

1. INTRODUCTION

The SVAN 945A is a pocket sound level meter (SLM) and 1/1 octave & 1/3 octave real time analyser in which the state of the art technology in digital signal processing was applied. The instrument is dedicated for the sound level measurements and analysis with the Type 1 accuracy in the frequency band: 1 Hz - 20 kHz. The instrument is able to operate for over 8 hours in the field using the internal rechargeable battery.



The view of the SVAN 945A instrument with the preamplifier and the microphone

The main features of the SVAN 945A are as follows:

1. The unique instrument combining functions of:
 - **Sound Level Meter** (Type 1 according to IEC 651, IEC 804 and IEC 61672-1 standards),
 - **1/1 OCTAVE & 1/3 OCTAVE analyser** (pass-band digital 1/1 octave & 1/3 octave filters, in base two system, working in parallel; Type 1 according to IEC 1260 standard),
 - narrow band frequency analysis (**FFT**).
2. **Parallel operation of three sound level meters, so-called here profiles** which perform the measurement of the acoustic signal with the selectable combination of the **A, C, G** or **LIN (Z)** filters (according to IEC 61672-1 standard) and **SLOW, FAST** or **IMPULSE** time constants of the detector.
3. **1/1 OCTAVE or 1/3 OCTAVE analyser works simultaneously with the mentioned above profiles.**
4. 8 MB of non-volatile memory (expandable up to 32 MB).
5. **SPL, LEQ, SEL, PEAK, MAX, MIN, Ltm3, Ltm5, statistics (LN)** and **time history** are measured in parallel in all three profiles. The statistics are also calculated for each 1/1 octave and 1/3 octave filter as well as for the TOTAL values.
6. The **USB 1.1** and **RS 232** interfaces links the **SVAN 945A** instrument with any computer.
7. The **SvanPC** for Windows 9x / NT software ensures the read out of the measurement results and supports several additional measurement data registration and post processing tasks.
8. The internal measurement of temperature and pressure.
9. At least **eight hours battery operating time** with only **635 g** of the instrument's mass (together with the preamplifier, the microphone and the internal battery).