DSM-1X

Digital Sound Level Meter

Owner's Manual

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1. Safety

Read the following safety information carefully before attempting to operate or service the meter.

Use the meter only as specified in this manual.

◆ **Environment conditions:**

Altitude: up to 2000 meters

RH≤90％（Non-Condensation）

Operating Temperature: -20～60℃

◆ **Maintenance**

Repairs or servicing not covered in this manual should only be performed by qualified personnel.

Wipe the unit with a dry soft cloth. Do not use abrasives or solvents on this instrument.

◆ **Safety Symbol**

CE Comply with EMC

2. Applications and Features

This SPL Meter is designed to meet the requirements of safety engineers, health personnel , industrial safety offices and sound quality control in various environments such as factories, schools, construction sites, recording studios, etc.

◆Comply with IEC61672-1 CLASS2 Standard

◆Max/Min/Data Hold

◆Over / Under range indication

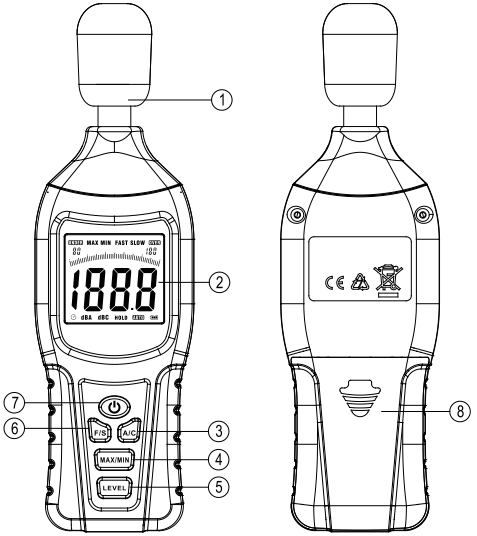
◆A & C Weighting

◆FAST & SLOW response

3. Specifications

Applied standard	IEC61672-1 CLASS2
Frequency range	31.5Hz～8kHz
Dynamic range	50dB
Measuring level range	Lo：30dB～80dB Med：50dB～100dB Hi：80dB～130dB Auto：30dB～130dB
Accuracy	±1.4dB
Time weighting	FAST (125ms); SLOW (1s)
Microphone	1/2 inch electret condenser microphone
Display	3½ digits LCD display with a resolution of 0.1dB
Frequency weighting	A & C
Data update	2 times/sec
Auto power off	Meter automatically shuts down after approx. 15 minutes inactivity.
Power supply	One 9V battery, 006P or IEC 6F22 or NEDA 1604.
Battery life	at least 30 hours
Operating conditions	-20℃～60℃，10％RH～90％RH
Storage conditions	-20℃～60℃，10％RH～75％RH
Weight	178g
Dimension (L*W*H)	158*62*32mm

4. Meter Description



①Microphone ②LCD display

③Weighting A/C select button

④MAX/MIN button

⑤Level Range select button

⑥Response time FAST/SLOW select button

⑦Power ON/OFF button ⑧Battery Compartment

5. LCD Display Description

①Under-range icon

②MAX hold

③MIN hold

④Fast sampling time icon

⑤Slow sampling time icon

⑥Over-range icon

⑦Level range display

⑧Analog bar

⑨Measurement reading

⑩Battery icon

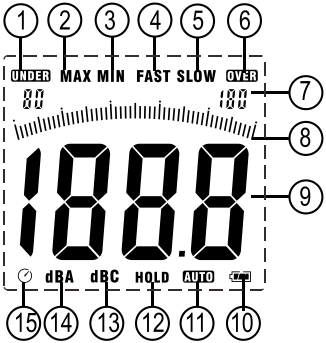
⑪Auto range icon

⑫Data hold icon

⑬dBC icon

⑭dBA icon

⑮Auto power off icon



6. Operation Instruction

(1) **Power ON/OFF**: Turn the meter on by pressing the "  " button for 1 second. Turn the meter off by pressing and holding the "  " button for approx. 3 seconds then release the button.

(2) **Backlight**

After turning the meter on, momentarily press the "  " button, to turn the backlight on/off. The backlight will automatically turn off after approx. 30 seconds of inactivity.

(3) **Frequency weighting A/C selection**

Press the " 

" button to select A or C.

dBA: Follows the frequency sensitivity of the human ear at low levels

dBC: Follows the frequency sensitivity of the human ear at high levels

(4) **FAST/SLOW selection**

After turning the meter on, press “ 

” to select the desired response time:

FAST: Fast sampling time measurement,1 time per 125ms.

SLOW: Slow sampling time measurement, 1 time per second.

(5) **MAX/MIN**

After turning the meter on, press the " 

" button for three seconds to enter MAX measurement, ‘MAX’ will appear on the LCD and the captured maximum sound level will be displayed. Press the key again, ‘MIN’ will appear on the LCD and the minimum sound level will be displayed. Hold the button for three seconds to exit MAX/MIN measurement mode.

(6) **Data HOLD**:

After turning the meter on, momentarily press the " 

" button. The "HOLD" icon will appear on the LCD, which freezes the reading on the display. To exit Data Hold mode, press the button again.

(7) **Level range selection:**

Press the “ 

” button, the level range will toggle between the different options:

Lo：30dB～80dB　　Med：50dB～100dB

Hi：80dB～130dB　　Auto：30dB～130dB

7. Calibration Procedure

(1) Select the following switch settings:

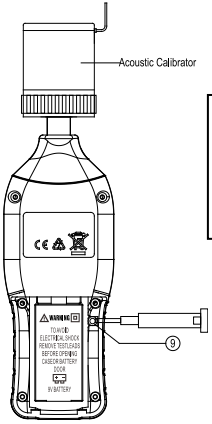
Frequency weighting: A

Response time: FAST

Level range: 50 ~100dB

(2) Insert the microphone housing carefully into the 1/2 inch insertion hole of the calibrator (94dB @ 1kHZ).

(3) Turn on the calibrator and adjust the CAL potentiometer until 94.0dB is displayed.



Note: Calibrator not included. Available from test instruments suppliers.
Screwdriver included to facilitate calibration.

NOTE: Our products are carefully calibrated before delivery.

Recommended recalibration cycle: 1 year.

8. Basic Operation

(1) Open the battery cover and install a 9-volt battery in the battery compartment.

(2) Turn on the power and select the desired level range.

(3) Select ‘dBA’ for low sound levels and ‘dBC’ for high sound levels.

(4) Select ‘FAST’ for short sound bursts and ‘SLOW’ for average sound level.

(5) Press the ‘ 

’ button for measuring maximum and minimum noise level.

(6) Hold the meter in hand or let it stand in upright position on a table top. The best measuring distance is 1~1.5m away from the microphone to the sound source.

9. Notes

(1) Do not store or operate the meter in high temperature or humidity.

(2) Remove the battery when the meter is to be stored for long periods of time to avoid battery leakage.

(3) Wind blowing across the will bring unwanted noise. Use the supplied windscreen to cover the microphone when necessary.

(4) Keep microphone dry and avoid severe vibration.

(5) When the low battery icon "  " appears, replace the meter's battery.

10. Accessories

① Owner's manual

② Windscreen

③ Calibration screwdriver

④ 9V battery

⑤ Carrying pouch