

EN

ORIGINAL INSTRUCTIONS
SOUND LEVEL MEASURING
DEVICE



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Notes regarding the instructions


Symbols


 **Warning of electrical voltage**
This symbol indicates dangers to the life and health of persons due to electrical voltage.

 **Warning**
This signal word indicates a hazard with an average risk level which, if not avoided, can result in serious injury or death.

 **Caution**
This signal word indicates a hazard with a low risk level which, if not avoided, can result in minor or moderate injury.

Note
This signal word indicates important information (e.g. material damage), but does not indicate hazards.

 **Info**
Information marked with this symbol helps you to carry out your tasks quickly and safely.

 **Follow the manual**
Information marked with this symbol indicates that the instructions must be observed.

You can download the current version of the instructions and the EU declaration of conformity via the following link:




SL300



<https://hub.trotec.com/?id=44590>

Safety

Read this manual carefully before starting or using the device. Always store the manual in the immediate vicinity of the device or its site of use.

-  **Warning**
Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.
Save all warnings and instructions for future reference.
- Do not use the device in potentially explosive rooms or areas and do not install it there.
 - Do not use the device in aggressive atmosphere.
 - Do not immerse the device in water. Do not allow liquids to penetrate into the device.
 - The device may only be used in dry surroundings and must not be used in the rain or at a relative humidity exceeding the operating conditions.
 - Protect the device from permanent direct sunlight.
 - Do not expose the device to strong vibrations.
 - Do not remove any safety signs, stickers or labels from the device. Keep all safety signs, stickers and labels in legible condition.
 - Do not open the device.
 - Never charge batteries that cannot be recharged.
 - Different types of batteries and new and used batteries must not be used together.
 - Insert the batteries into the battery compartment according to the correct polarity.
 - Remove discharged batteries from the device. Batteries contain materials hazardous to the environment. Dispose of the batteries according to the national regulations.
 - Remove the batteries from the device if you will not be using the device for a longer period of time.
 - Never short-circuit the supply terminal in the battery compartment!

- Do not swallow batteries! If a battery is swallowed, it can cause severe internal burns within 2 hours! These burns can lead to death!
- If you think batteries might have been swallowed or otherwise entered the body, seek medical attention immediately!
- Keep new and used batteries and an open battery compartment away from children.
- Only use the device, if sufficient safety precautions were taken at the surveyed location (e.g. when performing measurements along public roads, on building sites etc.). Otherwise do not use the device.
- Observe the storage and operating conditions (see Technical data).
- Do not expose the device to directly squirting water.
- Check accessories and connection parts for possible damage prior to every use of the device. Do not use any defective devices or device parts.

Intended use

Only use the device for sound level measurements within the measuring range specified in the technical data.

To use the device for its intended use, only use accessories and spare parts which have been approved by Trotec.

Foreseeable misuse

Do not use the device in potentially explosive atmospheres, for measurements in liquids or at live parts.

Any unauthorised changes, modifications or alterations to the device are forbidden.

Personnel qualifications

People who use this device must:

- have read and understood the instructions, especially the Safety chapter.

Personal protective equipment



Wear hearing protection

Wear hearing protection when handling the device.

Residual risks



Warning of electrical voltage

There is a risk of a short-circuit due to liquids penetrating the housing!
Do not immerse the device and the accessories in water. Make sure that no water or other liquids can enter the housing.



Warning of electrical voltage

Work on the electrical components must only be carried out by an authorised specialist company!



Warning

Risk of hearing damage!
Ensure sufficient ear protection when there are sources of loud sound. There is a danger of hearing damage.



Warning

Risk of suffocation!
Do not leave the packaging lying around. Children may use it as a dangerous toy.



Warning

The device is not a toy and does not belong in the hands of children.



Warning

Dangers can occur at the device when it is used by untrained people in an unprofessional or improper way!
Observe the personnel qualifications!



Caution

Keep a sufficient distance from heat sources.

Note

To prevent damages to the device, do not expose it to extreme temperatures, extreme humidity or moisture.

Note

Do not use abrasive cleaners or solvents to clean the device.

