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DATASHEET



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MOLES

(Miniature Outdoor Logger for Environmental Sound)

MOLES is a new development based on the powerful SVAN 971 Class 1 sound level meter, which allows medium to long-term unattended sound monitoring in all conditions.

Key points:-

- Long battery life – up to 4 weeks with standard battery
- Weatherproof case (IP65) and microphone
- 4GB μ SD storage (can be upgraded to 32GB)
- Summary (periodic) and logger (time history) data
- Hot swappable batteries
- Charger included
- External battery option
- Class 1 to BS EN 61672-1
- Linearity range down to 25dB(A)
- Extension cable included
- Easily portable (less than 7kg)

Options:-

- 1/1 and 1/3 octave real-time analysis to BS EN 61260
- Audio recording (incl. 2 in 10 recording for windfarms)
- Additional batteries
- External battery



MOLES is an outdoor noise monitoring system which is easily portable yet low-cost. The IP65-rated case contains a lead-acid battery which runs the system continuously for over 4 weeks (dependent on ambient temperature and analysis selected). The internal battery can be hot-swapped and external batteries may be connected to extend the life still further.

The case is fitted with waterproof LEMO connectors and the external microphone comes with a 4.5m extension cable although longer cables can be supplied on request.

The supplied SA271U outdoor microphone protection system incorporates a desiccator, rain protection and birdspikes, along with a large 130mm windshield, for excellent reduction of wind turbulence noise. Auto-calibration can also be enabled, allowing instant access to the calibration menu when a sound level calibrator is applied to the microphone.

The characteristics of the microphone system are fully documented, so the frequency response corrections for 90° (environmental) or 0° (aircraft) incidence can be dialled into the instrument, maintaining the Class 1 accuracy. If a more visually discreet windshield is required then our MW403 outdoor windshield with birdspikes is also available (option).

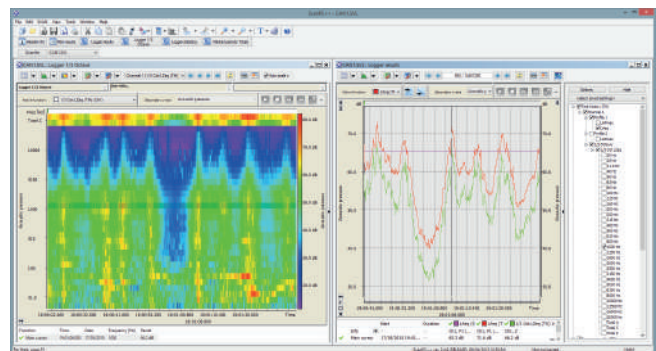
MOLES is very simple to operate and the SVAN971 can either be set up from your PC or using the instrument's keypad. The internal 4GB µSD card gives almost limitless storage of results, and can be downloaded via high-speed USB or by removing the card and reading directly on your PC.

Summary (periodic) results can be stored and synchronised to whole measurement intervals. Results include Leq, Ln, Lmax, Lmin, etc and three measurement profiles can be set with different frequency weightings and time constants. In addition, logger (time history) data may be stored in parallel, down to 100ms intervals, so complete time histories of sound levels can be evaluated later on your PC.

The SVAN 971 can be upgraded by the user at any time by unlocking additional capabilities such as the SV971_3 option which adds 1/1 and 1/3 octave real-time analysis from 20Hz to 20kHz (useful for evaluating the behaviour of tonal sources, and amplitude modulation in wind turbines) or the SV 971_15 Audio Events Recording option to add triggered audio recording capability up to 12kHz sample rate. Additionally, time-based audio recording is possible, such as the 2 minutes recording every 10 minutes suggested by the IOA Good Practice Guide on Wind Turbine Noise.



EXAMPLE SVAN971 SCREENSHOTS



SVANPC++ SOFTWARE

For more details on the SVAN 971 capabilities, see the separate data sheet.

SVAN 971

Sound Level Meter

23,25 cm



The SVAN971 is the smallest sound level meter we've ever made with such incredible functionality and if there's anything smaller out there then we've yet to find it!

It uses a high resolution, full color OLED screen which makes taking noise measurement a real pleasure.

Never before has a class 1 instrument been so affordable making your noise measurements more accurate and reliable than ever before.

