*The SVAN 947 is all digital, Type 1 sound & vibration meter along with analyser. Instrument is intended to general acoustic measurements, environmental noise 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 (like for sound $L_{eq}$, $L_{Max}$, $L_{Min}$ , $L_{Peak}$, SPL, SEL etc.). Advanced time history logging for each profile provides complete information about measured signal in non-volatile 8 MB or 48 MB (option) internal memory and can be easy downloaded to any PC using USB 1.1 interface and SvanPC software.*

*All required weighting filters (e.g.: A, C, $W_k$, $W_c$, $W_h$) 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 947 can perform real time 1/1 & 1/3 octave analysis including statistical calculations, real time FFT analysis, reverberation time RT 60 and Tonality.*

*Fast USB 1.1 interface (12 MHz) creates real time link for the application of the SVAN 947 as a PC "front-end".*

*Measurement results can be stored in large 8 MB or 48MB (option), non-volatile memory and easy downloaded to any PC using the USB, RS 232 interface and SvanPC software.*

*Thanks to built in rechargeable batteries, robust and lightweight design the SVAN 947 can be used in hard environmental conditions over the whole work day.*

---

## FEATURES

- Type 1 sound or vibration measurements in 20 kHz band
- Three parallel independent profiles of the meter mode with time history (simultaneous to frequency analysis)
- Up to 48 MB (option) internal memory for logging more then six weeks of the three 1 sec results (one result per profile)
- Measurement range 22 dBA RMS – 140 dBA Peak in SLM mode
- Human Vibration measurements Type 1 accuracy (ISO 8041) including VDV and MTVV
- 1/1 and 1/3 octave real time analysis with time history (option)
- 1920 lines real time FFT analysis in 22.4 kHz band (option)
- RT 60 Reverberation Time (option)
- Tonality measurements (option)
- Advanced trigger function
- Easy in use
- USB 1.1 and RS 232 interface (real time PC "front end" application supported)
- Integration time programmable up to 24 h
- Built in rechargeable batteries (operational time more then 8 h)
- Hand held, light weight and robust case (only ca 600 grams including batteries)

SVANTEK

INSTRUMENTATION FOR SOUND & VIBRATION MEASUREMENTS

# TECHNICAL SPECIFICATIONS

## SOUND LEVEL METER / ANALYSER

| | |
|---|---|
| Standards | Type 1: IEC 651, IEC 804 and IEC 61672-1 |
| Meter mode | SPL, $L_{eq}$, SEL, $L_{den}$, $L_{tm3}$, $L_{tm5}$, statistics- $L_n$ ($L_1$-$L_{99}$), $L_{Max}$, $L_{Min}$, $L_{Peak}$, Time History<br>Three profiles measure simultaneously with independent set of filters and detector times |
| Analyser (option) | Real time four channels 1/1, 1/3 octave (spectra logging down to 2 ms step) or FFT (1920 lines in 22.4 kHz band and sub-bands with Hanning window) analysis, RT 60, Tonality each parallel to meter mode |
| Weighting Filters | A, C and Lin (Type 1: IEC 651, IEC 804 and IEC 61672-1) |
| RMS Detector | Digital True RMS detector with Peak detection, resolution 0.1 dB,<br>Time Constants: Slow, Fast, Impulse |
| Microphones (option) | SV 22 (10 Hz ÷ 20 kHz) or SV 22L (1 Hz ÷ 20 kHz) Type 1 prepolarised 1/2" condenser microphone (50 mV/Pa sensitivity) with SV 12L IEPE preamplifier |
| Measurement Range | 22 dBA RMS ÷ 140 dBA Peak (with 5 dB margin from noise level) |

## VIBRATION LEVEL METER / ANALYSER

| | |
|---|---|
| Standards | Type 1: ISO 8041(meeting ISO 2631-1&2, ISO 5349-1&2) and ISO 10816-1 |
| Meter mode | RMS, VDV, MTVV or MAX, Peak, Peak-Peak, Min, Time History |
| Analyser (option) | Real time 1/1, 1/3 octave (spectra logging down to 2 ms step) or FFT (1920 lines in 22.4 kHz band and sub-bunds with Hanning window) analysis each parallel to meter mode |
| Filters | $W_k$, $W_c$, $W_d$, $W_j$, $W_h$, $W_m$, HP1, HP3, HP10, Vel1, Vel3, Vel10, VelMF, Dil1, Dil3, Dil10, W-Bxy, W-Bz, H-A, W-Bc, KB |
| RMS & RMQ Detectors | Digital True RMS & RMQ detectors with Peak detection, resolution 0.1 dB,<br>Time Constants: from 100 ms to 10 s |
| Accelerometers (option) | SV 39A/S seat accelerometer for Whole-Body measurements<br>SV 50/S set for Hand-Arm measurements (incl. SV 3023M2 triaxial accelerometer) |
| Measurement Range | 0.003 $ms^{-2}$ RMS– 1000 $ms^{-2}$ Peak (with SV 39A/S seat accelerometer) |

## BASIC DATA

| | | |
|---|---|---|
| Input | IEPE interface with TNC connector | |
| Dynamic Range | 100 dB, 20 bits A/D converter | |
| Internal Noise Level | less then 17dBA RMS (less then 1 $mms^{-2}$ RMS with HP10 filter) | |
| Frequency Range | 1 Hz ÷ 20 kHz (input transducers dependent), sampling rate: 48 kHz | |
| Display | LCD 97 x 32 pixels plus icons with backlighting | |
| Memory | 8 MB or 48 MB (option) non-volatile flash type | |
| Interface | USB 1.1 (real time PC "front end" application supported), RS232, analogue AC out 1 V Peak | |
| Power Supply | Built in rechargeable batteries | operation time > 8 h (4.8 V / 1.6 Ah) |
| | With external battery | operation time > 24 h (optional SA 17 pack) |
| | External power supply | 8 ÷ 15 V DC (1.5 W) |
| Environmental Conditions | Temperature | -10 °C to 50°C |
| | Humidity | up to 90 % RH, non condensed |
| Dimensions | 336 x 82 x 42 mm (with microphone and preamplifier) | |
| Weight | Approx. 0.6 kg with battery | |

*Main result one channel view*

*Main results 3 channels view*

*1/3 octave spectrum*

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


SVANTEK

SVANTEK Sp. z o.o.
Plac Inwalidów 3/62
PL 01-514 WARSAW, POLAND
phone/fax (+48 22) 839 00 31, (+48 22) 839 64 26
http://www.svantek.com e-mail: office@svantek.com.pl


CERTIFIED ISO 9001

DISTRIBUTOR: