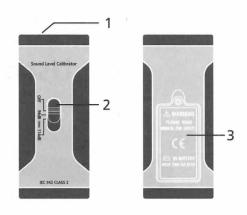
# 1.Calibrator Description

- 1. Microphone adaptor
- 2.Range switch
- 3.Battery compartment/Cover



Rev.090216

#### 2.Procedure

- Insert the microphone under test into the calibrator's microphone cavity, ensure that it is fully inserted (Sound level meters with 1/2" microphones can be calibrated with this device).
- Slide the range switch to the 94dB position, or the 114dB position as desired. The calibrator generates its signal as soon as the switch is set.
- Read the sound level meter's value. The sound level meter should read 94dB or 114dB depending on the calibrator's signal level. If the sound level calibrator does not match the calibrator's signal (within specification), adjust it as explained in the sound level meter's operating instructions.
- Slide the range switch to the "OFF" position and remove the microphone.

# 3. Specifications

Output Sound Pressure Levels: 114dB and 94dB Output Frequency: 1000Hz ±4%

Reference Conditions: Temperature 23°C (73°F) ,1013 mbar,65%RH

Accuracy: ±0.5dB

Power: One 9V battery, 006P or IEC 6F22 or NEDA 1604.

Low Battery Check: Calibrator wil cut sound pressure output if Ibattery

voltage

Falls Below Acceptable Range.

The Instrument Complies With: IEC 942 CLASS 2

Dimensions: 120(L) x 51(W) x 43(H) mm

Weight: Approx.130g

#### 4.Battery Replacement

• Please replace the battery when the sound level calibrator does not have sound pressure output.

•Open the battery cover to access the 9V battery. Remove the battery and replace with new 9V battery.

# SOUND LEVEL METER INSTRUCTION MANUAL



06/07

# 1. SAFETY INFORMATION

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

- ① Altitude lower than 2000 meters
- ② Relatively humidity ≤90%RH
- ③ Operation Ambient 0 ~ 40℃

# Maintenance & Clearing

- ① Repair or servicing not covered in this manual should be performed by qualified personnel.
- ② Periodically wipe the case with a dry cloth. Do not use solvents or eradicator on this instrument.

# Safety symbols

**(€** Comply with EMC

# 2. FUNCTIONS DESCRIPTION

This Sound Level Meter is designed for noise project; quality control; illness prevention and cure and all kinds of environmental sounds measurement. It is applied to the sounds measurement at factory; school; office; traffic access and household, etc.

This unit confirms to the IEC61672-1 CLASS2 for

Sound Level Meters.

- MAX & MIN measurements
- Over range display
- Under range display
- A & C Weighting
- FAST & SLOW response
- Analog AC/DC outputs for connection to frequency analyzer or X-Y shaft recorder

#### **SPECIFICATION**

Standard applied:

IEC61672 -1 CLASS2

Accuracy:

+1.4dB

Frequency range: 31.5HZ ~ 8KHZ

Dynamic range:

50dB

Level ranges:

LO: 30dB~80dB

Med: 50dB~100dB

Hi: 80dB~130dB

Auto: 30dB~130dB

Frequency weighting:

A/C

Time weighting: FAST (125ms), SLOW (1s)

Microphone:

1/2 inch electret condenser

microphone

3

Display: 4 digits LCD display with a resolution of 0.1dB

Display Update: 2 times/sec.

MAX hold: Hold the Maximum reading

MIN hold: Hold the Minimum reading

HOLD: Hold the readings

Alarm function: "OVER" is when input is more than upper limit of range.

"UNDER"is when input is less than upper limit of range.

Analog output: AC/DC outputs from earphone outlet

AC=1Vrms , DC=10mV/dB

Data output

: USB data traffic

Auto power off

: Meter automatically shuts down

after approx. 15 minutes of inactivity.

Power supply: One 9V battery, 006P or NEDA1604

or IEC 6F22.

Power life: About 30hours

Operation temperature and humidity:

0°C~40°C,10%RH~90%RH

Storage temperature and temperature:

-10°C~+60°C, 10%RH~75%RH

Dimension

: 278 (L) x 76 (W) x 50(H) mm

Weight

: 350g

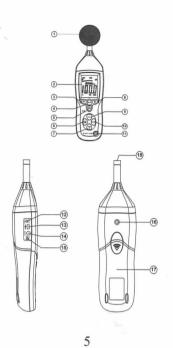
Accessories

: Instruction manual, battery,

screwdriver, ¢ 3.5mm earphone plug, windscreen,

software, USB cable.

# 4. NAME AND FUNCTIONS



① Windscreen

② LCD:



SYMBOL	FUNCTION	
LCD	4 digits	
MAX	Maximum hold	
MIN.	Minimum hold	
OVER	over range	
UNDER	under range	
FAST	Fast response	
SLOW	Slow response	
dBA	A-Weighting(responseto	human
	sense)	

dBC	C-Weighting(response to machine monitor)	
	memory	
88—188	Range indicate	
REC	Recording data into computer	
AUTO	Auto level range selection	
FULL	Memory full	
HOLD	Data hold function	
Ø ,	AutopoweroffPress the"SETUP" button	
	to disable power off	
==	Low battery indicate	

#### **3REC button**

#### 3.0 DATALOGGER function

Press "REC" button after it power on, the display will show "REC" to start Data Recording, press the button again to exit the record (Note: In order to avoid data error, please don't power it off under REC condition, when the REC function is deleted then it can power off).

#### **4**SETUP button

#### 4. 0. The time chip adjustment

Press 'SETUP' button and then power it on, when 'TIME' symbol displays then loosen 'SETUP', the meter will be

under time adjustment mode, at the time the display will show the date as following:

Press the 'SETUP' button second time, the display showing:

The display showing "minute" adjustment mode, press 'LEVEL' to make the adjustment, press 'HOLD' to keep the setup:

Press the 'SETUP' button third time, the display showing:

The display showing "hour" adjustment mode,  $( \quad \text{h-P=PM} \quad , \quad \text{h-A=AM} \quad ) \quad \text{press} \\ \text{`LEVEL'} \quad \text{to make the adjustment, press 'HOLD' to} \\ \text{keep the setup;}$ 

Press the 'SETUP' button fourth time, the display showing

mare - d - 2B

The display showing "date" adjustment mode, press 'LEVEL' to make the adjustment, press 'HOLD' to keep the setup;

Press the 'SETUP' button fifth time, the display showing:

.... + H - 10

The display showing "month" adjustment mode, press 'LEVEL' to make the adjustment, press 'HOLD' to keep the setup:

Press the 'SETUP' button sixth time, the display showing:

\*\*\* - A - DE

The display showing "year" adjustment mode, press 'LEVEL' to make the adjustment, press 'HOLD' to keep the setup;

Press the 'SETUP' button seventh time, the display showing

separately as following:

r5Ł

The display showing initialization of the time chip, press 'HOLD' to keep the setup, time and date have returned to factory setup. When the battery is exhausted or replaced, if the time can't be adjusted then please initialize the time chip first.

4.1. USB communications setting: turn on the meter, connect the meter with the computer correctly, choose the

software COM3 (COM4), then press 'SETUP', 'O', disappears from the display to indicate and disable auto power off, that the USB data is transmitting.

#### 5 FAST/SLOW button:

time weighting selection

FAST: Fast sampling measurement, 1 time per 125mS. SLOW: Slow sampling measurement, 1 time per second.

⑥MAX/MIN button: Maximum and Minimum hold Press this button for one time to enter MAX/MIN

measurement, 'MAX' will appear on LCD, maximum sound level will be captured and held until higher sound level is captured. Press the button again, 'MIN' will appear on LCD and minimum sound level will be captured and held until new lower sound level is captured. Press the button one more time to exit MAX/MIN measurement.

# CEVEL button: Level range selection

Each time you press "LEVEL" button, the level range will change between 'Lo' level, 'Med' level, 'Hi' level and 'Auto' level in the circular.



