



Sound Level Meter

LB-10SLM

Operational Manual

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1. Safety Measures

- Avoid storing or using the meter in environments with high temperature or humidity.
- If the meter will be stored for an extended period, remove the battery to prevent leakage.
- Wind passing over the microphone can increase noise readings. To minimize this, use the provided windscreen to cover the microphone when in use.
- Ensure the microphone remains dry and protected from strong vibrations.
- If the date and time reset to the default settings when the meter is powered on, it indicates low battery power—replace the battery in the meter.

2. Introduction

Sound level meter LB-10SLM is a class 2 portable decibel meter for noise measurement. It is equipped with AC/DC outputs for connection to frequency analyzer or X-Y shaft recorder. Large, clear display with backlit ensures optimal readability, even in a dark environment. The unit automatically shuts down after 15 minutes of inactivity, thus extends battery life.

3. Features

- MAX/MIN and HOLD function
- Over-range and under-range display
- FAST and SLOW response
- TIME and DATE display
- A & C frequency weighting
- LCD screen display
- Low battery indication

4. Specifications

Model No	LB-10SLM
Measuring level range	Lo: 30 dB ~ 80 dB
	Med: 50 dB ~ 100 dB
	Hi: 80 dB ~ 130 dB
	Auto: 30 dB ~ 130 dB
Standard	IEC61672-1 CLASS 2
Operating conditions	-20 °C ~ 60 °C
	-4 °F ~ 140 °F
	< 90 % RH (non-condensation)
Storage conditions	-30 °C ~ 70 °C
	-22 °F ~ 158 °F
	< 70 % RH
Accuracy	± 1.4 dB
Resolution	0.1 dB
Display	4 digit LCD
Frequency weighting	A & C
Time weighting	Fast: 125 ms
	Slow: 1 sec
Power supply	9 V battery
Sampling time	2 times/second
Dimensions (L x W x H)	252 x 66 x 33 mm
Weight	258 g

5. Applications

Used in industries, hospitals, general noise survey, workplace to measure intensity of noise, music and other sounds for environmental monitoring, safety and health.

6. Instrument Introduction

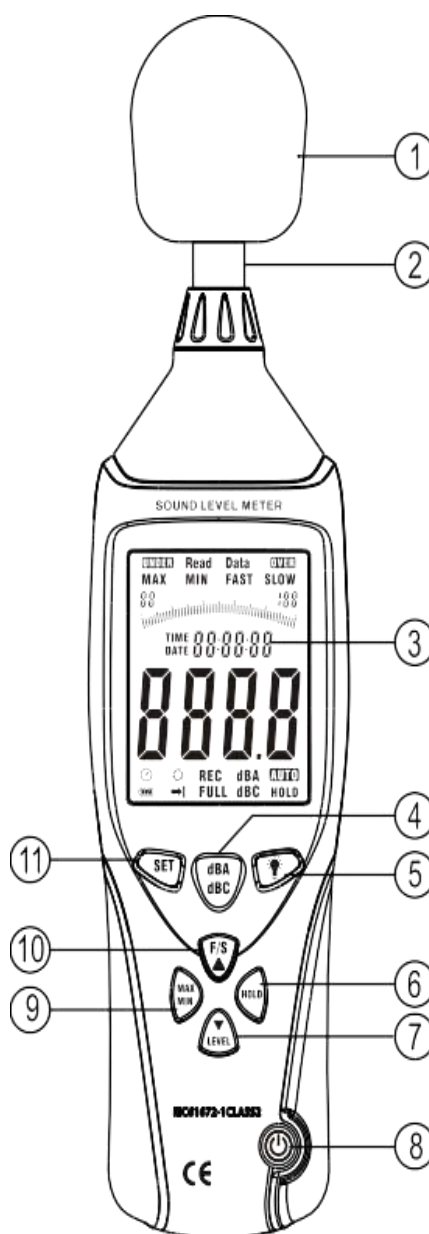


Figure-1

- | | |
|--|---------------------------------|
| 1) Windscreen microphone cover | 6) HOLD key |
| 2) Microphone | 7) Range selection key |
| 3) LCD display | 8) Power ON/OFF key |
| 4) Frequency weighting A/C selection key | 9) MAX/MIN KEY |
| 5) Backlight ON/OFF key | 10) Response time selection key |
| | 11) SET key |

Sound Level Meter LB-10SLM

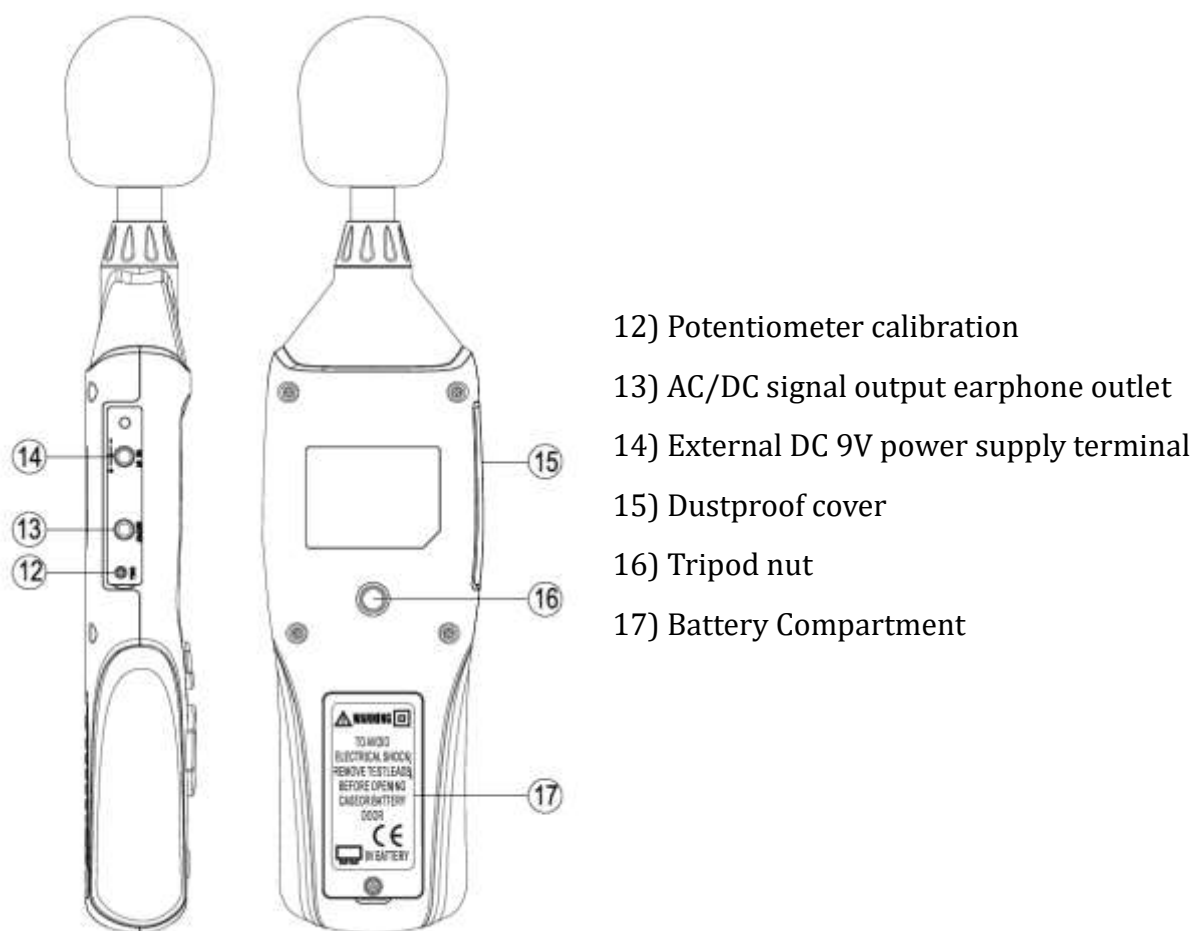


Figure-2

LCD Description

Icon	Function
LCD	4 digits
MAX	Maximum data hold
MIN	Minimum data hold
OVER	input is more than upper limit of range.
UNDER	input is less than lower limit of range.
FAST	Fast response
SLOW	Slow response
dBA	A frequency weighing the noise that human ear can hear
dBc	C frequency weighting (response to machine monitor)
88 ~ 188	Range display
TIME	Display current time (Hour-Minute-Second)
DATE	Display current date (Year-Month-Day)
AUTO	Auto level range selection
HOLD	Data hold function

	Auto power off
	Low battery indication

7. Installation

Environment Conditions

- Altitude up to 2000 meters
- RH≤90% (non-condensation)
- Operating Temperature: -20~60°C

8. Operations

8.1 Operation Instruction

8.1.1 Frequency Weighting Selection

Press the " " key to toggle between A and C weighting.

8.1.2 Backlight

To turn the backlight on or off, briefly press the " " key after switching on the meter. The backlight will automatically turn off after approximately 30 seconds of inactivity.

8.1.3 HOLD Function

Once the meter is turned on, press the " " button briefly. The "HOLD" icon will appear on the LCD, indicating that the current reading is frozen. Press the button again to release the hold and resume live readings.

8.1.4 Level Range Selection

Press the " " key to cycle through level ranges in the following order: 'Lo', 'Med', 'Hi', and 'Auto'.

8.1.5 Power On/Off

To power on the meter, press and hold the " " key for 1 second. To turn it off, continue pressing the key for approximately 3 seconds.

8.1.6 MAX/MIN

Press the " " key once to enter the MAX/MIN measurement mode. The "MAX" indicator will appear on the LCD, showing the maximum recorded sound level. Press the key again to switch to "MIN," which displays the minimum recorded sound level. Press the key once more to exit the MAX/MIN measurement mode.

