

# Digital sound level meter

## Operation manual

### I Precautions:

Please read this operation manual carefully before using this equipment for correct operations. This equipment have been designed to meet the measurement requirement of Safety Engineers, Health, Industrial Safety offices and Sound Quality control in various environment.

### II Features:

- 1) This unit was designed according to the IEC651 TYPE2& ANS S1.4 TYPE2 for sound level meters.
- 2) Measurement range: 30-130 decibel
- 3) With two equivalent weighted sound pressure levels, A and C.
- 4) Fast & Slow dynamic characteristic modes.
- 5) AC and DC signed output for frequency analyzer level recorder, graphic recorder.

### III Specifications:

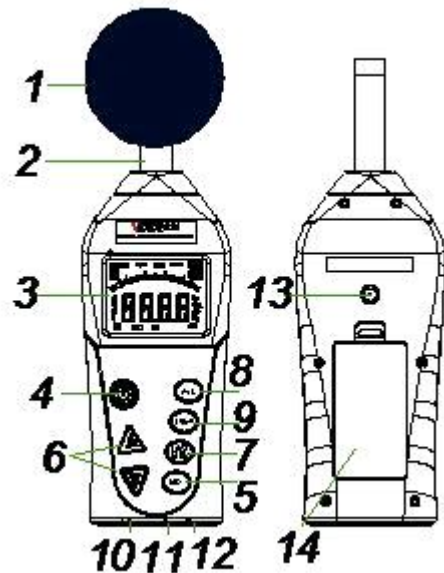
- 1) Accuracy:  $\pm 1.5$  dB (under reference conditions)
- 2) Frequency range: 31.5 Hz~ 8.5K Hz
- 3) Linearity range: 50 dB
- 4) Measuring level: 30~130 dBA, 30~130 dBC
- 5) Frequency weighting: A, C
- 6) Digital display: 5 digits  
Resolution: 0.1dB  
Sampling rate: 2times/s
- 7) Bar graph: 50 dB scale at 1 dB step for monitoring current sound pressure level display
- 8) measuring ranges: 30-80 dB; 50-100 dB; 60-110 dB; 80-130 dB;
- 9) Over range indicate: Shows "OVER" or "UNDER" symbol.
- 10) AC output: 0.707 Vrms at FS output impedance approx 600 $\Omega$
- 11) DC output: 10 mV / dB output impedance approx 100 $\Omega$
- 12) Dynamic characteristics: Fast / Slow
- 13) Microphone: 1/2 inch condenser microphone
- 14) Max: Maximum hold
- 15) Power supply: 1\*9V battery
- 16) Self-inspection time: 10 sec
- 17) Operating Temperature: 0 $^{\circ}$ C to 40 $^{\circ}$ C  
Operating Humidity: 10% to 80% RH
- 18) Storage Temperature: 0 $^{\circ}$ C to 60 $^{\circ}$ C  
Storage Humidity:10% to 70%RH
- 19) Dimensions: 200 $\times$ 63 $\times$ 30mm

20) Weight: approx. 210g(including battery)

### IV Calibration Procedures:

Please use a 94dB@1kHz Standard sound source.

- 1) Make the following settings:  
Display: SPL (dBA) Time  
weighting: FAST  
Level range: 60 to 110 dB  
Measurement mode: MAX function disable
- 2) Insert the microphone carefully into the 1/2 inch hole of the standard sound source.
- 3) Turn on the 94dB@1kHz Standard sound source and adjust the Potentiometer in back top of the unit. The display will indicate the desired Level (94.0).  
Our products are all well calibrated before Shipment.  
Recommended recalibration cycle: 1 year.



### V Name and Functions:

- 1) sponge ball.
- 2) condenser microphone
- 3) LCD display.
- 4) Power switch
- 5) Maximum value hold switch. (MAX)
- 6) Level range control switch:  
30dB~80dB; 50dB~100dB;  
60dB~110dB; 80dB~130 dB
- 7) Time weighting select switch.  
Fast: For normal measurements.  
Slow: For checking average level of fluctuating noise.
- 8) Frequency weighting select switch.  
A: A weighting is the noise sound level for human.  
C: C weighting is the noise sound level for machine.
- 9) Back Light Button Switch
- 10) External DC 9V power supply terminal.
- 11) AC output terminal: 0.707 mV Corresponding to each range step.

- 12) DC out put terminal: output 10 mV/ dB
- 13) Tripod mounting screw
- 14) battery door
- 15) when the device is under a situation of none operation or none noise for 10 minutes, it will auto power off.

#### VI LCD Display Description:

- 1) Measuring range.
- 2) Low battery.
- 3) Maximum value.
- 4) Measuring value.
- 5) Measurement Unit.
- 6) Frequency weighting A/C.
- 7) Level range Bar graph.
- 8) OVER range symbol.
- 9) Slow reaction rate.
- 10) Fast reaction rate.
- 11) UNDER symbol.



#### VII Pre-operations:

- 1) Open battery door and install 9V battery in the battery compartment.
- 2) Install battery door.
- 3) When the battery voltage drops below the operating Voltage, mark appears . Please replaced with new one.
- 4)When the DC adapter is used, insert the plugs (3.5φ) of the adapter into the DC 9V connector on the side panel.

#### VIII Operation direction:

- 1) Turn on power
- 2) Select the desired response and weighting, also select desired rang.
- 3) If weighting for general noise sound level, please select dBA.
- 4) If you need to know the current sound level, you should choose FAST. If you need to measure average sound level, use the slow setting.
- 5) When MAX mode is chosen. The instrument captures and hold the maximum noise level.

#### IX Cautions

- 1) Do not operate the unit at high temperature and Humidity environment.
- 2) Please take out battery from unit if do not use it for a long time.
- 3) Once using the unit in the presence of wind, it is a must to mount the windscreen to not pick up undesired signals.
- 4) Operating Environmental condition:  
Humidity ≤ 80%RH  
Height ≤ 200 meters

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