# SVAN 958A

## Four-Channel Sound and Vibration Analyser


SVANTEK

INSTRUMENTATION FOR SOUND & VIBRATION MEASUREMENTS

# SVAN 958A Four-Channel Sound and Vibration Analyser

Four-channel **SOUND & VIBRATION** analyser dedicated for engineering applications.

Depending on an application, each channel can be **INDEPENDENTLY** configured e.g. one tri-axial and one mono-axial vibration sensor or four microphones etc.

The Class 1 Sound Level Meter enables the simultaneous four-channel real-time frequency analysis in **1/1 AND 1/3 OCTAVE BANDS**.

The meter can be used for **BUILDING ACOUSTIC** measurements e.g. simultaneous 4-channel RT 60 measurements.

The **RS 232** interface enables integration with the production line.

The **FFT ANALYSER** offers the detailed frequency analysis in a selectable frequency band.

The **BUILDING VIBRATION** mode offers simultaneous **VELOCITY** and **ACCELERATION** measurements with the automatic indication of a **DOMINANT FREQUENCY**.

**OLED** 2.4" color display (320 x 240 pixels) provides a **SUPER CONTRAST VISIBILITY** even in sunny weather.

Aluminum **ROBUST** housing gives the comfort of a secure grip to the user and protects the hardware against the electromagnetic interference.


## About SVAN 958A

SVAN 958A is an unique four-channel instrument offering 20 kHz-band sound & vibration analysis. It is a perfect choice for all applications that require simultaneous Class 1 noise measurements & triaxial vibration assessment. Each of four input channels can be independently configured for sound or vibration mode with different filters and RMS detector time constants giving users an enormous measurement flexibility. The real advantage of SVAN 958A is the capability to perform advanced analysis simultaneously to the level meter mode. In practise this allows to obtain broad-band results such as Leq, RMS, Lmax, Lmin, Lpeak together with four-channel analysis like FFT or octave band analysis. List of available analyser functions includes FFT, 1/1 or 1/3 octave, cross spectra, sound intensity, RT 60 and more. All measurement results are stored in the non-volatile 32 MB internal memory and can be easily downloaded to a PC with SvanPC++ software. SVAN 958A with RS 232 interface (SV 55) can be offered with GPRS modem or LAN & WLAN connection module. Together with SvanNET or 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 as well as from the external DC power source or USB interface. Robust case and light weight design accomplish the exceptional features of this instrument.

## What's inside the SVAN 958A kit?

The standard kit includes SVAN 958A 4-channel sound & vibration level meter with an USB cable, set of 4x AA batteries, SC 61 TNC/BNC adapter and the user manual on a CD disk. Each SVAN 958A has its factory calibration certificate and a **36-MONTH WARRANTY CARD**. The standard kit also includes license for PC software.

## PC Software

**SvanPC++** is a PC software supporting functions such as measurement data downloading from instruments to PC, measurement setups creation, basic Leq/RMS recalculation, measurement results in text, table and graphical form of presentation, export data to a spread sheet or text editor applications. New version of SvanPC++ software also supports analysis of wave files from Svantek's instruments (for example calculation of tonality).

## Optional functions

**FREQUENCY ANALYSIS** is an irreplaceable tool for sound & vibration engineers. Depending on an application frequency analysis can be more or less detailed. Thanks to its powerful computing processor, SVAN 958A can perform very sophisticated 4-channel frequency analysis such as 1/1 or 1/3 octave, FFT or FFT cross spectrum. Each option can be activated separately at any time by ordering the activation code.

