



Sound level meter

SU

SU 150



PROFESSIONAL MEASUREMENT

English Version

User Manual Sound Level Meter

Version 1.1
2026-04
en
TSU-BA-e-2611

SAUTER SU**Sound level meter****User Manual Sound Level Meter**

Version 1.1 2026-04 English Version

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1 Technical Specifications

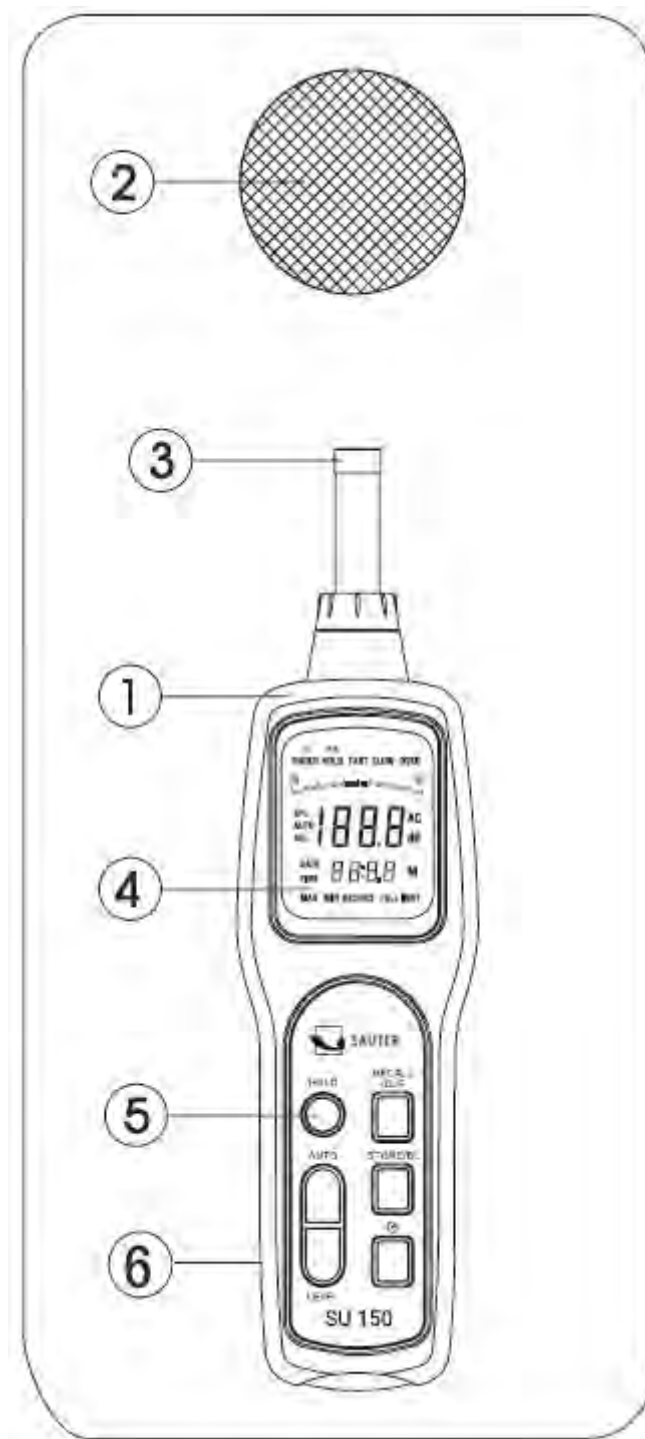
Function	SU 150	
A rating C-weighted	30 ~ 80 dB 50 ~ 100 dB 60 ~ 110 dB 80 to 130 dB	0.1 dB resolution ± 1.5 dB accuracy
Frequency range	31.5 Hz ~ 8 kHz	
Sampling rate	FAST SLOW	125 ms 1 second
Analog bar graph	1 dB per scale 100 sps (samples per second)	
Overload	Over-range→ OVER Under-range→ UNDER	
Analog DC signal output	Output impedance approx. 100 Ω, 10 mV/dB	
Analog signal output (AC)	Output impedance approx. 600 Ω, 0.707 V/scale	
Microphone	1/2-inch electret condenser	
Drop test	1 m passed	
Battery	4 x AA	
Battery life	Approx. 20 h	
Maximum altitude	2000 m	
Battery life	Approx. 100 hours with backlight off	
Operating temperature and humidity	0 °C to 40 °C, < 75% relative humidity (non-condensing)	
Storage temperature and humidity	-20 °C to 60 °C, < 80% relative humidity (non-condensing)	
Dimensions	273 x 69 x 39 mm	
Weight	Approx. 386 g (including battery)	

3 Device Overview

3.1 Scope of delivery

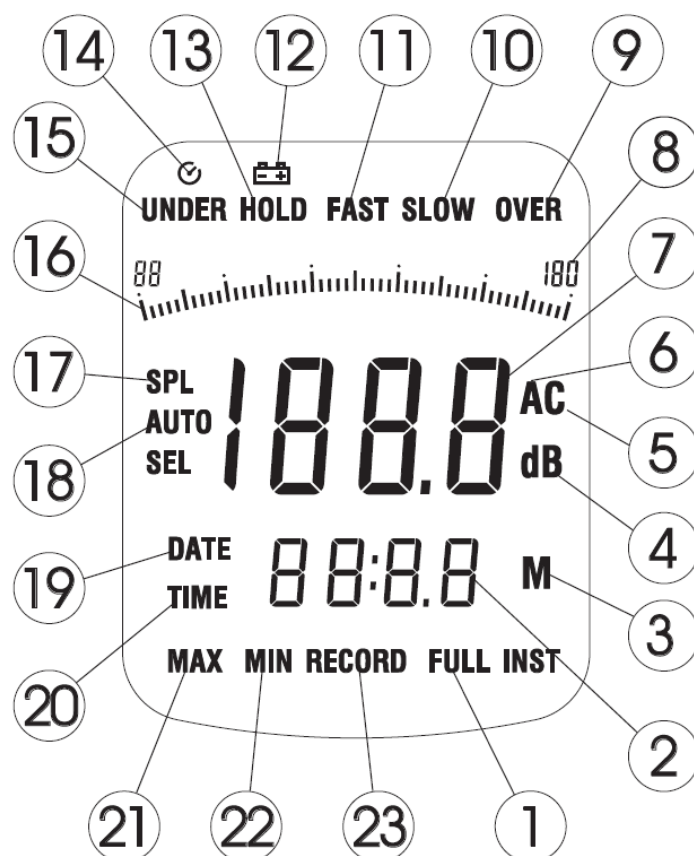
- Sound level meter
- User manual
- Windscreen
- AA batteries (4)

3.2 Components



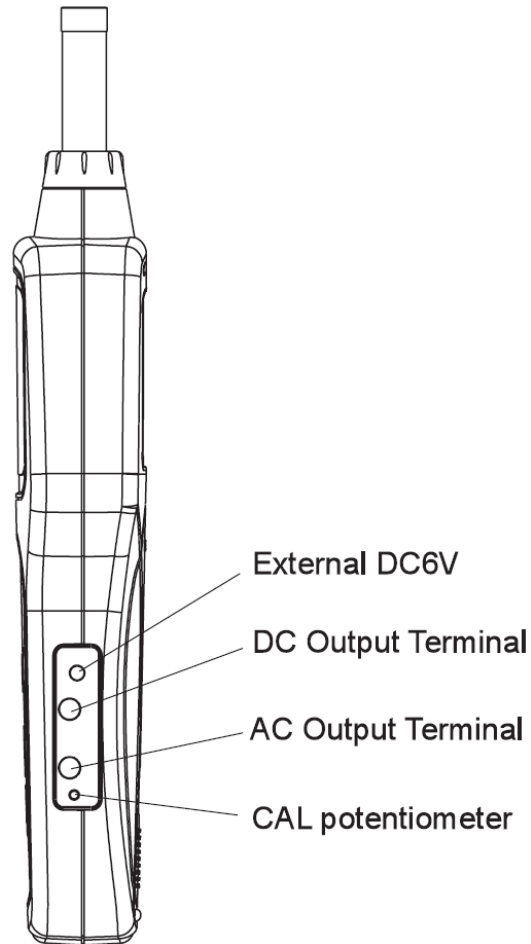
1. Housing
2. Windscreen
3. Microphone
4. LCD display
5. Function buttons
6. Signal output and power connection