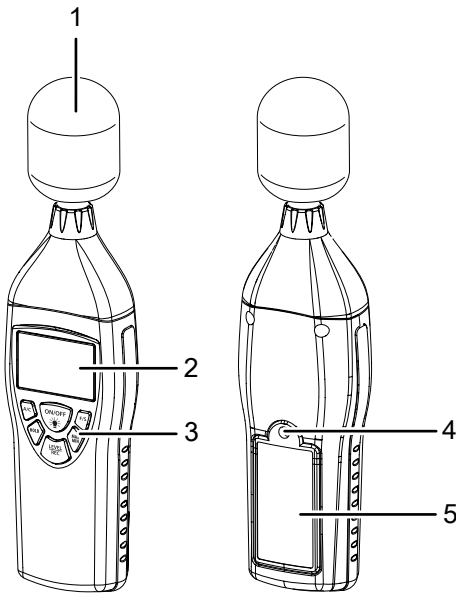
Information about the device

Device description

The digital sound level meter was specifically designed to perform noise measurements and quality inspections in various areas and different locations. The measurements can be carried out e.g. at your workplace, at the office, in factories, schools, at home or on busy roads. This permits the introduction of preventative measures and helps to guard against noise-induced diseases.

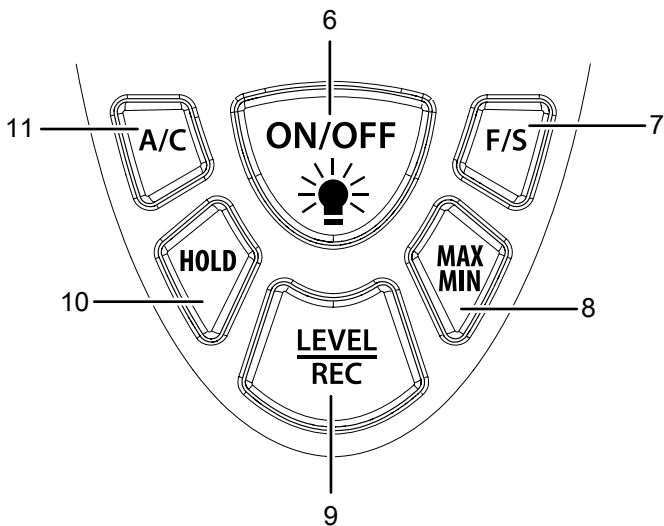
- The device meets the requirements of the standard for digital sound level meters DIN EN 61672-1.
- display of maximum and minimum values
- indication when exceeding the measuring range
- indication when falling below the measuring range
- dBA and dBC display
- measuring range selection

Device depiction



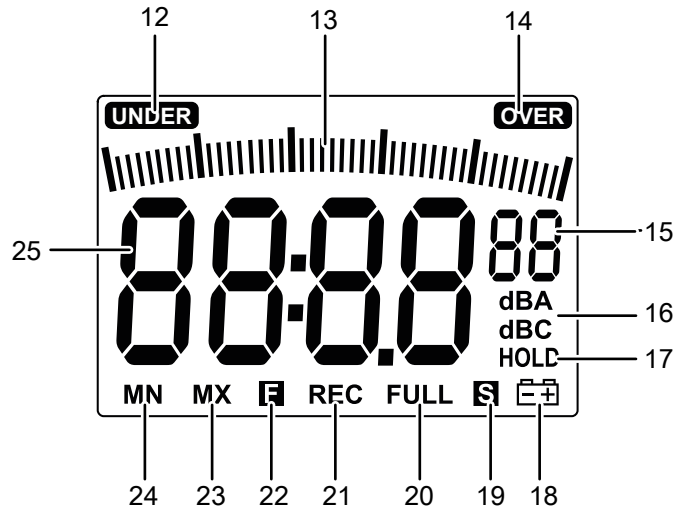
No.	Designation
1	Measuring probe with protective cap
2	Display
3	Control panel
4	Tripod thread
5	Battery compartment with cover

Control panel



No.	Designation
6	On/off button with background illumination
7	F/S button
8	MAX/MIN button
9	LEVEL / REC button
10	HOLD button
11	A/C button

Display



No.	Designation
12	UNDER indication (i.e. fallen below measuring range)
13	Display of the measuring scale
14	OVER indication (i.e. measuring range exceeded)
15	Measuring range selection indication (01–04)
16	dBA / dBC indication (indication in dBA or dBC)
17	HOLD indication (measured value is recorded)
18	⚡ indication (low battery)
19	S indication (slow response time)
20	FULL indication (memory full)
21	REC indication (measuring process in progress)
22	F indication (fast response time)
23	MAX indication (maximum value)
24	MIN indication (minimum value)
25	Measured value display

Technical data

Parameter	Value
Model	SL300
Article number	3.510.005.010
Measuring range	30 dB to 130 dB
Accuracy	± 1.4 dB as per DIN EN 61672
Resolution	0.1 dB
Frequency range	31.5 Hz to 8 kHz
Dynamic range	50 dB
Partial measuring ranges	(01):30 – 80dB (02):50 – 100dB (03):80 – 130dB (04):30 – 130dB (Auto)
Display response time	500 ms
Power supply	9 V battery 006P or NEDA 1604 or IEC 6F22
Alarm function	OVER: Fallen below measuring range UNDER: Fallen below measuring range
Data hold function	50 data records
Time weighting	FAST (-125ms); SLOW (-1s)
Microphone	1/2-inch electret condenser microphone
Operating conditions	0 °C to 40 °C with 10 % to 90 % RH
Storage conditions	-10 °C to +60 °C with 10 % to 75 % RH
Weight	230 g
Dimensions (length x width x height)	210 mm x 55 mm x 32 mm
Automatic switch-off	Switch-off after approx. 15 min of non-use

Scope of delivery

- 1 x Digital sound level meter
- 1 x Device bag
- 1 x Wind shield for microphone
- 1 x 9 V battery
- 1 x Quick guide

Transport and storage

Note

If you store or transport the device improperly, the device may be damaged.

Note the information regarding transport and storage of the device.

Transport

For transporting the device, use the bag included in the scope of delivery in order to protect the device from external influences.

Storage

When the device is not being used, observe the following storage conditions:

- dry and protected from frost and heat
- protected from dust and direct sunlight
- with a cover to protect it from invasive dust if necessary
- the storage temperature complies with the values specified in the Technical data
- Batteries are removed from the device

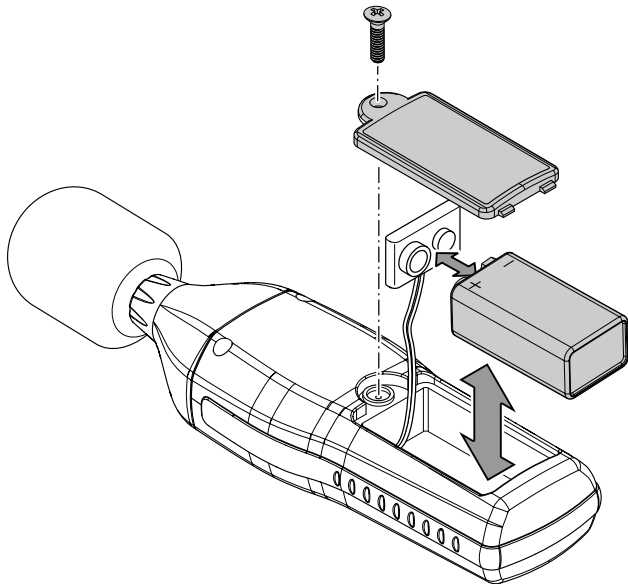
Operation

Inserting the battery

Insert the supplied battery before first use.

Note

Make sure that the surface of the device is dry and the device is switched off.



1. Open the battery compartment at the rear of the device by loosening the screw at the cover.
2. Use the battery clip to connect the 9 V battery with correct polarity.
3. Place the battery with the battery clip into the battery compartment.
4. Reattach the cover to the battery compartment.
5. Retighten the screw at the battery compartment.

Switching the device and performing measurements



Info

Please note that moving from a cold area to a warm area can lead to condensation forming on the device's circuit board. This physical and unavoidable effect can falsify the measurement. In this case, the display shows either no measured values or they are incorrect. Wait a few minutes until the device has become adjusted to the changed conditions before carrying out a measurement.



Info

Please note that the measurement of a sound source always has to be carried out directly. There must be no objects or persons located in between the microphone and the sound source, unless their influence on the sound intensity is to be measured on purpose as well.

1. Press and hold the *On/off* button (6) for approx. 2 s.
 - ⇒ The display (2) is switched on and the device is ready for operation.
 - ⇒ The current measured value is displayed in the measurement value display (25).
2. Point the device at the sound source to be measured.
 - ⇒ Wait for a moment to achieve a stable measured value.

Setting the measuring range

The device has different measuring ranges which can be selected as needed or according to the expected sound level. If the expected sound level range is a known factor, one should always select the corresponding measuring range whenever possible, since this permits an optimum resolution of the scale (13) at all times.

- Lower measuring range: 30 to 80 dB
- Medium measuring range: 50 to 100 dB
- Upper measuring range: 80 to 130 dB
- Auto: 30 to 130 dB

Please proceed as follows to set the measuring range:

1. Press the LEVEL (9) button once to switch from the "low" LEVEL (stage 01) to the "medium" LEVEL (stage 02).
2. Press the LEVEL (9) button again to switch from the "medium" LEVEL (stage 02) to the "high" LEVEL (stage 03).
3. Press the LEVEL (9) button once more to switch from the "high" LEVEL (stage 03) to the "auto" LEVEL (stage 04).
4. If you press the LEVEL (9) button for a fourth time, you switch back to the "low" LEVEL (stage 01).
 - ⇒ The *measuring range selection* (15) changes in the display to the respective value 01, 02, 03 or 04.

Measured curve setting (dBA / dBC)

You can choose whether your measured values are to be displayed according to dB(A) or dB(C).

Please proceed as follows to set the measured curve:

1. Repeatedly press the A/C button (11) until either dB(A) or dB(C) is displayed in the display 2.
 - ⇒ The measured value will be adjusted automatically.

Setting the MIN / MAX function

By use of the MAX/MIN function you can retain either the highest or the lowest value of the current measurement. Please proceed as follows to set the MAX/MIN function:

1. Press the MAX/MIN button (8).
 - ⇒ The MAX indication (23) appears on the display.
 - ⇒ The measured value display (25) will be frozen and changes only if a new higher value is measured.
2. Press the MAX/MIN button (8) again.
 - ⇒ The MIN indication (24) appears on the display.
 - ⇒ The measured value display (25) will be frozen and changes only if a new lower value is measured.
3. Press the MAX/MIN button (8) again to quit using the MAX/MIN function.

Setting the HOLD function

By use of the HOLD function you can retain the currently measured value.

Please proceed as follows to set the HOLD function:

1. 1. Press the HOLD button (10).
 - ⇒ The indication HOLD (17) appears on the display.
 - ⇒ The measured value display (25) will be frozen.
2. Press the HOLD button (10) again.
 - ⇒ The currently measured value is indicated.
 - ⇒ The HOLD indication (17) disappears.

Setting the time weighting

You can choose between a (FAST) and (SLOW) time weighting.

- FAST: 125 ms (real-time signal evaluation)
- SLOW: 1 s (average signal evaluation)

Please proceed as follows to set the time weighting:

1. Press the F/S button (7) until the desired type of time weighting (FAST 22 or SLOW 19) is indicated on the display.

Switching the background illumination on or off

The device comes with an optionally selectable background illumination. Please proceed as follows to switch the background illumination on or off:

1. Press the *On/off* button with background illumination (6) twice to switch the background illumination on.
2. Press the *On/off* button with background illumination (6) again to switch the background illumination off.

Setting the time and date

You can adjust the time and date for the device.

To do so, please proceed as follows:

- ✓ The device is switched off.
1. Press the *A/C* button (11) and switch the device on at the same time by simultaneously pressing the *On/off* button (6) for 3 seconds.
 2. Release the *A/C* button (11) once "Set" appears on the display (2).
 - ⇒ The device is now in adjusting mode.
 - ⇒ The date is shown on the display.
 3. Press the *A/C* button (11) again to switch to the time indication.
 4. The set time will be indicated on the display.
 5. Then press the *A/C* button (11) to adjust the minutes.
 6. In order to set a higher value, press the *MAX/MIN* button (8) for all settings. In order to set a lower value, press the *LEVEL / REC* button (9) for all settings.
 7. Press the *A/C* button (11) to set the hours.
 8. Press the *A/C* button (11) again to switch to the date.
 - ⇒ Here you can set the day first.
 9. Press the *A/C* button (11) again to set the month.
 10. Press the *A/C* (11) button once more to set the year.
 11. If you press the *A/C* button (11) again, *rSt-6 -Reset* will be indicated on the display.