## Optional accessories to SVAN 958A

SV 60
Sound
Measurement Kit

SV 80 / 81
Mono-axial
Accelerometers

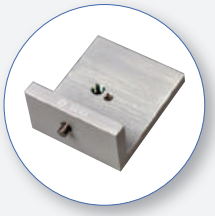
SV 84 / 85
Tri-axial
Accelerometers

SV 207B
Building Vibration
Kit

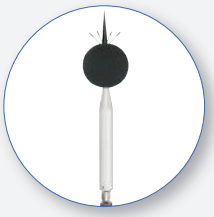
SM 258 PRO
Monitoring
Case

SV 55
Cable for RS 232
devices

SV 111
Vibration
Calibrator



SA 154
Calibration
Adapter to SV 84



SV 208
Outdoor Sound
Measurement Kit

SA 48
Waterproof
Carrying Case

SV 36 Class 1
Acoustic Calibrator
94 dB / 114 dB
at 1 kHz

SA 420B
Tripod Up To
4 m Height

# SVAN 958A Technical Specifications

## Vibration Level Meter & Analyser

| | |
|---|---|
| Standards | ISO 8041:2005, ISO 20816-1, DIN 4150-3, BS 7385-2 |
| Meter Mode | RMS, VDV, MTVV or Max, Peak, Peak-Peak |
| Analyser[1] (optional) | 1/1 or 1/3 octave real-time analysis<br>FFT 1600 lines with Hanning, Kaiser-Bessel or Flat Top window<br>FFT cross spectra measurements<br>RPM rotation speed measurements parallel to the vibration measurement (1 ÷ 99999) |
| Filters | Wd, Wk, Wc, Wj, Wm, Wb, Wg (ISO 2631), Wh (ISO 5349), HP1, HP3, HP10, Vel1, Vel3, Vel10, VelMF, Dil1, Dil3, Dil10, KB (DIN 4150) |
| RMS Detector | Digital True RMS detector with Peak detection, resolution 0.1 dB<br>Time constants: from 100 ms to 10 s |
| Accelerometer (optional) | SV 84 triaxial high sensitivity accelerometer for ground or building vibration measurements (1 V/g)<br>SV 38 triaxial accelerometers for whole-body measurements (1 V/g MEMS type) |
| Measurement Range | Accelerometer dependent (with SV 84: 0.0005 $m/s^2$ RMS ÷ 50 $m/s^2$ PEAK) |
| Frequency Range | 0.8 Hz ÷ 20 kHz; accelerometer dependent |

## Sound Level Meter & Analyser

| | |
|---|---|
| Standards | Class 1: IEC 61672-1:2013 |
| Meter Mode | SPL, Leq, SEL, Lden, LEPd, Overload time, Ltm3, Ltm5, LMax, LMin, LPeak,<br>Simultaneous measurement in three profiles with independent filters and detectors |
| Analyser[1] (optional) | 1/1 or 1/3 octave real-time analysis<br>FFT[1] 1600 lines with Hanning, Kaiser-Bessel or Flat Top window<br>FFT cross spectra measurements<br>Sound Intensity measurements |
| Weighting Filters | A, C, Z and G |
| RMS Detector | Digital True RMS detector with Peak detection, resolution 0.1 dB<br>Time constants: Slow, Fast, Impulse |
| Microphone (optional) | MK 255, Class 1, 50 mV/Pa, prepolarised 1/2" condenser microphone with SV 12L preamplifier<br>SV 25, Class 2, dose meter, ceramic 1/2" microphone with integrated preamplifier |
| Measurement Range | Total Dynamic Range: 16 dBA RMS ÷ 140 dBA Peak<br>Linearity Range (IEC 61672): 26 dBA RMS ÷ 140 dBA Peak |
| Frequency Range | 0.5 Hz ÷ 20 kHz (microphone dependent, with MK 255 microphone: 3.5 Hz ÷ 20 kHz) |

## General Information

| | | |
|---|---|---|
| Input | IEPE type (channels 1, 2, 3 - LEMO4-pin & channel 4 - TNC connector) | |
| Dynamic Range | 100 dB, 4 x 20 bits A/D converters | |
| Frequency Range | 0.5 Hz ÷ 22.4 kHz, sampling rate 48 kHz | |
| Data Logger | Time-history logging to internal memory | |
| Display | Super contrast (10000:1) OLED 2.4" colour display (320 x 240 pixels) | |
| Memory | 32 MB non-volatile flash type | |
| Interfaces | USB 1.1 Client, RS232 (option: SV55 required)<br>Extended I/O - AC output (1V Peak) or Digital Input/Output (Trigger / Pulse) | |
| Power Supply | Four AA batteries (alkaline) | operation time > 10 h (6.0 V / 1.6 Ah)[2] |
| | Four AA rechargeable batteries (not included) | operation time > 14 h (4.8 V / 2.6 Ah)[2] |
| | SA 17A external battery pack (optional) | operation time > 24 h |
| | External power supply | 6 V DC ÷ 24 V DC (1.5 W) |
| | USB interface | 500 mA HUB |
| Environmental Conditions | Temperature | from -10 °C to 50 °C (14 °F to 122 °F) |
| | Humidity | up to 90 % RH, non-condensed |
| Dimensions | 140 x 82 x 42 mm | |
| Weight | 510 grams with batteries (Approx. 2.00 lb) | |

[1]function parallel to the meter mode
[2]depending on configuration and environmental conditions

The policy of our company is to continually innovate and develop our products. Therefore, we reserve the right to change the specifications without prior notice.

Proudly distributed by: