1 INTRODUCTION

The **SVAN 957** is digital, Type 1 sound & vibration level meter along with analyser. The instrument is intended to general acoustic and vibration measurements, environmental monitoring, occupational health and safety monitoring.

Three acoustic or vibration profiles allow parallel measurements with independently defined filters and RMS detector time constants. Each profile provides significant number of results (like **Leq**, **LMax**, **LMin**, **LPeak**, **Spl**, **SEL** in the case of sound measurements or **RMS**, **PEAK**, **VDV**, **MTVV** in the case of vibration measurements). Advanced time history logging for each profile provides complete information about measured signal in non-volatile 32 MB internal memory or external USB Memory Stick and can be easy downloaded to any PC using the USB interface and SvanPC+ software.

All required weighting filters (e.g.: **A**, **C**, **Wk**, **Wc**, **Wh**) including the latest ISO 2631-1&2 standard are available with this instrument. The RMQ detector enables direct measurement of the Vibration Dose Value (**VDV**).

Using computational power of its digital signal processor the **SVAN 957** instrument can, simultaneously to the meter mode, perform real time **1/1 OCTAVE** or **1/3 OCTAVE** analysis including statistical calculations, acoustic dose measurements, **FFT** analysis and **R**everberation **T**ime measurements. The time history logging of **1/1 OCTAVE**, **1/3 OCTAVE** and **FFT** analysis is provided. The time domain signal recording on the external USB memory stick is also available as an option.

Fast USB 1.1 interface (12 MHz) creates real time link for the PC "front-end" application of the **SVAN 957** instrument. The **HOST USB** functionality is also available. The USB HOST controller installed in the instrument enables the user to connect to this meter the USB memory sticks, USB hard disks, USB printers etc. A PC using the optional interfaces (RS 232 or IrDA) can also remotely control the instrument. The measurement results can be downloaded to PC using all mentioned above interfaces. The instrument is powered from four AA standard or rechargeable batteries (i.e. NiMH - separate charger is required). The powering of the instrument from the External DC power source or the USB interface is also provided. Robust and lightweight design accomplishes the exceptional features of this new generation instrument.

1.1 SVAN 957 as Sound Level Meter & Analyser

- noise measurements (**SPL**, **LEQ**, **SEL**, **Lden**, **Ltm3**, **Ltm5** and statistics) with Type 1 IEC 61672:2002 accuracy in the frequency range 10 Hz ÷ 20 kHz with **ACO 7052H** microphone
- parallel **IMPULSE**, **FAST** and **SLOW** detectors for the measurements with **A**, **C** or **Z** filters
- two measurement ranges 25 dB RMS(A) ÷ 123 dB PEAK (**LOW**)

  and 36 dB RMS(A) ÷ 140 dB PEAK (**HIGH**)
- **1/1 OCTAVE** and **1/3 OCTAVE** real time analysis (optional) - 15 filters with centre frequencies 1 Hz ÷16 kHz, Type 1 – IEC 1260 and 45 filters with centre frequencies 0.8 Hz ÷ 20 kHz, Type 1 – IEC 1260
- **RT 60** analysis in 1/3 octave bands (option)
- **FFT** real time analysis - 1920 lines in up to 22.4 kHz band (option)
- **DOSE METER** measurements

1.2 SVAN 957 as Vibration Meter & Analyser

- General vibration measurements (acceleration, velocity and displacement) and optionally HVM meeting ISO 8041:2005 and ISO 10816-1 standards in the frequency range depends on the parameters of the attached accelerometer, i.e. with DYTRAN 3185D general purpose transducer is equal to 2 Hz ÷ 20 kHz

- parallel **RMS**, **VDV**, **MTVV** (or **MAX**), **PEAK**, **PEAK–PEAK** measurements
- **Z**, **HP1**, **HP3**, **HP10**, **KB**, **Wk**, **Wd**, **Wc**, **Wj**, **Wm**, **Wh**, **Wg**, **Wb** weighting filters
- **1/1 OCTAVE** and **1/3 OCTAVE** real time analysis (optional) - 15 filters with centre frequencies 1 Hz ÷16 kHz, Type 1 – IEC 1260 and 45 filters with centre frequencies 0.8 Hz ÷ 20 kHz, Type 1 – IEC 1260
- optional **FFT** spectra calculation (1920 lines in real time up to 22.4 kHz with Hanning, rectangle, flat top or Kaiser-Bessel window and linear averaging) parallel to the **VLM** operation

1.3 General features of SVAN 957

- Advanced **Data Logger** including spectra's logging on the **USB Memory Stick** providing almost unlimited logging capacity
- Time domain signal recording (option)
- Advanced trigger and alarm functions
- **USB 1.1 Host & Client interface** (real time PC "front end" application supported)
- **RS 232** and **IrDA** interfaces (options)
- Integration time programmable up to **24 h**
- Power supply by **four AA** rechargeable or standard **batteries**
- Hand held, light weight and robust case
- Easy in use

1.4 Accessories included

- **7052H -** prepolarised (polarisation 0 V) ½" microphone with nominal sensitivity 22 mV/Pa
- **SV 12L** - microphone preamplifier
- **SC 16 -** USB 1.1 cable
- **SC 35 -** cinch (plug) to BNC (plug) cable (2 m.)
- **four AA** batteries
- **SvanPC** for windows 2000/XP software

1.5 Accessories available

- **SA 17A** - external battery pack
- **SA 22** - windscreen
- **SC 26** - extension (3 m) cable TNC (plug) to TNC (socket)
- **SV 25** - dosimeter microphone with integrated preamplifier and cable
- **SA 43** - carrying case for instrument and accessories
- **SA 45** - carrying case for instrument and accessories (waterproof)
- **SA 46** - carrying belt-bag for instrument (leather)
- **SA 47** - carrying bag for instrument and accessories (fabric material)

- **SV 55** - RS 232 option for the instrument
- **SV 56** - IrDA interface option

1.6 Software options available

- **SVAN 957 -** Type 1 Sound & Vibration Analyser including 1/1 octave analyser
- **SV 957_2 -** 1/3 octave analysis option for the **SVAN 957**
- **SV 957_4 -** FFT analysis option for the **SVAN 957**
- **SV 957_5 -** RT60 option for **SVAN 957**
- **SV 957_9 -** Human Vibration filters option
- **SV 957_10 -** Dosimeter option for the **SVAN 957** (without **SV 25** microphone)
- **SV 957_15 -** Time domain signal recording (to the USB Flash Disk: *.srt or *.wav format)

Notice: *The software options can be purchased in any time as only the introduction of the special code is required for their activation.*

SVAN 957 instrument with microphone and microphone preamplifier

1.7 Current list of SVAN 957 options and accessories

The current list of SVAN 957 options and accessories are presented below:

SVAN 957	Type 1 Sound & Vibration Analyser including 1/1 octave analyser
SV 957_2	1/3 octave analysis option for the SVAN 957
SV 957_4	FFT analysis option for the SVAN 957
SV 957_5	RT60 option for SVAN 957
SV 957_9	Human Vibration filters option
SV 957_10	Dosimeter option for the SVAN 957 (without SV 25 microphone)
SV 957_15	Time domain signal recording (to the USB Flash Disk: *.srt or *.wav format)
SV 25	Dosemeter microphone with integrated preamplifier and cable
SV 55	RS232 interface option
SV 56	IrDA interface option
SC 26	Extention cable TNC (plug) to TNC (socket)
SA 22	Windscreen for 1/2" microphone
SA 18	Carrying bag for instrument and accessories (leather)
SA 43	Carrying case for instrument and accessories
SA 45	Carrying case for instrument and accessories (waterproof)
SA 47	Carrying bag for instrument and accessories (fabric material)
SVAN 957 -	accessories included: 7052H prepolarised microphone, SV 12L preamplifier, SC 16 cable, SC 09A cable, SA 22 windscreen, SvanPC for Windows 2000/XP software