



SCARLET TECH

- 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

ScarletSound™

# 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. Scarlet Tech ScarletSound™ 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 Manger 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.

ScarletSound™ 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.



# ScarletSound™ ST-109



Microphone

Pre-amplifier

Power

A/C/Z  
weighting

3 1/2 digit  
LCD display

Fast/Slow/Impulse time  
constant

## Application

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

## Features

- Wide frequency range 10 Hz...20 kHz
- Wide measurement range 30 dB...130 dB
- Wide dynamic range 100 dB
- 4G SD card support
- Parallel A/C/Z & Fast/Slow/Impulse measurement

## Technical specification

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

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



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