

# SVAN 979

## Sound & Vibration Analyser

SVAN 979 is the most advanced and powerful single channel instrument for general acoustic and vibration measurements ever made.

The list of the instrument outstanding features and functionalities includes:

- high accuracy sound and vibration measurements
  - most powerful frequency analysis package
  - time-domain (WAV) and Audio Events recording to Micro SD card
  - very high dynamic measurement range
  - extremely flat frequency response (digitally compensated)
  - extremely flexible set of interfaces (USB, Bluetooth, IrDA, RS232 and more)
  - USB Host port providing very flexible functional extensions capabilities
  - firmware ready for GPRS and WLAN communication (USB Host port)
  - GPS time synchronisation
  - super contrast colour display
  - built-in signal generator
  - automatic windscreen and extension cable detection
  - all weather microphone protection with Community and Airport response.
- SVAN 979 can record a raw audio data to micro SD flash card in WAV format, so the sources of noise can be played back and identified by listening (Time-domain signal

recording). The Audio-events-recording function is very useful in measurements requiring unattended monitoring.

Moreover, instrument is able to perform advanced measurement techniques like MLS, TDS etc. thanks to built-in sophisticated signal generator.

SVAN 979 is designed for easy communication with computers by built-in ports USB client and USB host. In practice it means full remote control over the instrument from the PC. Fast USB 1.1 interface (12 MHz) creates real-time link for the PC "front-end" application of the SVAN 979 instrument .

SvanPC+\_VR viewer software provides easy local communication with PC, data transfer and instrument's settings configuration. This already advanced and user-friendly application can optionally be extended by SvanPC+\_RC remote communication module (GPRS, LAN or WLAN transmission) and SvanPC+\_EM software for environmental monitoring data processing. These exceptional features make SVAN 979 the leading product for measurements in field (environmental monitoring).

SVAN 979 is powered from standard or rechargeable AA batteries. The powering of the instrument from the External DC power source or USB interface is also provided. Robust and light weight design accomplished the exceptional features of this new generation instrument.

## FEATURES

- Type 1 IEC 61672:2002 sound level measurements
- General vibration measurements (acceleration, velocity and displacement)
- Three parallel independent profiles
- 1/1, 1/3 octave real-time analysis
- 1/6, 1/12 octave real-time analysis
- FFT real-time analysis 1600 lines in up to 20 kHz band
- Time-domain signal recording
- Advanced data logger including spectra logging and Audio-events-recording
- Reverberation Time measurements
- Pure tone detection
- Acoustic loudness measurements
- Advanced trigger and alarm functions
- User programmable band-pass filters
- Windscreen and extension cable auto detection
- Built-in self vibration monitoring
- Micro SD card for mass data memory
- USB 1.1 Host interface providing remote communication by GPRS, LAN & WLAN or GPS time synchronisation and many other functional extensions
- USB 1.1 Client interface (real-time PC "front end")
- Bluetooth, RS 232 and IrDA interfaces
- Super contrast (10000:1) colour OLED display
- Built-in signal generator
- All weather microphone protection SA 205
- 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, $L_{den}$ , $L_{m3}$ , $L_{m5}$ , Statistics - $L_n$ (L1-L99), $L_{Max}$ , $L_{Min}$ , $L_{Peak}$
Analysers	Simultaneous measurement in three profiles with independent set of filters and detectors 1/1 or 1/3 octave <sup>1</sup> real-time analysis 1/6 or 1/12 octave <sup>1</sup> real-time analysis (option under development) FFT <sup>1</sup> real-time analysis 1600 lines, up to 20.0 kHz band (option) Loudness <sup>1</sup> based on ISO 532B standard and Zwicker model (option) Pure tone detection meeting ISO 1996-2 (Tonality <sup>1</sup> option) Reverberation time analysis in 1/3 octave bands (RT 60 option) User programmable second order band pass filters <sup>1</sup> (option) and more...
Weighting Filters	A, C, Z (standard) and B & G (option)
RMS Detector	Digital True RMS detector with Peak detection, resolution 0.1 dB Time constants: Slow, Fast, Impulse
Microphone	GRAS 40AE, 50 mV/Pa, prepolarised 1/2" condenser microphone with SV 17 preamplifier
Measurement Range	22 dBA RMS ÷ 140 dBA Peak
Internal Noise Level	less than 12 dBA RMS
Frequency Range	3.15 Hz ÷ 20 kHz, with GRAS 40AE microphone

## VIBRATION LEVEL METER & ANALYSER

Standards	ISO 10816-1, ISO 6954:2000, DIN 45669-1 (required by DIN 4150-2)
Meter Mode	RMS, MAX, Peak, Peak-Peak
Analysers	Simultaneous measurement in three profiles with independent set of filters and detectors 1/1 or 1/3 octave <sup>1</sup> real-time analysis 1/6 or 1/12 octave <sup>1</sup> real-time analysis (option under development) FFT <sup>1</sup> real-time analysis 1600 lines, up to 20.0 kHz band (option) RPM <sup>1</sup> rotation speed measurement parallel to the vibration measurement (option) Advanced enveloping option dedicated for bearing diagnostics (option) User programmable second order band pass filters <sup>1</sup> (option) and more...
Filters	HP1, HP3, HP10, Vel1, Vel3, Vel10, VelMF, Dil1, Dil3, Dil10, KB
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	Direct AC, Direct AC with 200 V polarisation, Direct DC or IEPE type with TEDS (LEMO 7-pin)
Self-vibration Monitoring	Built-in
Dynamic Range	115 dB
Frequency Range	0.5 Hz ÷ 22.4 kHz, sampling rate 48 kHz
Data Logger <sup>1</sup>	Time-history logging with logging step down to 1 millisecond, Time-domain signal recording and audio events recording function both to micro SD card or USB Memory Stick
Signal Generator	Sine, Sweep, White noise, Pink noise etc. (option)
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) or external USB Memory Stick (not included)
Interfaces	USB 1.1 Client, USB 1.1 Host, Bluetooth, RS 232 (with SV 55 option), IrDA (option) GPS time synchronisation and positioning (under development)
Power Supply	Extended I/O - AC output (1 V Peak) or Digital Input/Output (Trigger - Pulse) Four NiMH AA rechargeable batteries (included) operation time > 8 h ÷ 12 h (4.8 V / 2.6 Ah) <sup>2</sup> SA 17A external battery pack (option) operation time > 24 h (option) <sup>2</sup> External power supply 6 V/500 mA DC ÷ 15 V/250 mA DC USB interface 500 mA HUB
Environmental Conditions	Temperature from -10 °C to 50 °C 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

<sup>1</sup>each function parallel to the meter mode    <sup>2</sup>depends on instrument operation mode

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

DISTRIBUTOR: \_\_\_\_\_



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