12. Press the *A/C* button (11) again to save the settings.
 - ⇒ Time and date are now set.

Recording measurement series on the device (REC / Logging)

1. Press the *HOLD* button (10) to freeze a displayed value.
2. Press the *LEVEL / REC* button (9) to activate the device's recording function.
 - ⇒ The freezed value will be stored in the device storage with time and date.
 - ⇒ "REC" appears on the display.
3. Press the *HOLD* button (10) again to return to the measuring process.

Read data

- ✓ The device is switched off.
1. Press the *LEVEL / REC* button (9) and switch the device on at the same time by simultaneously pressing the *On/off* button (6).
 2. Release the *LEVEL / REC* button (9) once "DATA" appears on the display (2).
 3. Press the *LEVEL / REC* button (9) to switch between the measuring values stored in the memory.
 4. Press the *HOLD* button (10) or *MAX/MIN* (8) to see date or time of the record.
 5. If you press the *LEVEL / REC* button (9), you go to the next saved value.
 6. Press the *F/S* button (7) to exit the mode.

Deleting data memory

- ✓ The device is switched off.
1. Press the *HOLD* button (10) and switch the device on at the same time by simultaneously pressing the *On/off* button (6).
 2. Release the *HOLD* button (10) once "CLA" appears on the display (2).
 - ⇒ The data is deleted from the data memory.

Assembling the tripod

The device is equipped with a 1/4 inch tripod thread. If required, you can mount the device onto a tripod.

Switching the device off

1. Press and hold the *On/off* button (6) until the device is switched off.
 - ⇒ The countdown P-3, P-2, P-1 appears on the display after which the device is switched off.

Errors and faults

The device has been checked for proper functioning several times during production. If malfunctions occur nonetheless, check the device according to the following list.

The device does not switch on:

- Check the charging status of the battery. Change the battery, if required.
- Make sure that the battery is properly positioned. Check the polarity is correct.
- Never carry out an electrical check yourself; instead, contact your Trotec customer service.

Maintenance and repair

Battery change

A battery change is required when the battery status indication (18) flashes or the device can no longer be switched on (see chapter Inserting the battery).

Calibration

The device is already factory-calibrated and optimally adjusted. A recalibration requires special tools. In the case of a recalibration please contact the Trotec service.

Cleaning

Clean the device with a soft, damp and lint-free cloth. Make sure that no moisture enters the housing. Do not use any sprays, solvents, alcohol-based cleaning agents or abrasive cleaners, but only clean water to moisten the cloth.

Repair

Do not modify the device or install any spare parts. For repairs or device testing, contact the manufacturer.

Disposal

Always dispose of packing materials in an environmentally friendly manner and in accordance with the applicable local disposal regulations.



The icon with the crossed-out waste bin on waste electrical or electronic equipment is taken from Directive 2012/19/EU. It states that this device must not be disposed of with the household waste at the end of its life. You will find collection points for free return of waste electrical and electronic equipment in your vicinity. The addresses can be obtained from your municipality or local administration. You can also find out about other return options that apply for many EU countries on the website <https://hub.trotec.com/?id=45090>. Otherwise, please contact an official recycling centre for electronic and electrical equipment authorised for your country.

The separate collection of waste electrical and electronic equipment aims to enable the re-use, recycling and other forms of recovery of waste equipment as well as to prevent negative effects for the environment and human health caused by the disposal of hazardous substances potentially contained in the equipment.



In the European Union, batteries and accumulators must not be treated as domestic waste, but must be disposed of professionally in accordance with Directive 2006/66/EC of the European Parliament and of the Council of 6 September 2006 on batteries and accumulators. Please dispose of batteries and accumulators according to the relevant legal requirements.

Only for United Kingdom

According to Waste Electrical and Electronic Equipment Regulations 2013 (SI 2013/3113) (as amended) and the Waste Batteries and Accumulators Regulations 2009 (SI 2009/890) (as amended), devices that are no longer usable must be collected separately and disposed of in an environmentally friendly manner.

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