



Class 1



Logger



USB



micro SD

## Class 1 Sound Level Meter

### Features

- Wide frequency 10 Hz...20 kHz
- Wide range 30 dB...130 dB
- Wide dynamic range 100 dB
- 32G SD card support
- Parallel A/C/Z & Fast/Slow/Impulse

### Application

- Noise at work
- Occupational & industrial hygiene
- Vehicle noise assessment
- Construction noise measurement
- Entertainment noise measurement

### Technical specifications

Display	3 1/2 digit backlight LCD
Display refresh rate	1 Hz
Standard	IEC 61252-1993; IEC 61672-1-2003 ANSI S1, 25-1992; ANSI S1, 4-1983; ANSI S1, 43-1997
Microphone	1/2" pre-polarized condenser microphone build in preamplifier : -26+2dB (50mV / Pa), frequency range: 10 Hz ~ 20 kHz, heat noise : <28 dB (A)
Measurement items	SPL, Leq, S <sub>EL</sub> , Max, Min
Measurement range	30dB ~ 130dB (A) / 35dB ~ 130dB (C) / 40dB ~ 130dB (Z)
Max Cpeak	70...133 dB
Dynamics range	100 dB
Accuracy	+/- 1.4 dB @ 94 dB / 1 kHz
Integration time	10s/1m/5m/10m, 30m/1h/2h/4h/8h/16h/24h/user set
Time weighting	Fast / Slow / Impulse / Peak
Frequency weighting	A / C / Z
Frequency range	10 Hz...20 kHz
DC output	2 Vdc / 130 dB
AC output	2 Vrms / 130 dB
Battery life	30 hours ( LR6 1.5V x 4 Alkaline batteries )
AC power	AC 100...240 V to DC 6...9 V / 0.5 A
Dimensions	285 (L) x 90 (W) x 39 (H) mm
USB interface	Yes
Data storage	37,000 records
External storage media	Micro SD card. Up to 32GB supported
Weight	550 g (batteries included). 2.5 Kg (whole package)



- IEC-61672-2002 Class 1
- 10 Hz...20 kHz frequency range
- 30 dB...130 dB measurement range
- Integrating measurement
- SPL/Leq/SEL/Max/Min
- SD card storage

# ST-109

## Low Cost Class 1 Sound Level Meter



# Introduction

A sound level meter is a device that allows you to determine the acoustic intensity and to measure the sound pressure level, but does not necessarily determine levels of sound in relation to tolerance of the human ear. Sound level meters are suitable for professional application, including measurement of sound at work and environmental sound measurement.

Sounds analyzers provide octave bands analysis to help Safety Manager identify exactly noise sources easily by looking into the most relevant frequency components. The frequency domain information is based on DSP technology.

## Class 1 vs. Class 2

Sound level meters are divided into two "classes" which both have the same functionality, but different tolerances for error. Class 1 instruments have a wider frequency range and a tighter tolerance than a lower cost, Class 2 device. This applies to both the sound level meter and its associated acoustic calibrator.

ST-109 series adopts microphones complied with IEC-61672-2002 & IEC-61260-1995 Class 1 and is designed for Safety Managers to help them conduct effective and accurate workplace noise measurements.





## Technical specification

Display	3 1/2 digit backlight LCD display with maximum reading 2000
Display refresh rate	1 Hz
Standard	IEC 61252-1993; IEC 61672-1-2003 ANSI S1, 25-1992; ANSI S1, 4-1983; ANSI S1, 43-1997 JJG-188-2002 Class 1
Microphone	1/2" pre-polarized condenser microphone build in preamplifier : -26 ~+2dB (50mV / Pa), frequency range: 10 Hz ~ 20 kHz, heat noise : <28 dB(A)
Measurement items	SPL, Leq, S <sub>EL</sub> , Max, Min
Measurement range	30dB ~ 130dB (A) 35dB ~ 130dB (C) 40dB ~ 130dB (Z)
Max Cpeak measurement	70...133 dB
Dynamics range	100 dB
Accuracy	+/- 1.4 dB @ 94 dB / 1 kHz
Integration time	10s, 1m, 5m, 10m, 30m, 1h, 2h, 4h, 8h, 16h, 24h or set in a given range
Time weighting	Fast / Slow / Impulse / Peak
Frequency weighting	A / C / Z
Frequency range	10 Hz...20 kHz
DC output	2 Vdc / 130 dB
AC output	2 Vrms / 130 dB
Battery life	30 hours ( LR6 1.5V x 4 Alkaline batteries )
AC poewr	AC 100...240 V to DC 6...9 V / 0.5 A
Dimensions	285 (L) x 90 (W) x 39 (H) mm
USB interface	Yes
Data storage	37,000 records
External storage media	Micro SD card. Up to 4GB supported
Weight	550 g (batteries included). 2.5 Kg (whole package)

*Environmental conditions: 23°C ± 5°C, relative humidity < 80%*