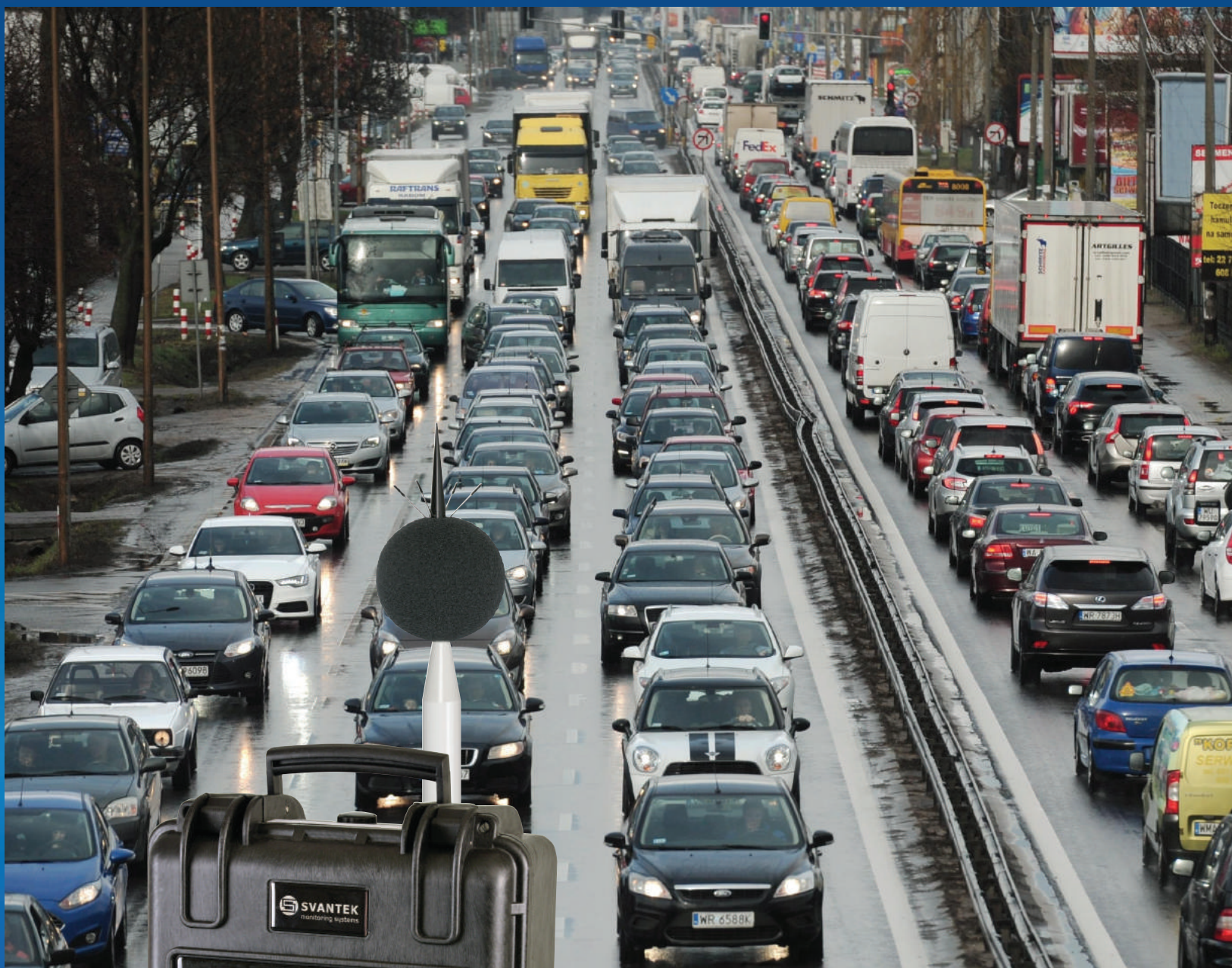# SV 277 PRO
Noise Monitoring Station

svan net

SVANTEK
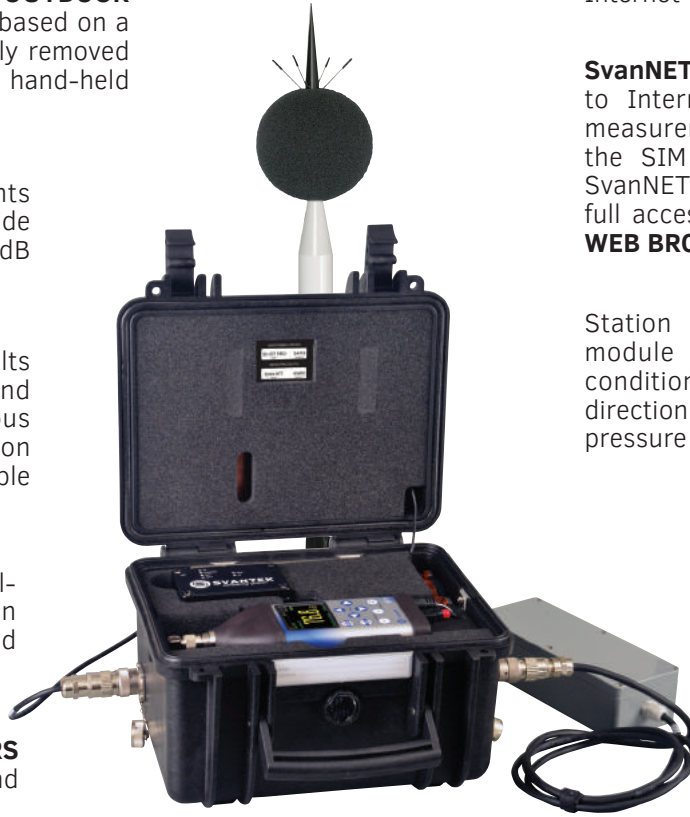monitoring systems

SV 277 PRO Noise Monitoring Station

SV 277 PRO is a portable monitoring system housed in a waterproof case dedicated for periodic **OUTDOOR** measurements. The station is based on a **SVAN 977A** which can be easily removed from the case and used as a hand-held sound level meter.

CLASS 1 noise measurements are performed over a very wide dynamic range - over 110 dB from 10 Hz up to 20 kHz.

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

The station can perform real-time frequency analysis in **1/1 or 1/3 OCTAVE** bands and save it as time-history data.

Military standard **CONNECTORS** provide reliable, robust and waterproof cable connections.

The **3G MODEM** provides data transfer over the Internet to PC with standard Internet connectivity.

SvanNET enables a plug & play connection to Internet and easy management of measurement projects. Regardless of the SIM card type, Public or Private, SvanNET will establish connection, giving full access to the measurement data via **WEB BROWSER**.

Station supports an optional **METEO** module for assessment of weather conditions such as wind speed and direction, temperature, humidity, ambient pressure or rainfall.

Station can be powered from an internal battery or outdoor DC power supply and is ready for direct connection of a **SOLAR PANEL.** The powering is managed by the intelligent charging unit.

What's inside the SV 277 PRO

The SV 277 PRO kit consists of two carrying cases. The main unit is a waterproof carrying case with internal 17 Ah battery and internal charging unit supporting powering from external DC or solar panel. The SVAN 977A Class 1 sound level meter is installed inside.
