

Sound Level Meter Instruction Manual

V1.4.4

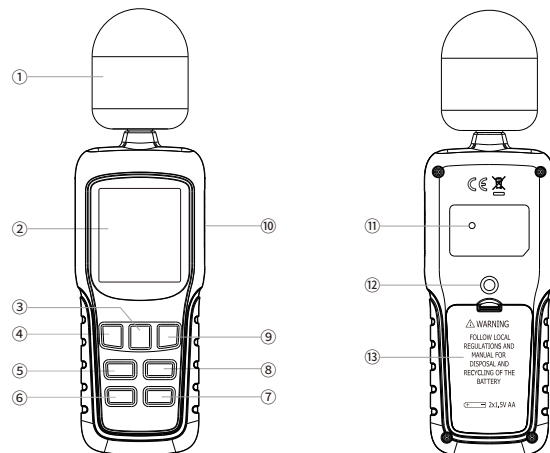


1. Introduction

This product is an instrument for measuring the value of environmental noise, divided into a standard version and a record version. It can be used in machine building, equipment maintenance, architectural design, transportation, environmental protection and health and other fields.

2. Product Description Schematic

2.1 Exterior



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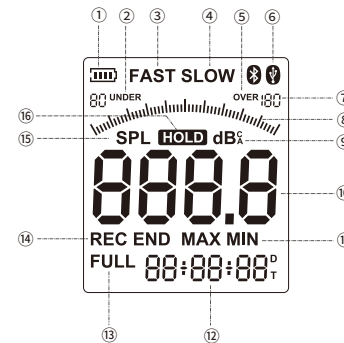
- ①Sponge ball
(Containing condenser microphone)
- ②LCD
- ③Power key
- ④“MODE” or “MODE (D/T)” key
- ⑤“F/S” or “F/S▼”
- ⑥“MAX/MIN” or “MAX/MIN (REC)” key

- ⑦“☀” or “☀/CLR”
- ⑧“A/C” or “A/C▲”
- ⑨HOLD key
- ⑩USB, DC and AC interface
- ⑪Calibration hole
- ⑫Tripod fixed screw hole
- ⑬Battery compartment

- ⑮Maximum value prompt of over gear
- ⑯USB connection prompt
- ⑰Measurement gear prompt
- ⑱Sound analogy to depict
- ⑲Unit dB and frequency weighting A/C
- ⑳Numerical display area
- ㉑Maximum/minimum measurement mode prompt
- ㉒Perpetual calendar display area (Model B)
- ㉓Remind that the record is full (Model B)
- ㉔Data recorded prompts symbol (Model B)
- ㉕Sound pressure level
- ㉖Value hold prompt

Note: Only some keys are different in appearance between the two instruments. For the convenience of description, we will use display part of the key to indicate the keys with large functional differences, such as the “MODE (D/T)” key and the “MAX/MIN (REC)” key . When using, please refer to the actual instrument purchased.

2.2 LCD



- ①Battery level reminder
- ②Minimum value prompt of under gear
- ③Fast weighting
- ④Slow weighting

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3. Battery Installation Instructions

- (1) Insert the battery according to the positive and negative instructions inside the battery compartment.
- (2) After inserting the battery, close the battery cover.
- (3) When not using the instrument for a long time, be sure to remove the battery and place it properly.

4. Switch Machine

Press the “Power” key to turn the instrument on or off.

Note: The instrument will automatically shut down if there is no key operation for 10 minutes by default.

5. Measurement Steps

Step 1: Install batteries and turn on the instrument.

Step 2: Select the appropriate gear to measure. After the value is stable, read the noise value of the measured object.

Step 3: After the measurement is over, turn off the instrument.

Note: When measuring outdoors, please put a sponge ball on the microphone to prevent wind noise from affecting the measurement reading.

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6. Function Description

6.1 Measurement Gear

Short press the “MODE” or “MODE (D/T)” key, switchable 30~130dB, 30~80dB, 50~100dB and 80~130dB four gears.

Note: When the measured value exceeds the minimum or maximum value of the current gear, the screen will prompt “UNDER” or “OVER”.

6.2 Perpetual Calendar (Model B)

In the measurement mode, long press the “MODE (D/T)” key, and the number indicating “day” on the right side of the perpetual calendar display area starts to flash. The instrument enters the perpetual calendar setting mode, and the setting steps are as follows:

Step 1: Press “F/S▼” and “A/C▲” key adjust the size of the number, after the adjustment is completed, short press “MAX/MIN (REC)” key, the number indicating “month” starts to flash.

Step 2: Repeat step 1 until the “year” setting is completed. At this point, the date setting is complete.

Step 3: Short press the “MODE (D/T)” key, the instrument switches to time, and the number representing “second” starts to flash.

Step 4: Repeat step 1 until the “hour” setting is completed. At this time, short press the “MODE (D/T)” key, the instrument exits and save settings.

