

# SV 211 & SV 212 Sound & Vibration Monitoring Stations

SV 211 and SV 212 are outdoor systems dedicated for unattended monitoring of environmental noise and ground / building vibration caused by heavy transportation or building construction site.

Both terminals can be used also for acoustic map making, verification of the noise barrier efficiency as well as general periodical on-line vibration & noise monitoring.

Main usage field of SV 211 is sound monitoring by means of one-channel sound level meter (SVAN 955/957/959) whereas SV 212 system applications are sound and triaxial vibration measurements performed by four-channel analyser SVAN 958.

The unique feature of SV 211 monitoring system is Audio Events Recording to time-history files which together with SvanPC+ software provide an easy solution for noise source identification and in-time localization by audio data playback. All elements of the system are protected from weather conditions by waterproof case with locking capabilities. Total weight and dimensions of the case allow moving it from place to place easily, making the system portable. Whenever necessary, measuring instrument (SVAN 955/7/8/9) can be taken out of the case to be used as a hand-held device.

Internal battery is able to power the whole system up to two weeks without recharging. Stations can be powered from external DC or solar panel. Included charger is designed for indoor usage only.

Built-in memory of portable analyser is capable to log results for the whole measurement period. Data can be also recorded to USB disc (Pen Drive) which is mainly used for large size data storage for onsite downloading (time-history logging with audio-events recording or wav files recording).

Remote control over SV 211 / SV 212 is available in two ways: GPRS or Local internet connection (LAN, WLAN).

In the case of GPRS transmission the only requirements are internet connection on PC side and GPRS modem with internet access in monitoring station. Data transmission is fully supported by SvanPC+\_RC Remote Communication software. Remote communication allows to set up instrument and download data from monitoring system placed in the field. Remote alarm functions via e-mails and text messages (SMS) are also implemented.

## FEATURES

- USB memory stick providing almost unlimited logging capability
- Sophisticated alarm functions including reporting via text messages and e-mails
- Remote communication via GPRS transmission, LAN & WLAN (over internet)
- SV 205 weather conditions monitoring module including both, wind speed and direction data
- Powered from internal battery, DC power supply or solar panel
- Real-time 1/1 or 1/3 octave analysis
- Real-time FFT analysis
- Advanced data logger including spectra logging
- Audio Events Recording
- Dynamic range up to 110 dB



## SV 211 SOUND MONITORING

- Environmental (Airport, City, and Industrial) periodical noise monitoring terminal in all climatic conditions
- Dedicated for sound analysers SVAN 955 / SVAN 957 / SVAN 959
- SA 203 outdoor microphone kit for periodical monitoring



## SV 212 SOUND & VIBRATION MONITORING

- Noise & vibration monitoring terminal in all climatic conditions
- Dedicated for SVAN 958 sound & vibration analyser
- SV 207 triaxial vibration accelerometer mounted in robust hermetic metal box with special levelling system
- SV 208 sound measurement set including SA 203 outdoor microphone protection kit



# TECHNICAL SPECIFICATIONS

## SV 211 & SVAN 959

Standards	Type 1: IEC 61672-1:2002
Meter Mode	SPL, $L_{eq}$ , SEL, $L_{den}$ , $L_{tm3}$ , $L_{tm5}$ , Statistics - $L_n$ ( $L_1$ - $L_{99}$ ), $L_{Max}$ , $L_{Min}$ , $L_{Peak}$
Analysers	Simultaneous measurement in three profiles with independent set of filters and detectors 1/1 octave* real-time analysis, Type 1, IEC 61260 1/3 octave* real-time analysis, Type 1, IEC 61260 Audio Events Recording* on USB memory stick FFT* real-time analysis up to 1600 lines with Hanning, Kaiser-Bessel or Flat Top window (option)
Weighting Filters	A, C and Z
RMS Detector	Digital true RMS detector with Peak detection, resolution 0.1 dB Time constants: Slow, Fast, Impulse
Microphone Protection	SA 203 outdoor protection kit for airport and community noise monitoring
Measurement Range	22 dBA RMS ÷ 140 dBA Peak (with SVAN 959)
Internal Noise Level	Less than 12 dBA RMS (with SVAN 959)
Frequency Range	3.15 Hz ÷ 20 kHz (with SVAN 959)

## SV 212 & SVAN 958

Standards	DIN 4150, Type 1: IEC 61672-1:2002
SLM Mode**	SPL, $L_{eq}$ , SEL, $L_{den}$ , $L_{tm3}$ , $L_{tm5}$ , Statistics - $L_n$ ( $L_1$ - $L_{99}$ ), $L_{Max}$ , $L_{Min}$ , $L_{Peak}$
VLM Mode**	RMS, VDV, MTVV or Max, Peak, Peak-Peak
Analysers (option)	1/1 octave* real-time analysis, Type 1, IEC 61260 1/3 octave* real-time analysis, Type 1, IEC 61260 FFT* real-time analysis up to 1920 lines with Hanning, Kaiser-Bessel or Flat Top window
Filters	A, C, G and Z KB (DIN 4150), HP1, HP3, HP10, Vel1, Vel3, Vel10, VelMF, Dil1, Dil3, Dil10, $W_d$ , $W_k$ , $W_c$ , $W_i$ , $W_m$ , $W_p$ , $W_g$ (ISO 2631), $W_h$ (ISO 5439)
RMS & RMQ Detectors	Digital true RMS & RMQ detectors with Peak detection, resolution 0.1 dB SLM time constants: Slow, Fast, Impulse VLM time constants: from 100 ms to 10 s
Microphone Set (option)	SV 208: SV 22 prepolarised 1/2" condenser microphone (sensitivity 50 mV/Pa), SV 12L preamplifier, SA 203 outdoor protection kit for airport and community noise monitoring Measurement Range: 26 dBA RMS ÷ 140 dBA Peak Frequency Range: 10 Hz ÷ 20 kHz
Accelerometer Set (option)	SV 207: Dytran 3233A accelerometer (triaxial, 1 V/g sensitivity) in robust metal hermetic box with levelling system Measurement Range: 1 $mms^{-2}$ RMS ÷ 50 $ms^{-2}$ Peak with HP1 filter Frequency Range: 0.5 Hz ÷ 3000 Hz

## METEO DATA SV 205 (option)

Temperature Range	-40 °C ÷ 124 °C (±0.3 °C)
Ambient Pressure Range	150 hPa ÷ 1150 hPa (±5 hPa)
Humidity	0 % ÷ 100 % (±2 %)
Wind Speed	0 m/s ÷ 60 m/s (±2 %)
Wind Directions	0° ÷ 359° (±3°)

## BASIC DATA

Data Logger	Time-history logging to internal memory or external USB memory stick (not included)	
Memory	16 MB or 32 MB non-volatile flash type	
Interfaces	USB 1.1 Client, USB 1.1 Host, RS 232 (with SV 55 option)	
Remote Communication	GPRS modem (option) LAN & WLAN module (option)	
Power Supply	Battery recharging	15 V ÷ 30 V (waterproof connector)
	DC power supply	11 V ÷ 30 V (waterproof connector)
	Mains power supply	100 V ÷ 240 V
	Internal battery	33 Ah (12 V)
Environmental Conditions	Temperature	-10°C ÷ +50°C
Dimensions	420 x 340 x 210 mm (without antenna)	
Weight	Approx. 19 kg including battery	

\*each function parallel to the meter mode

\*\*simultaneous measurement in four channels with independent set of filters and detector constants

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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