#### **Backlight button**

Turn the backlight on/off

9 Frequency weighting select button

A: A-Weighting

C: C-Weighting

**(III)** HOLD button:

Press "HOLD" button, The hold function freezes the reading in the display.

(11) Power button

Turn the meter power ON/OFF

(12) External DC 9V power supply terminal

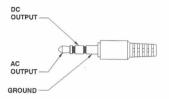
For connection with DC 9V power supply.

Aperture size: external diameter: 3.5mm, internal diameter: 1.35mm

(13) USB interface

USB signal output is a 9600 bps serial interface.

(14) AC/DC signal output earphone outlet



AC: Output voltage: 1Vrms corresponding to each range step.

Output impedance: 100Ω

DC: Output voltage: 10mV/dBOutput impedance:  $1k\Omega$ 

(15) Calibration potentiometer (CALL)

For external standard level calibration adjustments.

- (16) Tripod mounting screw
- (17) Battery cover
- (18) Microphone

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#### 1/2 inch Electret Condenser microphone

#### 5. CALIBRATION PROCEDURES

①Make the following switch settings: Frequency weighting: A-weighting

Time weighting: FAST Level range: 50 ~100dB

- ②Insert the microphone housing carefully into the 1/2 inch insertion hole of the calibrator (94dB @ 1kHz).
- ③Turn on the switch of calibrator and adjust the CALL potentiometer of the unit 94.0dB is displayed.

NOTE: All products are well calibrated before shipment. Recommended recalibration cycle: 1 year.



#### 6. MEASUREMENT PREPARATION

 Remove the battery cover on the back and put in one 9V battery.

- ② Recover the back cover.
  - voltage or battery aging, this symbol will

3 When battery voltage drops below the operating

appear on LCD. Replace the 9V battery.

When the AC adapter is used, insert the plug of the adapter (3.5φ) into the DC 9V connector on the side panel.

#### 7. OPERATING PROCEDURE

- Power on the meter.
- ② Press 'LEVEL' button to select desired level, base on 'UNDER' or 'OVER' do not appear on LCD.
- Select 'dBA' for general noise sound level and 'dBC' for measuring sound level of acoustic material.
- Select 'FAST' for instant sound and 'SLOW' for average sound level.
- Select 'MAX/MIN' button for measuring maximum and minimum noise level.
- 6 Hold the instrument comfortable in hand or fix on tripod and measure sound level at a distance of 1~1.5 meter.

#### 8. NOTICE

i. Do not store or operate the instrument at

high temperature and high humidity environment.

- ii. When not in use for long time, please take out the battery to avoid battery liquid leakage and cautery on the instrument.
- iii. When using the instrument in the presence of wind, it is a must to mount the windscreen to not pick up undesirable signals.
- iv. Keep microphone dry and avoid severe vibration.
- 9. accessories:
- 1 installation CD
- ② USB interface cable
- 3 screwdriver
- 4 tripod
- 5 windscreen
- 6 DC 9V power supply.
- 10. Installing the software
- 1.0 Start windows
- 1.1 Insert the CD into the CD-drive.
- 1.2 Open folder SL-8851. Open folder 8851. Run setup.exe. Install wizard will then guide you through

the process.

1.3 Connecting the meter to the computer via the USB interface installs CP2102 drive software and using wizard will then guide you through the process.

#### **USB Drive Installation**

- Copy the CP210XWIN Drivers to a certain directory, such as: C:\usb\_driver.
- Connect the USB to the computer, the Windows system will show finding a new hardware. Choose specific directory C:\usb\_driver according to the instruction.
- After Driver installation, a new COM port will be added to the Ports in the Device Manager. Port number will be ranged following the primary COM ports, such as: COM3 or COM4.
- 1.4 Once the drive software is installed, start the application software, connect the meter to the computer by USB, then search for the COMX port occupied by CP210X, press

button, the 'symbol will not appear on the display, which indicate the meter is transmitting data to the

computer.



1.5 Enter the menu REAL TIME\ 'SETUP' to set the monitoring data(data volume, response, monitoring time)





1.6 DATALOGGER menu:

The computer read the memory data in the meter when REC not appear on the display and the connection is in order.

