

SVAN 977A

Sound & Vibration
Level Meter



SVAN 977A Sound & Vibration Level Meter

SVAN 977A Class 1 **SOUND & VIBRATION** Level Meter and analyser is designed to meet the needs of both environmental monitoring and occupational health and safety monitoring specialists.

SVAN 977W **TYPE APPROVED WELMEC** version is available.

If you disconnect the microphone preamplifier, you can use the instrument to take **VIBRATION** measurements - simply by connecting a cable and a vibration sensor.

The microphone preamplifier has been **REINFORCED** with a metal collar to protect it against mechanical damage.

The **TIME HISTORY LOGGING** of results such as Leq, Max, Min and Peak with two simultaneous logging steps is saved on a 16 GB **microSD** card (upgradeable to 128 GB).

Large **OLED DISPLAY** is a full color and **HIGH CONTRAST** so it can be used in a sunlight or night. The OLED technology doesn't use back-light giving SVAN 977A more battery operating time.

With a special microphone the meter provides measurement range of the **ULTRASOUNDS** up to 40 kHz.



The **Bluetooth®** interface connects the meter with the SvanMobile application that allows the user to trigger measurements, edit settings, rename files and view the results remotely.

Anyone who makes measurements in the environment will appreciate the ability of SvanMobile to automatically add weather data and **GPS** position to the measurement report.

SvanMobile also allows to link measurement files from the sound level meter to media files from the smartphone such as photos, videos or audio recordings.



About SVAN 977A

The SVAN 977A is a Class 1 Sound and Vibration meter designed for occupational and environmental measurement applications. It provides broad-band results such as Leq, Max, Min and Peak with all standard weighting filters together with an incredible time-history logging feature with two adjustable logging steps.

One unique feature of the SVAN 977A is ultrasound measurement band up to 40 kHz. The ultrasound band is normally considered as the frequency range above

20 kHz. Ultrasound is used in a number of industrial processes such as cleaning, drilling or welding as well as hospitals for medical procedures.

The built-in Bluetooth® interface together with smartphone application, SvanMobile, extends measurement capabilities with all the features offered by smartphones including text/voice comments, photo, video, GPS position etc.

Software for SVAN 977A

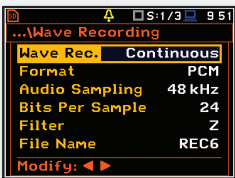


SvanPC++ is a PC software supporting functions such as measurement data downloading from instruments to PC, measurement setups creation, basic Leq/RMS recalculation, measurement results in text, table and graphical form of presentation, export data to a spread sheet or text editor applications. New version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

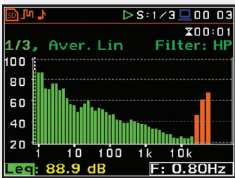
Supervisor is a dedicated software for determination of occupational noise & vibration exposure. It supports data download, instrument configuration and provides tools for reporting. The data files from the SVAN 977A can be used for calculation of all required measurement results and uncertainties in accordance to measurement strategies described in ISO 9612.

SvanMobile is an application for Android devices that uses the Bluetooth® connection to control the SVAN 977A. It allows the user to trigger measurements, edit settings, rename files and view the results remotely. Anyone who makes measurements in the environment will appreciate the ability of SvanMobile to automatically add weather data and GPS position to the measurement report. SvanMobile also allows to link measurement files from the sound level meter to media files from the smartphone such as photos, video or audio recordings.

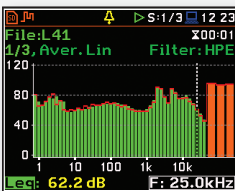
Optional functions



TIME DOMAIN SIGNAL RECORDING means recording the raw signal samples with defined frequency up to 48 kHz. Analysis of the raw signal is used whenever frequency analysis is not sufficient. Post-processing of high quality wave files (48 kHz, 24 bit) such as calculation of tonality is available in SvanPC++ program. Time domain signal is recorded in a wave format which means that it can be played back in the PC software and used for noise source recognition (audio recording).



FREQUENCY ANALYSIS of the signal in 1/1 or 1/3 octave bands allows to determine the influence of high or low frequencies on overall values. The 1/3 octave can be also used for the assessment of tonality in accordance to ISO 996-2 (simplified method). It can be activated at any time by ordering the activation code.

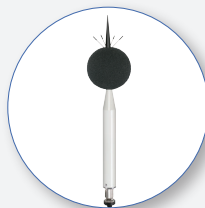


With an optional microphone and 1/3 octave or FFT analysis SVAN 977A provides analysis of the **ULTRASOUNDS** up to 40 kHz. The ultrasound band is normally considered as the frequency range above 20 kHz. Limits of permissible ultrasound levels are usually expressed in terms of Leq and Max values specified in 1/3 octave bands for 20 kHz, 25 kHz, 31.5 kHz and 40 kHz.

