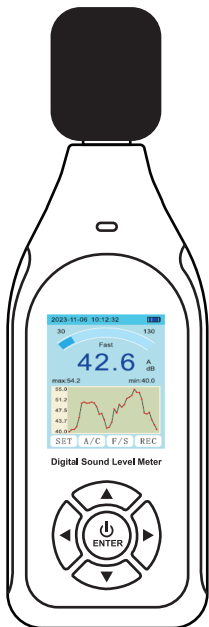


# DIGITAL SOUND LEVEL METER

## USER MANUAL



## SCAN THE QR CODE

to download the  
**USER MANUAL**  
in different languages  
and **SOFTWARE**



 **TUTORIAL VIDEO ON HOW TO USE**

 **Need more help? CONTACT US.**

[www.cd50.net/441](http://www.cd50.net/441)

## TABLE OF CONTENTS

Introduction.....	1
Features .....	1
Component Name and Button Function.....	2
Specifications.....	3
Operation Instructions .....	4
- Power On/Off .....	4
- SET (Parameter Settings).....	4
• Language .....	4
• Date & Time .....	4
• Auto Off.....	4
• Light Alarm.....	5
• Save Data.....	6
• Read Data .....	6
• Delete Data .....	7
• Reset Default .....	8
- Data Recording .....	8
- Data Hold .....	8
- A/C Frequency Weighting Selection .....	8
- Fast/Slow Time Weighting Selection.....	9
- Line Chart and Average Value .....	9
PC Software .....	10
- Requirements of Computer Configuration.....	10
- Install the Software .....	10
- Connect the Decibel Meter to the Computer.....	11
- Import the Recorded Data from the Meter to the Software .....	11
- PC Software Interface .....	12
• Menu Bar.....	12
• Toolbar.....	13
- System Setup .....	14
• Common Setting .....	14
• PC Software Setting.....	14
- Real-time Data Logging on the SoundLab Software.....	15
Calibration .....	16

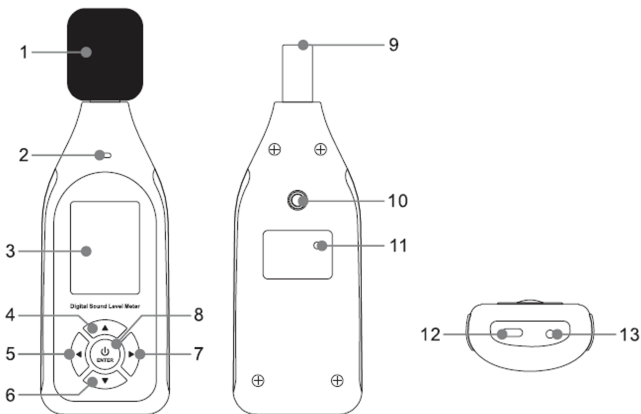
## **INTRODUCTION**






This Sound Level Meter has been designed to meet the measurement requirement of noise engineers, noise quality control and health prevention in various environments, such as noise measurement in factory, office, traffic road, family and all other noise measurement applications.

## **FEATURES**

1. A/C frequency weighting option
2. Fast/Slow time weighting option
3. Three-color light alarm
4. MAX/MIN/AVG function
5. Chinese/English/Japanese Language
6. Data hold
7. Data storage capacity: 43,000 data records
8. Easily read and delete stored data
9. Automatic shutdown time can be set, and automatic shutdown when battery runs out
10. Display date and time
11. Line chart: Visual display of noise data changes
12. USB charging and PC communication: Connect with the PC through USB, providing data record download, real-time data sampling analysis, and printing graph and data functions.
13. DC output
14. This Sound Level Meter was designed according to the following standards:
  - a. International Electrotechnical Commission standard:  
IEC PUB 651 Type 2
  - b. US national standard: ANSI S1.4 Type 2

## COMPONENT NAME AND BUTTON FUNCTION



1. Sponge ball (when outdoor use please put on, prevent wind blowing noise disturbing the unit reading)
2. Alarm light
3. LCD display
4.  Up button: Increase value / Move up / Hold data
5.  Left button: Go back to the previous step / Shrink the line chart / Left select the data bits
6.  Down button: Decrease value / Move down
7.  Right button: Go to the next step / Enlarge the line chart / Right select the data bits
8.  Middle button: Power on/off / Confirm / Go to the next step
9. Capacitance microphone
10. Tripod fixed screw aperture
11. Calibration knob
12. Type-C interface
13. DC output

## SPECIFICATIONS

Calibration sound source	±94dB@1KHz
Measurement range	30 ~ 130 dB(A), 35 ~ 130dB(C)
Accuracy	±1.5dB (Reference sound pressure standard, 94dB@1KHz)
Resolution	0.1dB
Frequency weighting	A/C
Frequency response	31.5Hz ~ 8500Hz
Time weighting	FAST/SLOW
Sampling rate	FAST: 8 times/second SLOW: 1 times/second
Rated current	70mA
Standby current	5uA
Power supply	3.7V lithium battery /1000mAh
Charging time	1.5h
Duration of service	8h
Data storage	43,000
Microphone	1/2-inch polarization capacitance microphone
Operating temperature	0 ~ 50°C
Operating humidity	10 ~ 80%RH
Dimension	160*56*31mm (Excluding sponge ball)
Weight	Approx 114g (Excluding sponge ball)

DC output: Output the noise value by voltage mode according to proportion

DC voltage range	300mV ~ 1300mV
DC voltage error	±5mV
DC impedance	120R
DC and noise relationship	$V_{out} = \text{dB} \times 10$ Unit: mV (dB: noise value, Vout: DC output voltage)

# OPERATION INSTRUCTIONS

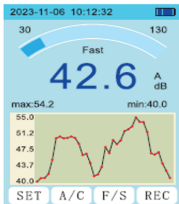
## 1. Power on/off

Power On: Press the  button to turn it on.

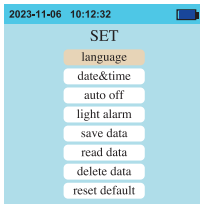
Power Off: Long press the  button to turn it off

## 2. SET (Parameter Settings)









### Measurement Interface












### Main Settings page





### (1). language

- On the measurement interface, press the  button to select "SET".
- Press the  button to access the main settings page, then press the  button to choose "language".
- Press the  or  button to enter the secondary page, press the  button to choose select between Chinese, English, or Japanese and press the  button to confirm the setting.
- Press the  button to return to the previous step.

### (2). date&time

- When "date&time" is selected, press the  or  button to enter the secondary page.
- Press the  button to choose the specific setting items (year/month/day/hour/minute/second)
- Press the  or  button to enter the setting and press the  button to adjust the value and then press the  or  to confirm
- Press the  button to return to the previous step.

### (3). auto off (Automatic shutdown)

- When "auto off" is selected, press the  or  button to enter the secondary page.

- b. Press the / button to choose the enable/off time option
- ①. Enable/disable automatic shutdown: Select the “enable” option, press the or button to enable (YES) or disable (NO) it
  - ②. Set the automatic shutdown time: Select the “off time” option, press the or button to enter the setting. Press the / buttons to navigate between digits, adjust the value with the / buttons, and then press the button to confirm. Automatic shutdown time range: 0001 to 9999 minutes.
- c. Press the button to return to the previous step.

#### (4). **light alarm** (Alarm setting)

- a. When “light alarm” is selected, press the or button to enter the secondary page.
- b. Press the / button to choose the light/red alarm/yellow alarm option.
- ①. Enable/disable alarm function: Select the “light” option, press the or button to enable (ON) or disable (OFF) it
  - ②. Set the red alarm value: Select the “red alarm” option, press the or button to enter the setting. Press the / buttons to navigate between digits, adjust the value with the / buttons, and then press the button to confirm.
  - ③. Set the yellow alarm value: Select the “yellow alarm” option, press the or button to enter the setting. Press the / buttons to navigate between digits, adjust the value with the / buttons, and then press the button to confirm.
- c. Press the button to return to the previous step.

light alarm	
light	ON
red alarm	090.0
yellow alarm	070.0

Alarm setting



**Blue font + Green indicator:** Does not exceed the yellow alarm value





**Yellow font + Yellow indicator:** Exceed the yellow alarm value








**Red font + Red indicator:** Exceed the red alarm value








**Note:** The adjustable range is 30 to 130 dB. The alarm setting will be successful only if the red alarm value is higher than the yellow alarm value.








**(5). save data (Saving setting)**

a. When “save data” is selected, press the  or  button to enter the secondary page.

b. Press the / button to choose the start/interval/amount option.

①. Start recording on the meter: Select the “start” option, press the  or  button to start recording. Press the  button to stop recording.

②. Set the recording interval: Select the “interval” option, press the  or  button to enter the setting. Press the / buttons to navigate between digits, adjust the value with the / buttons, and then press the  button to confirm. Adjustable range: 01 to 99s.

③. Select the “amount” option, press the  or  button to enter setting. Press the / buttons to navigate between digits, adjust the value with the / buttons, and then press the  button to confirm. Adjustable range: 00010 to 99999 groups.



c. Press the  button to return to the previous step.

**Notes:**


①. To save successfully, a minimum of 10 groups of data must be recorded;



②. Once data recording begins, it will automatically stop once the designated number of record groups is reached or when it reaches 43,000 groups.








**(6). read data (View records)**

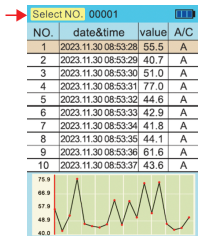
a. When “read data” is selected, press the  or  button to enter the secondary page.







b. Press the / button to select the data entry. If there are multiple pages of records, press the / button to navigate between pages.

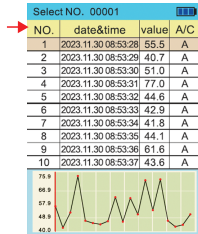
c. Press the  button to access the detailed record interface for the selected data entry.







d. Press the / button to toggle between the “Select NO./data table/line chart” options.

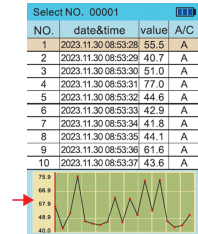
①. Select NO: Select “Select NO” and press the  or  button to enter the setting. Press the  /  button to navigate between digits, adjust the value to the desired data number with the  /  button, then press the  button to confirm and jump to the corresponding data entry number.





②. data table: When “data table” is selected, press the  or  button to enter. Then press the  /  button to select a single data, or press the  /  button to navigate between pages








③. line chart : When “line chart” is selected, press the  or  button to enter. Then press the  /  button to zoom in or out on the line chart, or press the  /  button to navigate between pages.








**Note:** When in “Select NO”/“data table”/“line chart” mode, press the  button to exit and then press the  button to return to the data list




## (7). delete data (Delete record)

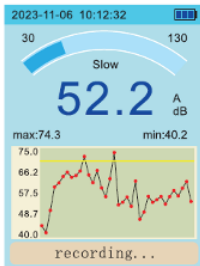
Select the option of “delete data” and press the  or  button to enter the secondary page. Press the  /  buttons to select 'enter' (to clear) or 'cancel' (to cancel the clear), then press the  button to confirm your selection.

### (8). **reset default (Restore to factory settings)**



Select the option of “reset default” and press the  or  button to enter the secondary page. Press the  /  buttons to select 'enter' (to restore) or 'cancel' (to cancel), then press the  button to confirm your selection.

### 3. Data Recording

On the measurement interface, press the  /  button to locate to REC option and press the  button to start/stop recording.






### 4. Data Hold

On the measurement interface, press the  button to display “HOLD” for data lock. Press the  button again to release the data lock and continue measuring.

**HOLD**





### 5. A/C Frequency Weighting Selection

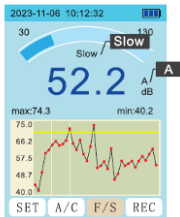
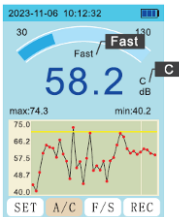
On the measurement interface, press the  /  button to locate to A/C option and press the  button to switch between A/C.

**A** - Weighting for general sound level measurements.

**C** - Weighting for checking the low-frequency content of sounds


## 6. FAST/SLOW Time Weighting Selection

On the measurement interface, press the  button to locate to F/S option and press the  button to switch between Fast/Slow.

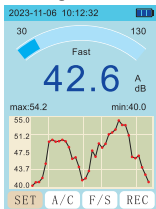


## 7. Line Chart and Average Value

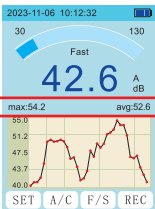
### Accessing the Line Chart:

On the measurement interface, press the  button to select the line chart. The maximum value and average value will appear above the chart.

**Note:** The average is calculated from all data points within the displayed chart range.





Line chart unselected





Line chart selected

### Zoom In/Out the Line Chart:

When the line chart is selected, press  or  button to zoom in or out the line chart.

### Exiting the Chart:

Press  or  again to return to the standard measurement interface.

### 1. Requirements of Computer Configuration

- ①. CPU: Pentium III 600MHZ or above
- ②. One free available USB connecting interface
- ③. The lowest screen resolution of monitoris 800\*600 (or much higher), true color
- ④. At least 8MB available memory
- ⑤. Atleast 50MB available disk memory
- ⑥. Operation system: Windows 7, Windows 10, and Windows 11

### 2. Install the software

Please download and install the “SoundLab” software from the QR code or URL below.