The outdoor power supply and outdoor microphone kit are packed inside the second transportation case. The kit includes license for SvanPC++ software and SvanNET connectivity service. Each kit has its factory calibration certificate and 36 months warranty card.

About SV 277 PRO

SV 277 PRO is an outdoor monitoring system based on SVAN 977A Class 1 sound level meter. The IP65-rated case contains a lead-acid battery which operating time can be easily extended by connecting an external battery or a solar panel. The intelligent charging unit enables use of a solar panel without expensive controllers or heavy batteries. The case is fitted with very robust, waterproof connectors (military standard) and is supplied with an IP 65 external power supply. The light-weight microphone protection kit can be easily installed on a mast with standard mounting threads. All accessories fit conveniently into a second carrying case. The system 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. The broad-band results can be recorded in three acoustic profiles which enable measurements to be taken with 3 different filters (A, C, Z) as well as 3 different detector time constants (Fast, Slow, Impulse).
The monitoring station uses a 3G modem for the remote communication with Internet. SvanNET, a connectivity service, supports the connection between PC and station. The SvanNET allows the usage of all types of SIM cards with the system, regardless if they have public or private IP. The connection over the SvanNET allows users to use a mobile phone or tablet to check the status of the noise monitoring station.
The SVAN 977A can be easily removed from the case and used as a hand-held sound level meter.