8.1.7 FAST/SLOW

Press the " " key to select either FAST or SLOW time weighting measurement.

FAST: Sampling occurs once every 125 milliseconds.

SLOW: Sampling occurs once every second.

8.1.8 Date and Time Set

Before turning on the meter, press and hold the “” key. While holding the key, power on the meter. When the DATE icon and data begin flashing, release the key to enter the Date & Time Set mode. The display will show the format YEAR-MONTH-DAY, as illustrated below.



Figure-3

When the YEAR value is flashing continuously, press the “▲” key to increase the value or the “▼” key to decrease it. See the figure below for reference.

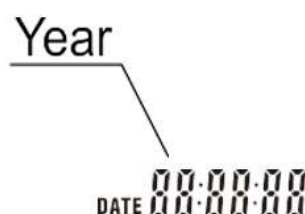


Figure-4

Press the “” key a second time, and the MONTH value will begin flashing continuously. Use the “▲” key to increase or the “▼” key to decrease the value. See the figure below for reference.

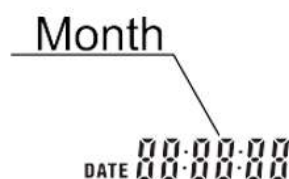


Figure-5

Press the “” key a third time, and the DAY value will start flashing continuously. Use the “▲” key to increase or the “▼” key to decrease the value. See the figure below for reference.

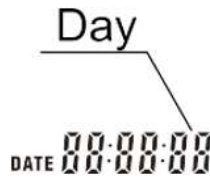


Figure-6

Press the “” key a fourth time, and the TIME icon along with the HOUR value will begin flashing. Press the “▲” key to increase or the “▼” key to decrease the value. See the figure below for reference.



Figure-7

Press the “” key a fifth time, and the MINUTE value will begin flashing. Use the “▲” key to increase or the “▼” key to decrease the value. See the figure below for reference.

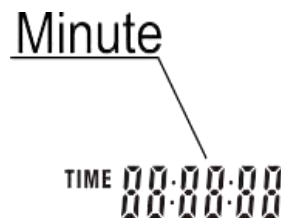


Figure-8

Once the Date & Time settings are complete, press the “**PEAK**” key to save the data and exit the setting mode.