SoundLab

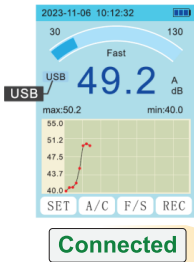
URL

[www.cd50.net/441](http://www.cd50.net/441)

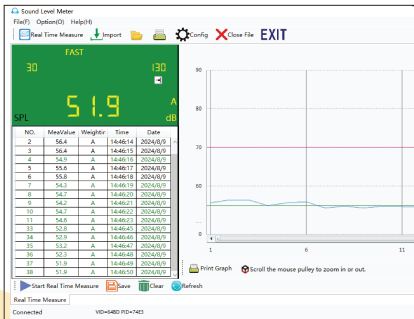
### 3. Connect the decibel meter to the computer.

- Open the software, turn on the decibel meter, and then connect it to the computer.
- Once successfully connected, “**Connected**” appears in the bottom left corner of the software and “**USB**” appears on the left side of the product screen.

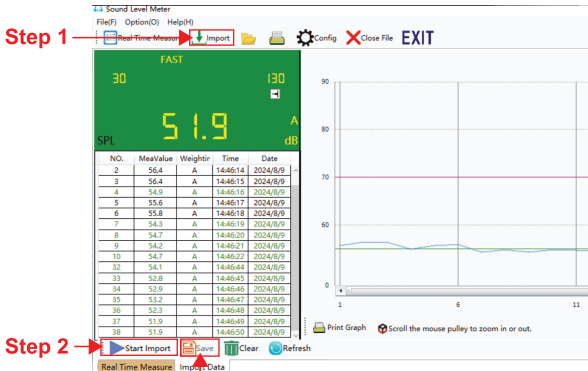
#### Measurement Interface (product screen)



#### Software Interface



### 4. Import the recorded data from the meter to the software



#### Step 3 (Export the recorded data in Excel format)

## 5. PC Software Interface

Menu bar

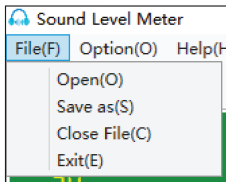
Toolbar

NO.	MeaValue	Weightir	Time	Date
2	56.4	A	14:46:14	2024/8/9
3	56.4	A	14:46:15	2024/8/9
4	54.9	A	14:46:16	2024/8/9
5	55.6	A	14:46:17	2024/8/9
6	55.8	A	14:46:18	2024/8/9
7	54.3	A	14:46:19	2024/8/9
8	54.7	A	14:46:20	2024/8/9
9	54.2	A	14:46:21	2024/8/9
10	54.7	A	14:46:22	2024/8/9
11	54.6	A	14:46:23	2024/8/9
33	52.8	A	14:46:45	2024/8/9
34	52.9	A	14:46:46	2024/8/9
35	53.2	A	14:46:47	2024/8/9
36	52.3	A	14:46:48	2024/8/9
37	51.9	A	14:46:49	2024/8/9
38	51.9	A	14:46:50	2024/8/9

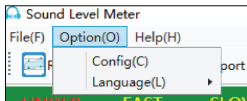
Status

### Software Interface

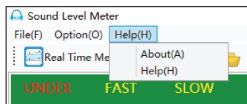
#### a. Menu bar



Open:	Open the recorded data file in excel format
Save:	Save the recorded data in excel format
Close File:	Close the current page
Exit:	Exit the software










Config:	Adjusting the Sample Speed, A/C Weighting, Real Time Measurement Interval, Low/High dB Alarm, Alarm Sound
Language:	English, Simplified or Traditional Chinese, Japanese options



Help:	Software problem feedback
About:	Software version description

## b. Toolbar

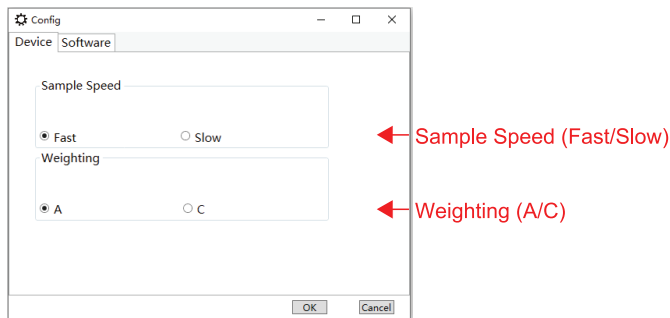


Buttons	Function
 Real Time Measure:	Initiate real-time measurement data recording and display on the PC software screen.
 Import:	Import the recorded data from the meter to the software for analysis or export.
 Open:	Open the recorded data file in excel format
 Print:	Print the data sheet
 Config:	Adjusting the Sample Speed, A/C Weighting, Real Time Measurement Interval, Low/High dB Alarm, Alarm Sound
 Close	Close the current page
 EXIT	Exit the software

