

SPL Noise Level Indicator 1012741

Instruction manual

10/15 ALF



1. Description

The SPL noise level indicator is an accurate, handy and easy-to-use meter for measuring sound levels. It can be used to indicate noise levels in schools, including pre-school establishments, homes, workplaces etc.

The equipment detects noise by means of a built-in microphone. The incoming sound signal is first amplified and filtered, then its intensity is measured and the noise level in dB is indicated on the digital display.

A colour-coded display in the form of a caricatured face provides an easily seen indication when a specific pre-defined threshold has been exceeded. A smiling green-coloured face will change to a frowning red face when the noise in the room gets too loud.

The brightness of the various display elements can be set individually.

The noise level indicator features an energy-saving stand-by mode (average consumption below 0.7 mA). When the display switches to this mode, the noise level is no longer measured continually. The device automatically switches to stand-by mode if noise remains at a minimal level for a lengthy period (about 5 minutes). If the level increases again, the indicator automatically switches back to measuring mode. It also enters sleep mode if the level remains under a set threshold (42 dB) for longer than two minutes. In this mode, the device checks every two minutes whether the level has become louder and, if it has, it goes back to measuring mode. The indicator can be "woken up" quickly by pressing any of the configuration buttons.

The SPL noise meter can be powered by connecting it to a USB port on a computer or can alternatively get its power from a plug-in supply.

The supply voltage may not exceed a maximum of $U_{\max} = 6.0 \text{ V}$.

Applying a voltage that is too high can lead to a failure of the indicator. If a power supply other than that supplied is used, it must be ensured that the output voltage from that supply never exceeds 6.0 V

The “power supply” warning indicator flashes red when the power supply voltage is higher than 5.5 V. It remains on a constant red if the supply voltage is too low.

The noise meter can either be used mounted on a wall or free-standing on a desk or table. Its well design compact construction also makes it easily portable.

Note: the SPL noise level indicator contains sensitive electronics for detecting very small signals from the microphone. Electromagnetic radiation can interfere with the equipment, e.g. mobile telephones can cause it to register higher noise levels than usual when they are searching for a network or establishing a connection and are less than about 30 cm from the device. The display will return to the correct level as soon as the electromagnetic interference is no longer present. This phenomenon has no adverse effect on the overall lifespan of the indicator.

2. Supplied components

- 1 Noise level indicator
- 1 Stand
- 1 USB/miniUSB cable
- 1 USB plug-in power supply

3. Technical data

Display:	100 mm diam. with LED
Measuring range:	40 dB to 130 dB
Resolution:	1 dB
Frequency evaluation:	A
Time evaluation:	SLOW
Threshold for colour coding:	can be set in steps of 1 dB
Power supply:	5 V DC via miniUSB socket
Current consumption:	150 mA (measuring mode) <1 mA (stand-by)
USB power supply:	100 – 240 V, 50/60 Hz
Dimensions:	130x145x12 mm ³
Weight:	280 g approx. (not including stand)

4. Operation

Setting parameters

The threshold for switching over the colour-coded display can be set to any level within the measuring range of the equipment. The brightness of the display can be set to one of ten levels from 0 (off) to 9 (maximum).

Parameters are set with the help of the configuration buttons, “SET” and “+/-”. The “SET” switches to the next parameter while the “+/-” buttons increase or decrease the actual setting. The buttons can be operated with a thin pen or similar.

About 5 seconds after the last press of a configuration button, the device will automatically revert back to measuring mode.

The set values are permanently saved and are kept even if the device is turned off.

4.1 Setting noise threshold

- To set the noise threshold for changing the colour display, press the “SET” button once.

The display will begin to flash between red and green while the digital display indicates the current noise threshold.

- The threshold can be set to the desired value with the help of the “+/-” buttons.

4.2 Setting brightness of the colour display

- To set brightness of the colour display, press the “SET” button again (pressing twice from the measuring mode goes to the “green” setting and three times goes to the “red” setting).

In the relevant setting mode, the colour-coded indicator will be displayed as either red or green. The display also shows the letter “G” for green or “R” for red as well as the current brightness level.

- The brightness can then be set to the desired level with the help of the “+/-” buttons.

4.3 Setting brightness of the digital noise level display

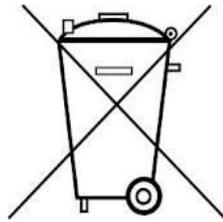
- To set brightness of the digital noise level display, press the “SET” button again (four times altogether from measuring mode).

The colour-coded display will be turned off and the letter “D” for display will be shown along with the current brightness level.

- Set the brightness to the desired level as above.
- Pressing one more time reverts the device to measuring mode and it also returns to that mode automatically after a 5 second delay.

5. Storage, cleaning and disposal

- Keep the noise level indicator in a clean, dry and dust-free place.
- Handle the device carefully and do not subject it to severe mechanical stresses or direct sunlight.
- Before cleaning the device, disconnect it from its power supply.
- Do not immerse the device in water to clean. Instead wipe it with a damp cloth, perhaps using some soap or screen cleaner.
- Do not clean it with volatile solvents or abrasive cleaners.
- The packaging should be disposed of at local recycling points.
- Should you need to dispose of the equipment itself, never throw it away in normal domestic waste. Local regulations for the disposal of electrical equipment will apply.



6. Example noise level values

Noise level	Example
40 dB	Quiet flat
50 dB	Private study or work room
55 dB	Outdoor park
60 dB	Normal conversation
70 dB	Loud conversation (1 m away)
80 dB	Large open-plan office/heavy road traffic
85 dB	Shouting (1 m away)
90 dB	Diesel engine (10 m away)
100 dB	Heavy lorry
120 dB	Uncomfortable noise level
130 dB	Pain threshold
140 dB	Jet aircraft (30 m away)



Fig. 1 Display with “happy smiling face”



Fig. 2 Display with “frowning face”