8.1.9 TIME/DATE Display

After turning on the meter, press the “” key to switch between TIME and DATE display.

8.1.10 AC/DC Signal Output Earphone Outlet

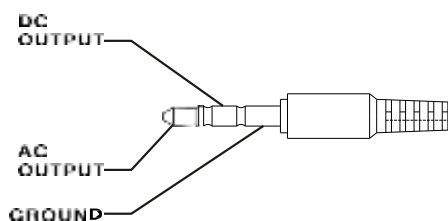


Figure-9

AC: Output voltage: 1Vrms corresponding to each range step.

Output impedance: 100 Ω

DC: Output voltage: 10mv/dB

Output impedance: approx.1K Ω

8.1.11 External Power Supply

DC 9V Input

External DC 9V power supply with positive polarity on the inside and negative polarity on the outside.

Connector size: Outer Diameter (OD) 3.5mm, Inner Diameter (ID) 1.35mm.

8.2 Calibration Procedure

- 1) Set the following switches:
 - Frequency weighting to A-weighting
 - Time weighting to FAST
 - Level range to 50 ~ 100 dB
- 2) Carefully insert the microphone housing into the 1/2-inch insertion hole of the calibrator (94 dB @ 1 kHz).
- 3) Turn on the calibrator switch and adjust the CAL potentiometer until the display shows 94.0 dB.

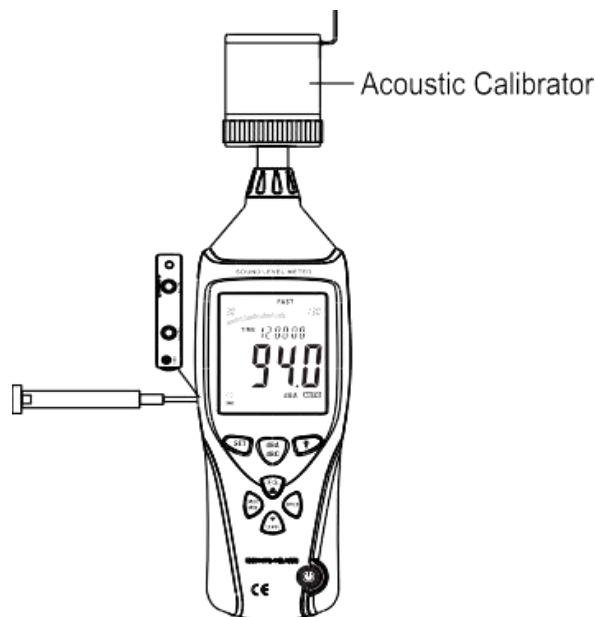


Figure-10

8.3 Basic Operation

- 1) Open the battery cover and install a 9-volt battery into the battery compartment.
- 2) Close the battery compartment.
- 3) When the low battery icon "☐" appears, replace the battery in the meter.
- 4) When using the AC adapter, insert the adapter plug (3.5 ϕ) into the DC 9V connector on the side panel.

8.4 Operating Procedures'

- 1) Turn on the meter.
- 2) Press the " " button to choose the desired level range.
- 3) Select "dBA" for general noise measurement or "dBC" for measuring the sound level of acoustic materials.
- 4) Choose "FAST" for instantaneous sound measurement or "SLOW" for averaged sound levels.
- 5) Press the " " button to measure the maximum and minimum noise levels.
- 6) Hold the meter by hand or mount it on a tripod at the desired location. The optimal measuring distance is 1 to 1.5 meters from the microphone to the sound source.

9. Accessories

Standard Accessories

No	Accessory Name
1	9 V battery
2	Windscreen
3	Regulator rod
4	Φ 3.5 earphone plug
5	Carrying case



Labotronics Scientific. 1007 N Orange St., Wilmington, DE 19801, USA.
info@labotronics.com | www.labotronics.com