## 6. System setup

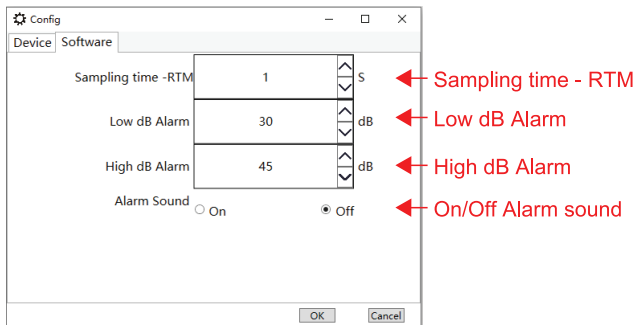
### (1) Common Setting:

Sample Speed, A/C Weighting.



### (2) PC Software Setting:

Sampling time -RTM, Low/High dB Alarm, Alarm Sound switch.



#### Note:

The "Device" setting can be synced with the meter.

The "Software" setting cannot be synced with the meter.

## 7. Real-time data logging in the SoundLab software

Step 1 →

The screenshot shows the 'Sound Level Meter' software interface. At the top, there is a menu bar with 'File(F)', 'Option(O)', and 'Help(H)'. Below the menu, there are several icons: a play button for 'Real Time Measure', a download icon for 'Import', a folder icon, a printer icon, a gear for 'Config', a red 'X' for 'Close File', and 'EXIT'. The main display area is divided into three sections: a green display showing 'FAST' and 'SPL 51.9 dB', a table of recorded data, and a line graph on the right. The table has columns for 'NO.', 'MeaValue', 'Weightir', 'Time', and 'Date'. The graph shows a fluctuating blue line representing sound level over time.

NO.	MeaValue	Weightir	Time	Date
2	56.4	A	14:46:14	2024/8/9
3	56.4	A	14:46:15	2024/8/9
4	54.9	A	14:46:16	2024/8/9
5	55.6	A	14:46:17	2024/8/9
6	55.8	A	14:46:18	2024/8/9
7	54.3	A	14:46:19	2024/8/9
8	54.7	A	14:46:20	2024/8/9
9	54.2	A	14:46:21	2024/8/9
10	54.7	A	14:46:22	2024/8/9
32	54.1	A	14:46:44	2024/8/9
33	52.8	A	14:46:45	2024/8/9
34	52.9	A	14:46:46	2024/8/9
35	53.2	A	14:46:47	2024/8/9
36	52.3	A	14:46:48	2024/8/9
37	51.9	A	14:46:49	2024/8/9
38	51.9	A	14:46:50	2024/8/9

At the bottom of the interface, there are buttons for 'Start Real Time Measure', 'Save', 'Clear', and 'Refresh'. A status bar at the very bottom shows 'Connected' and 'VID=646C PID=74E3'.

Step 2 →

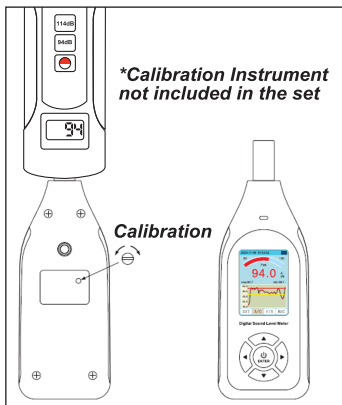
Step 3 (Export the recorded data in Excel format)

**Note: It is important to export all measuring data from the software before exiting to prevent any potential data loss**

Start Real Time Measure Save Clear Refresh Print Graph Scroll the mouse pulley to zoom in or out.

Button	Function
Start Real Time Measure	Click to start Real Time Measure
Stop Real Time Measure	Click to stop Real Time Measure
Save	Click to store real-time measuring data, input file name in popup window, click to save the document format of excel.
Clear	Click to clear all the measuring data
Refresh	Refresh diagram
Print Graph	Click to print curve diagram
	Scroll the mouse pulley to zoom in or out the diagram

## CALIBRATION



1. Please use 94B@1KHZ standard calibration instrument
2. Setting on sound level meter: Frequency weighting is A, Time weighting is FAST
3. Insert the microphone carefully into a 1/2-inch hole in the standard audio source (94dB@1KHz).
4. Turn on the power switch of the standard sound source, adjust the potentiometer at the circular hole in the battery door with slotted screwdriver, and make the LCD display 94.0

### Note:

**Our products are all well calibrated before Shipment.**

**Recommended recalibration cycle: 1 year.**