IMPULSE
SOUND LEVEL METER

SL-5868I

CONTENT

6. COMMON PROBLEMS

6-1 When the meter is turned on, but there is nothing displayed.

1) The batteries are not installed or the batteries are in poor contact.

2) The **POWER** key damaged or in poor contact.

6-2 The sound level is obviously low.

The microphone or preamplifier may be damaged. Replaceable microphone or preamplifier. It may also be that the connection between the preamplifier socket and the main board falls off.

7. POINTS FOR ATTENTION

The microphone used in the instrument is a kind of precision sensor. Do not collide, otherwise the diaphragm will be damaged. Keep it in place when not in use. If man-made damage is not covered by the warranty.

Pay attention to the polarities when installing the batteries or external power supply. Do not reverse the connection. When the instrument is not in use for a long time, the batteries shall be removed to avoid damage to the instrument due to leakage.

The instrument shall not be placed in places with high temperature, humidity, sewage, dust and air or chemical gas with high hydrochloric acid and alkali content. Avoid direct sunlight.

Do not disassemble the instrument without permission. If the meter does not work normally, it can be sent to the repair unit or manufacturer for maintenance. Disassembly without permission is not covered by warranty.

8. PARTS LIST

Standard accessories:

1) Impulse sound level meter.....1

2) Wind shield.....1

3) Operation manual.....1

4) Carrying case.....1

Optional accessories:

1) External power supply (5V).....1

Appendix: Indicator & Meaning comparison table

Lin	Linear
FAST(F)	Time weighting 'Fast'
SLOW(S)	Time weighting 'Slow'
Low Value	Under range indication
OVER	Over range indication
HOLD	Max value hold
A	A Frequency weighting
C	C Frequency weighting

5-4 Backlight

When measuring at night, press the **BL** key to turn the backlight of LCD on or off. Lighting the LCD will increase the current consumption of the sound level meter and shorten the battery life.

5-5 Use of AC output

The AC signal can be output from the AC output socket on the right side of the sound level meter for observation of signal waveform or signal processing.

5-6 Sound calibration

The meter has been calibrated and verified before leaving the factory. Generally, it does not need to be calibrated. However, if the microphone is not used for a long time or replaced, or if there is a requirement in the measurement specification, it shall be calibrated. Generally, the sound calibrator ND9 is used for sound calibration. The calibrator produces a constant sound pressure with a frequency of 1000Hz and a sound level of 94dB. The calibration value of this meter is 93.8dB due to the use of 1/2-inch free field response microphone.

Put the sound calibrator (94db, 1kHz) on the microphone of the meter, without vibration or shaking. Press the power switch button of the sound level calibrator once, and set the weighting of sound level meter to A or C (press the **WEIGHTING** key on the panel). The sound pressure level reading should be 93.8dB, otherwise adjust the sensitivity calibration potentiometer on the right side of the meter. Calibration complete and remove the calibrator.

5-7 Power supply

There is Φ 1.1 external power socket on the right side of the sound level meter. The external power supply can be connected to the sound level meter. At this time, the internal battery of the sound level meter should be taken out. The voltage range of the external power supply is 5V, the plug shell is negative, and the plug core is positive. When the sound level meter is used continuously for a long time, external power supply is recommended.

5-8 Battery check and replacement

When the sound level meter works, it will automatically check whether the battery power is sufficient. If the battery power is insufficient, 'batt' will be displayed on the top left of LCD to remind that the battery should be replaced. Remove the battery back cover and battery, install new battery, cover back the back cover, and the instrument can be used normally.

If the instrument is not used for a long time, take out the battery in the instrument to avoid the battery leakage damaging the instrument.

5-9 Use of wind shield

When the measurement is carried out in the windy situation, the wind shield can be used to reduce the influence of wind noise.

1. OVERVIEW

The Impulse Sound Level Meter is a universal sound level meter that measures the exponential time weighted sound level, and an impulse sound level meter. Its performance is in accordance with GB/T 3785-2010 standard level 2 And IEC 61672:2013 Class 2 sound level meter requirements. It also meets the JJG 188-2017 standard.

2. FUNCTIONS AND FEATURES

* The three time weighting F, S, and I measurements can be selected.
* The digital detection technology is used to replace some traditional sound level meters, the stability and reliability are greatly improved.
* Large screen display is adopted, with clear and intuitive display. With dynamic scale display.