Optional accessories to SVAN 977A



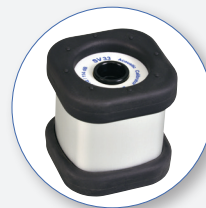
SC 26
Extension Cable
for Pre-amplifier



SA 277
Microphone
Outdoor
Protection Kit



SM 277 PRO
Outdoor
Monitoring
Case



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



SV MK202E
Ultrasonic
Microphone up to
40 kHz band



What's inside the SVAN 977A kit?

The kit consists of SVAN 977A Class 1 sound & vibration level meter with a detachable preamplifier SV 12L and high quality omni-directional ACO SV 7052E microphone, compliant to IEC61094-4. The list of accessories includes: SA 143 carrying case, SA 22 windscreen, 16 GB microSD card, four AA batteries, USB cable, and CD with user manual. Each SVAN 977A has its factory calibration certificate and 36 months warranty card.

SVAN 977A Technical Specifications

Sound Level Meter & Analyser

| | |
|---|---|
| Standards | Class 1: IEC 61672-1:2013; Class 1: IEC 61260-1:2014 |
| Weighting Filters | A, B, C, Z, LF, U, AU |
| Time Constants | Slow, Fast, Impulse |
| Microphone | ACO SV 7052E, 35 mV/Pa, prepolarised 1/2" condenser microphone |
| Preamplifier | SV 12L detachable (TNC) |
| Linear Operating Range | 25 dBA RMS ÷ 140 dBA Peak (in accordance to IEC 61672) |
| Total Dynamic Measurement Range | 15 dBA RMS ÷ 140 dBA Peak (typical from noise floor to the maximum level) |
| Internal Noise Level | Less than 15 dBA RMS |
| Dynamic Range | >110 dB |
| Frequency Range | 10 Hz ÷ 20 kHz with ACO SV 7052E |
| Meter Mode Results | Elapsed time, L _{xy} (SPL), L _x eq (LEQ), L _x peak (PEAK), L _x ymax (MAX), L _x ymin (MIN), LR (ROLLING LEQ), OvI (OVERLOAD), L _x ye (SEL), LN (LEQ STATISTICS), L _{den} , L _{EPd} , L _{tm3} , L _{tm5} |
| Measurement Profiles | Simultaneous measurement in three profiles with independent set of filters (x) and detectors (y) |
| Analyser ¹ (optional) | 1/1 octave or optional 1/3 octave real-time analysis, up to 40.0 kHz band meeting Class 1: IEC 61260-1 FFT analysis 1600 lines, up to 40.0 kHz band (optional) RPM rotation speed measurement parallel to the vibration measurement (optional) |
| Statistics | L _n (L ₁ -L ₉₉), complete histogram in meter mode and 1/1 or 1/3 octave analysis |
| Data Logger ¹ | Time-history logging of summary results, spectra with adjustable double logging steps down to 2 ms |
| Audio Recording ¹ (optional) | Audio records to time-history data or WAV format with selectable band and recording period |

Vibration Level Meter & Analyser

| | |
|---|--|
| Standards | ISO 20816-1 |
| Meter Mode | RMS, Max, Peak, Peak-Peak |
| Filters | Simultaneous measurement in three profiles with independent filter sets and detectors HP1, HP3, HP10, Vel1, Vel3, Vel10, VelMF, Dil1, Dil3, Dil10, Wh |
| Accelerometer | SV 80 (100 mV/g) or any IEPE accelerometer (optional) |
| Analyser ¹ (optional) | 1/1 octave or optional 1/3 octave real-time analysis, up to 40.0 kHz band meeting Class 1: IEC 61260-1 FFT analysis 1600 lines, up to 40.0 kHz band (optional) RPM rotation speed measurement parallel to the vibration measurement (optional) |
| Data Logger | Time-history logging of summary results, spectra with two adjustable logging steps |
| Time-domain Signal Recording ¹ | Continuous or triggered time-domain signal recording to WAV format (optional) |

General information

| | |
|--------------------------|---|
| Input | IEPE with TNC connector |
| Memory | MicroSD card 16 GB (removable & upgradeable) |
| Display | Super contrast (10000:1) OLED 2.4" colour display (320 x 240 pixels) |
| Interfaces | USB 2.0 Client, Bluetooth®, RS 232 (with optional SV 55) |
| Power Supply | External I/O - AC output (1 V Peak) or Digital Input/Output (Trigger - Pulse) |
| | Four AA batteries operation time > 12 h (6 V / 2 Ah) ² |
| | Four rechargeable AA batteries operation time > 16 h (4.8 V / 2.6 Ah) ² (not included) |
| | 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 | 340 x 79 x 39 mm (with microphone and preamplifier) |
| Weight | Approx. 0.6 kg with batteries |

¹works together with the meter mode

²dependent on instrument operation mode

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.

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