

# Digital Sound Level Meter

## Operation Manual

### I . Preface

Thank you for selecting our production. Please read the following information carefully before using the meter. The Sound Level Meter has been designed to measure sound level for various environments, It is used to detect noise, music level or sound engineering...

### II. Safety information

Please use it according to the following usage.

Environment conditions:

Altitude: less than 2000 meters.

Relatively humidity 80% max

Operation temperature 0~40°C

Maintenance & save:

Do not clear the meter using alcohol and impregnant. if you do not use it for a long time, please take out the battery and place the instrument in a dry surrounding.

Safety symbols:



Meter is protected by double insulation



Comply with European Union's 93/68/EEC

### III. Functions & Features

The meter has been designed according to the IEC651 Type 2, ANSI S1.4 Type 2.

Measurement range is from 30dB to 130dB and automatic ranging.

With two equivalent weighted sound pressure levels, A and C.

Corresponsive rate select: FAST/SLOW

Maximum value locked.

Record data in memory: 16000 data, extended up to 128000 data according to user's demand.

Infrared interface for connecting with computer.

Computer software for data displaying and data recording on a computer.

Clock and calendar function.

AC and DC analog signals output, which can be linked to frequency analyzer or X-Y axis recorder.

Background light for working in the night. to save power, the background light shines for 5 seconds, then closes automatically.

Secondary plasticizing meter shell.

Good circuit designed to save power, the battery can

be used for a long time.

### IV. Specifications

Accuracy:  $\pm 1.5\text{dB}$   
Response frequency: 31.5Hz—8kHz  
Dynamic range: 50dB  
Frequency weighting: A/C  
Time weighting: FAST 125ms, SLOW 1sec  
Microphone: Electret Condenser microphone  
Digital display: 4 digitals, resolution 0.1dB,  
sampling rate 2 times/s  
Analog bar display: Each analog bar is as 1dB,  
sampling rate 20 times/s  
Measurement ranges: 30—80dB, 40—90dB, 50—100dB,  
60—110dB, 70—120dB, 80—130dB.  
Total of 6 ranges  
Auto-range: Micro-computer can choose the best  
measurement ranges  
Over range indicator: UNDER (less than range) and OVER  
(over range)  
AC signal output: 0.707 Vrms at FS (Auto-range mode  
isn't included) Output impedance  
  
approx. 600 $\Omega$   
DC signal output: 10mV/dB Output impedance approx.  
100 $\Omega$   
Power supply: Four LR03 AM4 1.5V SIZE AAA alkaline cell  
Power life: About > 35hrs (alkaline cells)  
Continuous operation  
AC adapter: Voltage 9vDC  
Voltage ripple <100mVpp  
Supply Current >100mADC  
Socket: pin Ground  
Casing positive  
External Diameter 3.5mm  
Data recording: 16000 data (extended to 128000 data)  
Operating temperature: 0 ~ +40 $^{\circ}\text{C}$   
Operating humidity: 10 ~ 80%RH  
Storage temperature: -10 ~ +60 $^{\circ}\text{C}$   
Storage humidity: 10 to 70%RH  
Dimensions: 245(L)×80(W)×35(H)mm  
Weight: Approx. 350g (including battery)  
Accessories: Earphone plug, Operation manual, Battery,


Windscreen, computer RS-232 cable,  
software for windows.

V. Preparation before using

Remove the battery cover on the back and put in six 1.5V 7# alkaline battery.

Close the battery cover.

When the battery voltage drops below the operating

voltage, mark “” appears and flashes. It must be done to replace all batteries with new one.

When the DC adapter is used, insert the plug of the adapter into the DC 9V connector on the side panel.

#### VI. The method of usage

1. Press the power switch, LCD displays the default range(40~90dB). and displays the sound level of a spot. If the display appears “UNDER” or “OVER” symbol, it indicates the sound level less than or more than 40~90dB, measurement is invalid. you need to set the meter's range to a correct position.

2. Set range:

Press LEVEL ▲ or ▼, choose the proper range, measure the sound level of the spot. When LCD appears “UNDER” symbol, it indicates that the range is high, you need to press LEVEL ▼ to set lower range until no “UNDER” symbol. When LCD appears “OVER” symbol, it indicates that the range is low, you need to press LEVEL ▲ to set higher range until no “OVER” symbol.

3. Choose weighting mode:

when you measure a general noise sound level, you could choose ‘A’ weighting by pressing A/C button. To measure a acoustic sound level, choose “C”.

4. When you want to get a real-time sound level, choose FAST by pressing FAST/SLOW button. To get average sound level, choose “SLOW”.

5. When you want to get the maximum value of a sound level, you can press “MAX” button.

6. When you want to measure in the night, you can open the background light by pressing “LIGHT” button.

#### VII. Record and storage of measurement data

To save real-time data in the meter, by pressing the “RECORD” button for 2 seconds, “RECORD”

symbol displays on the LCD screen. At the same time, the meter starts to record real-time data until it's memory is full. LCD screen displays “FULL” symbol, it indicates that the meter can't save data continually.

2. To Delete data in Sound Level Meter's memory, by

pressing the “LEVEL ▲” button for 2 second, LCD

displays “CEL” symbol, then press LEVEL ▼ button for 2 second, “CEL” symbol flashes, after a few seconds, it returns to normal display, it indicates that the data have been deleted.

#### VIII. Installing operation software in a computer

insert the accessory CD to the CD-ROM driver of a computer, click “setup.EXE” to install the software in the hard disk. When installation finishes, click

“DIGITAL SOUND LEVELMETER” in the program menu, then the operation window shows on the computer...

#### IX. Linking and communication between the meter and a computer

Connect the infrared output socket of Sound Level Meter and RS232 interface of a computer with the accessory cable.

Run "DIGITAL SOUND LEVEL METER", click "START" to receive and display data.

By pressing "SENDING" button for 2 second on the meter, real-time sound level data are trnsmitted to

computer. "SENDING" symbol displays on LCD

screen. Press "SENDING" button for 2 seconds again, transmission stops.

By pressing "A/C" button for 2 seconds, the memory data of the meter are transmitted to computer. Symbol "SENDING MEMO" display on LCD screen. During transmission computer displays "Downloding Please Wait...". When transmission is complete, it open a dialog box, you need to enter a filename, then save the data in your computer.

To open a saved file in the computer, run the

software of sound level meter, click "FILE", then click "OPEN" on the menu. Select and open corresponsive filename in the dialog box. It is all right.

#### X. Set time and date

Press "MAX" button then turn on the meter, LCD display time(hour, minute, second), the second digitals are flashing, press LEVEL▲ or LEVEL▼ to increase or decrease time; press "MAX" to set minute, hour, mouth, year. after setting is completed, turn off the meter.

#### XI. Calibrating Sound level Meter

When Sound Level Meter is used for a long time, it's accuracy may reduce, we need to check and calibrate it, normally a time for each year. Calibration needs a standard sound source, please contact with us about the method.


#### XII. Cautious

Do not use the meter in a high temperature or wet place.

When you do not use for a long time, please take out battery to avoid damaging the meter by electrolyte.

Auto-range (30-130dB) is unfit for measuring a instantaneous and impactive noises.

To measure sound level in a windy environment, please put windscreen on the microphone to avoid noises from wind.

If mark " "is on the screen, it indicates the

voltage is low, you must replace battery, we advise you to use alkalinescent battery.