SV 277 PRO Noise Monitoring Station Software

SvanNET

SvanNET is an advanced server solution supporting remote connection with SV 277 PRO. The SvanNET allows usage of all types of SIM cards with the SV 277 PRO modem regardless if they have public or private IP. The connection over the SvanNET allows users to use a web browser to watch real time measurement results, manually download files and reconfigure the station.

SvanPC++ is a PC software providing 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 spread sheet or text editor applications. Additionally, SvanPC++ includes a module for an advanced analysis of WAV files from SV 277 PRO. The WAV analyser can be used for variety of calculations, such as 1/3 octave, FFT or tonality analysis.
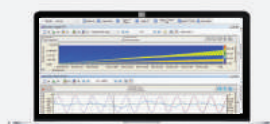
Optional functions

SvanNET Projects offers powerful functions such as automatic files download, data storage, status and measurement alarms, data sharing, public website creation and automatic reporting. The Projects functionality can be activated at any time by ordering the upgrade.

SvanPC++ Environmental Measurements module is designed for post-processing of data recorded by monitoring station. The module offers a powerful calculator and an automated noise event finder for noise source identification. SvanPC++_EM allows to combine and compare data from multiple measurements as well as create and save reports in MS Word™ templates. It can be activated at any time by ordering an activation code or hardware key.

The option for **1/3 OCTAVE REAL-TIME** analysis allows the analysis of the noise frequency contents. The statistical analysis in 1/3 octave bands is used for verification of noise sources in the environment. It can be activated at any time by ordering the activation code.

The option of **TIME DOMAIN SIGNAL RECORDING** to WAVE format works during measurement and is logged in parallel to a time history. Once downloaded to PC it can be played back. Settings such as triggers or recording time are adjustable. In addition to audio play-back, WAVE file can be post-processed in SvanPC++ software that provides calculation of overall results such as Leq, Lmax, Lmin, Lpeak as well as 1/3 octave and FFT calculations or tonality. It can be activated at any time by ordering the activation code.

Optional accessories to SV 277 PRO

| SA 206 Mast for Microphone Protection Kit | SB 271 Solar Panel to Monitoring Station | SB 272 External 33 Ah Battery to Monitoring Station | SP 272 Alarm Lamp to Monitoring Station | SP 275 Weather Station based on VAISALA module |

SV 277 PRO Technical Specifications

Standards	Class 1: IEC 61672-1:2013; Class 1: IEC 61260-1:2014
Meter Mode	Elapsed time, Lxy (SPL), Lxeq (LEQ), Lxpeak (PEAK), Lxymax (MAX), Lxymin (MIN), Ovl (OVERLOAD %), Lxye (SEL), LN (LEQ STATISTICS), Lden, LEPd, Ltm3, Ltm5
	Simultaneous measurement in three profiles with independent set of filters (x) and detectors (y)
Analyser[1] (optional)	1/1 or 1/3 octave real-time analysis
Audio Recording[1] (optional)	Time domain signal recording to WAV signal, continuous or triggered
	Sampling rate: 12/24/48 kHz with 24-bit resolution
Weighting Filters	A, C, Z, B,LF, U, AU
RMS Detector	Digital True RMS detector with Peak detection, resolution 0.1 dB
Detector Time Constants	Slow, Fast, Impulse
Microphone Protection Kit	SA 277 outdoor protection kit (IP 65) with SC 277 extension cable
Microphone	ACO 7052E, 35 mV/Pa, prepolarised 1/2" condenser microphone
Preamplifier	SV 12L IEPE preamplifier
Linear Operating Range	25 dBA RMS ÷ 140 dBA Peak (in accordance to IEC 61672)
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
Frequency Range	10 Hz ÷ 20 kHz with ACO 7052E
Data Logger	Time-history logging with two adjustable logging steps down to 2 milliseconds
Memory	MicroSD card 16 GB (upgradeable to 128 GB)
Remote Communication	3G modem
Power Supply	Waterproof DC power supply 15 V , 60 WATT (acceptable voltage range 11 V ÷ 30 V)
	Internal battery 17 Ah / 12 V
	Secondary external battery 33 Ah / 12 V (optional)
	Solar panel (optional)
Operating Time on Battery	4 days with continuous modem transmission[2]
	8 days with modem switched off[2]
	Test Conditions: meter mode, display dimmed, 2 ms time-history logger, continuous event recording
Environmental Conditions	Temperature -10 °C ÷ +50 °C
Dimensions	305 x 270 x 194 mm (without cables)
Weight	Approximately 9 kg including battery

[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.

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