



SV 200A

All in One
Noise Monitoring Station



SVANTEK
monitoring systems

SV 200A Noise Monitoring Station

SV200A is the top-of-the range **NOISE MONITORING STATION** with built-in microphones for **NOISE DIRECTIVITY** detection. This revolutionary solution enables identification of dominant noise sources providing information about their location both in vertical and horizontal directions.

In practice, the measurement of directionality gives the opportunity to indicate the dominant source of noise in the area of measurement, the exclusion of unwanted events and to identify airplanes passages.

Four additional microphones located on sides of the housing use the sound intensity technique to detect the **DIRECTION** of a **DOMINANT NOISE SOURCE** both in the vertical and horizontal axes. The Leq distribution in angle sectors is saved as the time-history and can be used for data filtering and reporting.

Station can perform a real-time frequency analysis in **1/1** and **1/3 OCTAVE** bands and save it as time-history data. Additionally it can record the **AUDIO SIGNAL** for **NOISE SOURCES RECOGNITION** and data recalculation.

The **ADVANCED ALARMS** function can send e-mail and SMS notifications triggered by threshold level conditions combined with time conditions. Station's status alarms are also available.

The **4G MODEM**, **WLAN** and **LAN** provide fast 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**.



Following **ISO 1996-2** requirements, the SV200A is using the **ELECTROSTATIC ACTUATOR** to perform the periodic system check. **CHECKING OF THE COMPLETE MEASUREMENT CHAIN** including the microphone is the advantage of using electrostatic actuator method.

The **LARGE WINDSCREEN** is highly efficient in reduction of a wind noise effects even at high wind speeds. Metal spikes protect station against birds.

The **WEATHERPROOF** housing protects the SV200A noise monitoring station against extreme weather conditions while fulfilling **CLASS 1 ACCURACY**.

The accurate **GPS** module provides information on the localization as well as measurement **TIME SYNCHRONIZATION**.

OLED display and 5 push-buttons enable the results **PREVIEW** and measurement parameters **CONFIGURATION**.

The SV200A has an internal Li-Ion battery and interface for direct solar panels connection. A **WATERPROOF** mains adapter for charging the battery and powering the station is also included.

The **Bluetooth®** and **Wireless LAN** provide **access point** for an easy configuration with the SvanNET Application.

About SV 200A

The SV200A is a new noise monitoring station dedicated for permanent noise monitoring. With four additional microphones the SV200A is able to detect the direction of the dominant noise source. The monitoring station has been equipped with a various options for connection including 4G, LAN, Wireless LAN and Bluetooth®.





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The SV200A is a Class 1 sound level meter integrated with a wireless communication via 4G, LAN, Wireless LAN and Bluetooth®. The list of add-ons also includes an built-in -electrostatic actuator, GPS module and e-compass. The waterproof power supply is also provided.



SvanNET is an advanced server solution supporting remote connection with SV200A. The SvanNET allows usage of all types of SIM cards with the SV200A 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 as well as manually download files and configure the station.



SvanPC++ Remote Communication software package offers advanced features such as automatic data download, CSV and HTML data publishing as well as FTP upload. The SvanPC++_RC module supports configuration of the monitoring station as well as configuration of advanced alarms that combine triggers based on time with noise thresholds.



SvanNET Application uses any local interface like Bluetooth®, LAN or Wireless LAN, USB for an easy configuration of the SV200A for the connection with the SvanNET or customer server or PC.

Optional software



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.

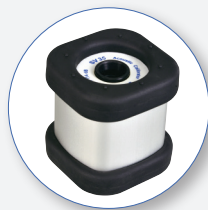


SvanPC++ Environmental Measurements module is designed for post-processing of data recorded by the monitoring station. The module offers a powerful calculator and an automated noise event finder for noise source identification. SvanPC++_EM allows to combine and compare data from multiple measurements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

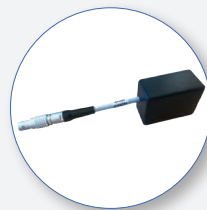
Optional accessories to SV 200A



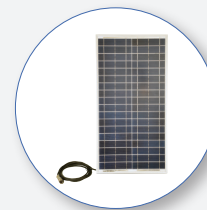
SP275
Weather Station
based on
VAISALA module