Note: a). The numbers in the display area of the perpetual calendar indicate from left to right, “Year-Month-Day” and “Hour-Minute-Second”.
b). If there is no operation for 10 seconds or long press the “MODE (D/T)” key, the instrument will return to the measurement mode without saving the settings.

6.3 Value Hold

Press the “HOLD” key, the instrument turns on or off this function, and the value is locked after turning on.

6.4 Time Weighting

Press the “F/S” or “F/S▼” key to select FAST or SLOW weighting.
(1) **Fast Weighting:** The time constant is 125 milliseconds, which displays the current instantaneous noise value, which is generally used to measure

fluctuations larger unstable noise and traffic noise, etc.
(2) **Slow Weighting:** The time constant is 1 second, which displays the average noise value in the current 1 second, and is generally used to measure steady state noise.

Note: The model B, only valid in measurement mode.

6.5 Frequency Weighting

Press the “A/C” or “A/C▲” key to switch frequency weighting A or C (The model B, only valid in measurement mode).

Note: a). “A” weighting refers to the amount of noise felt by human ears.
b). “C” weighting refers to the characteristics of mechanical noise.

6.6 Maximum Measurement Mode

In the general measurement mode, short press the “MAX/MIN” or “MAX/MIN (REC)” key to switch the maximum or minimum measurement mode. After switching, the instrument will maintain the maximum or minimum value finally obtained in this mode.

6.7 Recording Data (Model B)

In the measurement mode, long press the “MAX/MIN (REC)” key, the instrument enters the recording mode, and the screen prompts “REC”. At this time, you can use the “F/S▼” and “A/C▲” keys to adjust the interval time for the instrument to record data. After the setting is completed, short press the “MODE (D/T)” key, and the instrument will start to record data. After the recording is completed, long press the “MODE (D/T)” key, the instrument exits and saves the data.

Note: a). When the record body is full, the screen will prompt “FULL”.
b). The measurement data can be exported by connecting to the PC via the USB data cable.
c). During the setting process, if there is no operation for 10 seconds or long press the “MODE (D/T)” key, the instrument will return to the measurement mode without saving the settings.

6.8 Backlight

Short press the “☀️” or “☀️/CLR” key, the instrument turns on or off the backlight.

6.9 Clear Data (Model B)

Long press the “☀️/CLR” key, when the screen appears “CLR”, indicates that the instrument has cleared all data.

7. Calibration

Please use 94dB@1kHz standard audio source for calibration.
Settings before calibration: Measurement gear is 30~130dB; Frequency weighting is A; Time weighting is FAST.

- (1) Insert the microphone into the standard sound source hole and set the standard sound source to 94dB@1kHz.
- (2) Turn on the switch of the standard sound source and use a flat-blade screwdriver to adjust the knob in the calibration hole. When the screen displays 94.0, the calibration can be completed.

Note: The instrument has been calibrated before leaving the factory. The recommended calibration period is one year.

8. Firmware Upgrade (Model B)

The instrument supports users to upgrade firmware by themselves. As long as users run PC software and connect the instrument through USB, they can operate as needed after successful connection.

- (1) **Local upgrade:** Click “Device -> Device update -> Local update”.
- Note:** Contact the dealer to provide firmware before upgrading.
- (2) **Online upgrade:** Click “Device -> Device upgrade -> Online upgrade”.

9. Common Problem

Problem	Possible Causes
Display “E0”	USB the supply voltage is too low or too high (normal range 4.5~5.5V)
Display “E1”	The calibration source is not within the effective range of 94±5dB

10. Technical Parameters

Model	A	B
Record function	No	Yes
PC software	No	Yes
Storage capacity	No	17280 sets of measured values
Recording interval	No	1 second to 10 minutes optional
Measurement range	30~130dB(A); 35~130dB(C)	
Precision	±1.5dB (Reference sound pressure level standard, 94dB@1kHz)	
Resolution	0.1dB	
Measurement gear	30~130dB; 30~80dB; 50~100dB; 80~130dB	
Response frequency	31.5Hz~8.5kHz	
Sampling rate	2 times/sec	
Frequency weighting characteristics	A-weighting C-weighting	
Time-weighted characteristics	FAST (The time constant is 125 milliseconds) SLOW (The time constant is 1 second)	
Analogy portrayal display	2dB/portrait (30~130dB) 1dB/portrait (Other gears)	
AC signal output	4Vrms/full scale for each file, output impedance is about 100Ω	
DC signal output	10mV/dB, output impedance is about 85Ω	
Operating environment	Temperature: 0~40°C Humidity: 10~80%RH (Non-condensing)	
Storage environment	Temperature: -10~60°C Humidity: 10~70%RH (Non-condensing)	
Power	2 AA 1.5V dry cell batteries 2 AA 1.2V rechargeable batteries 5V USB	
Protection level	IP41	
Dimensions	221*65*30mm	
Shell material	ABS	
Weight	About 155g (Without batteries)	