INSTRUMENTATION FOR SOUND & VIBRATION MEASUREMENTS

 **SVANTEK**
continuous innovation

SVAN 971

Sound Level Meter

Key features:

- Small, pocket size design
- Class 1
- Options for 1/1 & 1/3 octave real-time analysis
- Large measurement range
- Self-vibration detection
- Dosimeter function (option)
- Audio events recording (option)
- Voice comments recording
- Statistical analysis
- Automatic calibration start
- High contrast color OLED display
- Screen automatically rotates when instrument turned
- IP 65 rating
- Easy and friendly user interface

Applications:

- Workplace (industrial hygiene) noise assessments
- Noise exposure calculations
- Hearing protection selection
- Short term environmental noise measurements
- Workplace noise legislation compliance
- Machinery noise testing



Class I according to IEC 61672-1

Display

The amazing digital display is a full color, high contrast OLED screen which even turns to stay upright automatically as the instrument is turned or inverted. It displays information in both text and graphical form and being OLED means you can easily read the screen even in full daylight. The display is also back-lit for easy use in low ambient light areas.



Operation

The menu structure is very easy to use which makes setting up and using the instrument easier than ever. Setup can be done either through the instrument or via the included "Supervisor" software. All data is stored on the integral 4GB microSD card which gives a vast amount of storage but if that's not enough then the card can be easily upgraded. The latest regulations call for instrument vibration to be measured to ensure acoustic measurements aren't distorted from excessive vibration. The SVAN 971 is the first instrument in its class to measure vibration continuously therefore ensuring full legislative compliance.

Acoustic characteristics



The SVAN 971 is a full class 1 instrument that has options for octave and third octave band filters. It has a measurement range of 15dB to 140dB which gives an incredible dynamic range that's greater than 110dB. It can record audio comments to .wav files and measures both SLM (sound level meter) and dosimeter data. The instrument has many unique features, like peak spectrum, that put it out there in a class of its own.

SVAN 971 features

What's inside?

The signal input comes from a high quality omni-directional microphone which allow sound measurements from as low as 10 Hz. The detachable preamplifier, unusual on an instrument of this size, makes it possible to use the SVAN 971 in applications that require extension cables. The standard kit includes a 4 GB microSD card which can be easily upgraded to as much as 32 GB and a SA 22 windscreens to protect the microphone from wind interference. The instrument is powered from 4 AAA batteries which provide enough power to run the instrument for up to 24 hours. One exceptional feature of the SVAN971 is its OLED high contrast colour display which provides good visibility even in sunny weather.

PC software pack



The SVAN971 works with Svantek's specialist health and safety software package, "Supervisor", and the full analysis package SvanPC++.
Supervisor is the latest software package from Svantek that provides the health and safety specialist with everything they need. Data can be stored by instrument, by user or by site and the amazingly versatile reporting package keeps the acoustic professional in full control.



SVAN 971 Sound Level Meter Specification

Standards	Class 1: IEC 61672-1:2002
Weighting Filters	A, B, C, Z
Time constants	Slow, Fast, Impulse
RMS Detector	Digital True RMS detector with Peak detection, resolution 0.1 dB
Microphone	ACO 7052E, 35 mV/Pa, prepolarised 1/2" condenser microphone
Calibration	Automatic calibration start @ 114 dB/1 kHz
Preamplifier	SV 18 detachable
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
Meter Mode Results	SPL, L_{eq} , SEL, L_{den} , L_{tm3} , L_{tm5} , L_{Max} , L_{Min} , L_{Peak} , "running L_{eq} " up to 60 minutes Simultaneous measurement in three profiles with independent set of filters and detectors
Statistics	L_n (L_1 - L_{99}), complete histogram in meter mode
Data Logger	Time-history logging of summary results, spectra with adjustable double logging steps down to 100 ms
Audio Recording (option)	Audio events recording, trigger and continuous mode, 12 kHz sampling rate, wav format
Voice Comments	Audio records on demand, created before or after measurement, added to measurement file
Dosimeter Mode Results (option)	SPL, L_{eq} , SEL, L_{Peak} , Dose, D-8h, Lav, SEL8, PSEL, E, E-8h, TWA, 'Peak Counter' and more Exchange Rate 2, 3, 4, 5, 6
1/1 Octave Analysis (option)	Real-time analysis meeting Type 1 requirements of IEC 61260, center frequencies from 31.5 Hz to 16 kHz available simultaneously with three profiles for broadband measurements (SLM), time-history logging and audio recording
1/3 Octave Analysis (option)	Real-time analysis meeting Type 1 requirements of IEC 61260, center frequencies from 20 Hz to 20 kHz available simultaneously with three profiles for broadband measurements (SLM), time-history logging and audio recording
Physical Characteristics	Dimensions 232,5 mm x 56 mm x 20 mm (including microphone and preamplifier) Weight Approx. 225 grams with batteries

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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