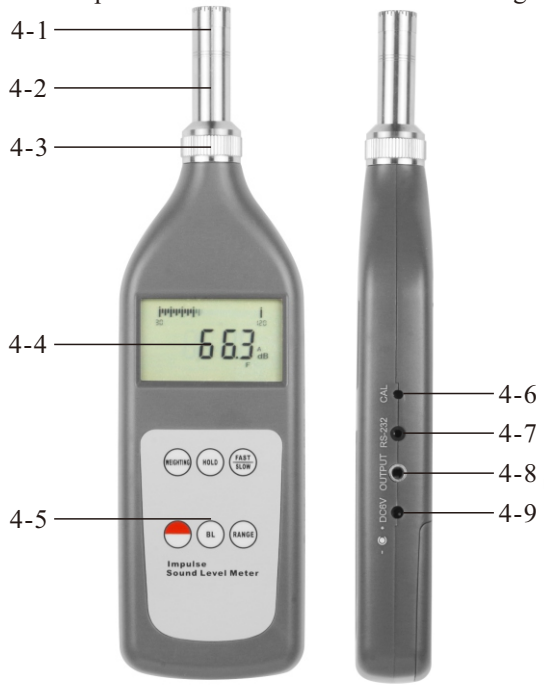
3. TECHNICAL PERFORMANCE

Microphone: Φ12.7mm (1/2') test condenser microphone
Frequency weighting: A, C, and Lin(Linear)
Measurement range: 25dB~130dB (A)
Range control: manual, three gears, linear range > 60dB
Measurement ranges:
30dB~90dB (dynamic scale display 10~100)
50dB~110dB (dynamic scale display 30~120)
70dB~130dB (dynamic scale display 50~140)
Accuracy: in accordance with IEC61672 standard, class 2
Time weighting: Fast (F), Slow (S), Impulse (I)
Frequency range: 20Hz-8kHz
Display: large screen dynamic LCD, instantaneous sound level, with analog ammeter display.
Calibration: use class 1 sound level calibrator
Power Supply: 4 x 1.5 V AAA (UM-4) Battery
External power supply: 5V
Weight: 185g (Not Including Batteries)
Dimensions: 227x63x26 mm
Operating Condition: Temperature: -10~50°C

4. STRUCTURE AND FUNCTION

See Figure 1 for the outline of sound level meter. The test condenser microphone and preamplifier should be installed in the head of the main unit during normal operation. The shape is tapered to reduce acoustic reflection. The case is made of ABS injection molding, and the battery is installed in the battery box. The battery can be easily replaced by removing the back cover plate of the meter. The measurement results are displayed by large screen LCD. The frequency weighting, time weighting and range switch are are located in the front middle of the sound level meter. The sensitivity potentiometer, data cable interface, output

port and power interface are located on the right side of the meter.



4-1 Microphone

4-2 Preamplifier

4-3 Lock nut

4-4 LCD screen

4-5 Panel buttons

4-6 Sensitivity calibration potentiometer

4-7 Data cable interface

4-8 AC output port

4-9 Power input

Fig.1

Function description of each key on the panel:

WEIGHTING:

Frequency weighting selection key, press the key to select A, C, and Lin.

HOLD:

Hold key. Press to enter hold mode during normal measurement, exit to normal measurement in hold state.

FAST/SLOW:

Time weighting selection key, press the key to select F, S and I.

BL:

Backlight selection key. Press to turn on or off the backlight display during normal measurement.

RANGE:

Range selection key, press the key to select the low, medium and high range step by step, and the screen scale display changes accordingly (10~100), (30~120), (50~140).

5. USING METHOD

5-1 Preparation before use

Check whether the battery is under voltage. If it is under voltage, replace it with

new batteries (see 5-8). If necessary, the sound level meter shall be calibrated with a sound calibrator. See 5-6 for the calibration method. The sound level meter shall be sent to the measurement department for verification regularly to ensure the accuracy of the sound level meter.

5-2 Measurement of the A, C and Lin sound levels

Turn on the power of the sound level meter, and the LCD will display the measured value of the A sound level.

1) Press the **WEIGHTING** key to make the display shows 'C', and the value displayed on the LCD is the measured value of 'C' sound level. Press the weighting key to make the display shows 'Lin', and the value displayed on the LCD is the measured value of 'linear sound level'. See Fig. 5.

2) Range selection

Generally, the range switch is set at the 'middle' position, and the indicator of the meter is 30dB~120dB. If the tested sound level exceeds the upper limit of the range, the overload indicator 'OVER' flashes, then press the **RANGE** key to switch to 'high', and the indicator head indicates 50dB~140dB. If the tested sound level is lower than the range, the sound level is too low, and the 'LOW' range indication appears on the right of LCD, the **RANGE** key shall be pressed to set to the low level, and the indicator head shall indicate 10dB~100dB. The range switch is cyclic.

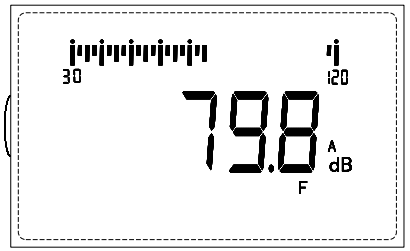


Fig. 5

3) There are 3 kinds of time weightings, Fast (F), Slow (S) and Impulse (I). Generally Fast 'F' is used. If the reading changes greatly, Slow 'S' can be used. Impulse (I) measurement is used for special requirements. As shown in Fig. 5.

5-3 Measurement of maximum sound level

Press the **HOLD** key once, the 'HOLD' symbol will be displayed on the LCD, and the sound level meter will be in the maximum value measurement state. At this time, the reading will change (increase) only when the louder level comes, otherwise it will be held. Press this key again, the sound level meter exits hold mode, and the 'hold' disappears. The **HOLD** key is for hold function during measurement.