SV36
Class 1 Acoustic
Calibrator
94 dB / 114 dB
at 1 kHz



SP200
LAN
Adapter



SB276
Solar Panel
to Monitoring
Station



SV 200A Technical Specifications

| | |
|----------------------------------|--|
| Standards | Class 1: IEC 61672-1:2013, Class 1: IEC 61260-1:2014 |
| Weighting Filters | A, B, C, Z |
| RMS Detector | Digital True RMS detector with Peak detection, resolution 0.1 dB Time constants: Slow, Fast, Impulse |
| Microphone | Microtech Gefell MK 255, 50 mV/Pa, prepolarised 1/2" condenser microphone |
| Preamplifier | Integrated |
| Linear Operating Range | 25 dBA RMS ÷ 133 dBA Peak (in accordance to IEC 61672) |
| Dynamic Measurement Range | 15 dBA RMS ÷ 133 dBA Peak (typical from noise floor to the maximum level) |
| Internal Noise Level | less than 15 dBA RMS |
| Frequency Range | 3.5 Hz ÷ 20 kHz |
| Meter Mode Results | Elapsed time, L _{xy} (SPL), L _x eq (LEQ), L _x peak (PEAK), L _{xy} max (MAX), L _{xy} min (MIN), L _{xy} e (SEL), 2 x LR (ROLLING LEQ), 2 x LE (ESTIMATED LEQ), LN (LEQ STATISTICS), L _{den} , LEPd, L _{tm} 3, L _{tm} 5 Simultaneous measurement in three profiles with independent set of filters (x) and detectors (y) |
| Statistics | L _n (L ₁ -L ₉₉), complete histogram in meter mode and 1/1 & 1/3 octave analysis Simultaneous measurement in three profiles with independent set of filters and detectors |
| 1/1 Octave Analysis ¹ | Real-time analysis meeting class 1 requirements of IEC 61260 (4 Hz ÷ 16 kHz) |
| 1/3 Octave Analysis ¹ | Real-time analysis meeting class 1 requirements of IEC 61260 (4 Hz ÷ 20 kHz) |
| Noise Directivity ¹ | Maximum noise energy directivity measurements in both azimuth and altitude directions including noise energy distribution diagram |
| Audio Recording ¹ | Time domain records to wav file format on demand with selectable bandwidth and recording period |
| Data Logger | Logging of summary results, spectra distribution and its statistics, weather data with logging step down to 1 s and time history of selected parameters with short logging step down to 20 ms |
| Ingress Protection Rating | IP 54 |
| Inputs | Power supply LEMO 3-pin, extended I/O port LEMO 10-pin, LAN interface LEMO 7-pin |
| Remote System Check | Built-in electrostatic actuator, triggered manually or in automated mode |
| Memory | 16 GB (non-removable) |
| Display & Keyboard | 1.1" OLED display and 5 push-buttons keyboard |
| Communication Interfaces | USB, RS 232, UART (TTL), LAN, Bluetooth®, 4G modem, WLAN |
| GPS | Used for time synchronization and localization |
| Power Supply | Li-Ion rechargeable battery (non-removable) Operation time on battery (10.8 V / 6.7 Ah) SV200A (modems off) up to 7 days SV200A with GSM mode on up to 4 days ² Solar Panel (not included) MPPT voltage 15.0 V ÷ 20.0 V SB274 AC power supply (included) Input 100 ÷ 240 VAC, output +15 VDC 2.67 A, IP 67 housing External DC source (not included) voltage range 10.5 V – 24 V, e.g. 12 V or 24 V accumulator ³ from -30 °C to 70 °C ⁴ |
| Environmental Conditions | Temperature Humidity up to 99 % RH |
| Dimensions | 860 mm length (total); 70 mm diameter excluding windscreen (windscreen diameter 130 mm) |
| Weight | 3.2 kg |

¹ function operates together with sound level meter mode

² meter mode, time history logging step 1 second, GSM modem transmission 10 % of the measurement time

³ 15 V required for internal battery charging

⁴ only with external powering

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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