

SVAN 945A

Sound Level Meter and Analyser

The SVAN 945A is all digital, Type 1 sound level meter (SLM) along with analyser. Instrument is intended to general acoustic measurements, environmental noise monitoring, occupational health and safety monitoring.

Three acoustic profiles allow parallel measurements with independently defined filters and RMS detector time constants. Each profile provides significant number of results (L_{eq} , L_{Max} , L_{Min} , L_{Peak} , SPL, SEL, L_{den} 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 easily downloaded to any PC using USB 1.1 or RS 232 interface and SvanPC+ software.

Using computational power of its digital signal processor the SVAN 945A can perform real time 1/1 & 1/3 octave analysis including statistical calculations, real time FFT analysis, reverberation time RT 60, Tonality and Loudness.

Fast USB 1.1 interface (12 MHz) creates real time link for the application of the SVAN 945A as a PC "front-end".

Built-in RS 232 interface allows acoustic monitoring applications including GSM/ GPRS modems communication.

Thanks to built-in rechargeable batteries and robust, lightweight design the SVAN 945A can be used in hard environmental conditions over the whole work day.

FEATURES

- Type 1 Sound Level Meter (sound measurements in 1 Hz ÷ 20 kHz band) PTB approved
- 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 than one week (six weeks) of three 1 sec results (one result per profile)
- Measurement range 22 dBA RMS ÷ 140 dBA Peak in SLM mode
- 1/1 and 1/3 octave real time analysis with time history (option)
- 1920 lines real time FFT analysis in 20 kHz band (option)
- Reverberation Time measurement (RT 60 option)
- Tonality measurement (option)
- Loudness measurement (option)
- Advanced trigger function
- Built-in temperature and static pressure sensors
- Easy in use
- USB 1.1 interface (real time PC "front end" application supported)
- RS 232 interface
- Integration time programmable up to 24 h
- Hand held, light weight and robust case (only ca 600 grams including batteries)



TECHNICAL SPECIFICATIONS

SOUND LEVEL METER

Standards

Type 1: IEC 651, IEC 804 and IEC 61672-1

Results

SPL, L_{eq} , SEL, L_{den} , L_{m3} , L_{m5} , statistics - L_n ($L_1 \div L_{99}$), L_{Max} , L_{Min} , L_{Peak} , Time History

Simultaneous measurement in three profiles with independent set of filters and detector time constants

Weighting Filters

A, C and Lin (Z) (Type 1: IEC 651, IEC 804 and IEC 61672-1)

RMS Detector

Digital True RMS detector with Peak detection, resolution 0.1 dB,

Time Constants: Slow, Fast, Impulse

SOUND ANALYSER (option)

1/1, 1/3 octave*

Real time analysis with spectra logging down to 2 ms time step

FFT*

Real time analysis in 20 kHz band and sub-bands with 1920 spectra lines

RT 60*

Reverberation time analysis in 1/3 octave bands

Tonality*

Pure tone indication based on the FFT analysis

Loudness*

Based on ISO 532B and Zwicker model

*each option parallel to meter mode

BASIC DATA

Input

5-pin LEMO connector

Preamplifier

SV 11 Microphone preamplifier supporting 200 V polarisation voltage

Microphones

GRAS 40AN Type 1 1/2" condenser microphone (1 Hz ÷ 20 kHz; 50 mV/Pa sensitivity)

Measurement Range

22 dBA RMS ÷ 140 dBA Peak (with 5 dB margin from noise level)

Dynamic Range

120 dB (meter mode), 100 dB (analyser mode)

Resolution

0.1 dB

Internal Noise Level

less than 17 dBA RMS

Frequency Range

1 Hz ÷ 20 kHz

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), RS 232, analogue output AC 1 V Peak

Power Supply

Buil-in rechargeable batteries operation time > 12 h (4.8 V / 1.6 Ah)

With external battery pack SA 17 operation time > 24 h (option)

External power supply 6 ÷ 15 V DC (1.5 W)

Environmental Conditions

Temperature -10°C to 50°C

Humidity up to 90 % RH, non condensed

Dimensions

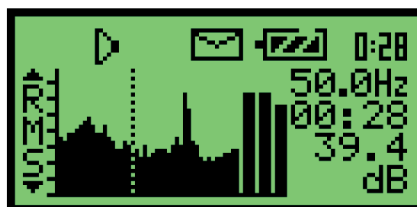
300 x 82 x 42 mm (with microphone and preamplifier)

Weight

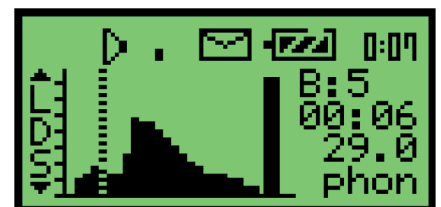
Approx. 0.6 kg with battery



Main result in one profile view



1/3 octave spectrum



Loudness

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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