3.3 Display



No.	Description	No.	Description
1	Data storage is full	13	Data retention icon
2	Date and time display	14	Icon for automatic on/off
3	Data memory	15	Sub-section
4	Decibels	16	Analog bar graph
5	C-weighting	17	Sound pressure level symbol
6	A-weighting	18	Automatic range selection
7	Tone value display	19	Date icon
8	Range indicator	20	Time icon
9	Range exceeded	21	Maximum value
10	Slow response	22	Minimum value
11	Fast response	23	Enable data storage
12	Low battery icon		

3.4 Side panel



- DC output connector: DC analog signal output. Output impedance 100 Ω (10 mV/V)
- AC output connector: AC analog signal output. Output impedance 600 Ω (0.707 V/range scale)
- CAL potentiometer: Used in combination with a sound calibrator for external calibration
- External 6 V DC: Use a power supply (not included) with a 3.5 mm output plug to connect to the port.

4 Basic Information (General)

4.1 General Information on Warnings

Warnings are used in this user manual to alert you to potential injury or property damage in specific situations.

Signal word	Description of the
DANGER	Failure to follow the instructions will result in serious injury, permanent impairment (e.g., loss of limbs), or death of the user or third parties.
WARNING	Failure to follow the instructions may result in serious injury, permanent impairment (e.g., loss of limbs), or death of the user or third parties.
CAUTION	Failure to follow the instructions may result in minor injuries or temporary harm to the user or third parties (e.g., minor cuts).
NOTE	Failure to follow the instructions may result in property damage.

Symbols in warnings :

Symbol	Meaning
Warning symbol	Warning signs alert you to hazards that can lead to injury. The symbol indicates the type of hazard.
	Indicates general hazards or a hazardous area
	Warning of electrical voltage
	Warning of flammable substances
	Warning of explosive substances
	Warning regarding electrostatic-sensitive components

4.2 Intended use

Use the precision measuring instrument exclusively for determining color spectra and wavelengths. To use the device as intended, avoid drastic changes in the device's external environment during measurement, such as flickering ambient light and rapid temperature fluctuations. During measurement, hold the device steady, keep the

measurement aperture close to the object being measured, and avoid vibrations and movement. Keep the device clean and tidy.

After use, store the device and its accessories in the device box and store it properly. The device should be stored in a dry and cool environment.

If you have any questions, please contact SAUTER or visit our website at www.sauter.eu.

4.3 Improper use

This measuring device must not be used for medical purposes.

Do not use the device in potentially explosive areas or for measurements in liquids or on live parts. This device is not waterproof and cannot be used in environments with high humidity or water mist. Prevent liquids, powders, or solid foreign objects such as water and dust from entering the measuring opening and the housing.

Unauthorized structural modifications, additions, or alterations to the device are prohibited. Unauthorized modifications may impair the accuracy of the device or even cause irreversible damage to it.

4.4 Warranty

The warranty is void if

- failure to comply with our specifications in the operating instructions
- Use outside the described applications
- Modifying or opening the device
- Mechanical damage and damage caused by media, liquids, or natural wear and tear
- Improper setup or electrical installation
- Improper assembly or electrical installation

5 Basic warnings and safety instructions

5.1 Follow the instructions in the user manual



Read the operating instructions carefully before commissioning/using the device, even if you already have experience with SAUTER devices. Always keep the instructions in close proximity to the device.

5.2 Staff training

The device may only be operated by persons who have read and understood the operating instructions, particularly the chapter on safety.

5.3 Safety

⚠ WARNING	
	Read all safety warnings and instructions. Failure to follow the safety instructions and guidelines can result in electric shock, fire, and/or serious injury. Keep all safety instructions and guidelines for future reference. • Ensure that no persons or objects are ever located under the load, as they could be injured or damaged! • Do not modify the design of the measuring device. This can lead to incorrect measurement results, safety-related defects, and destruction of the measuring device. • Do not operate the device in or install it in potentially explosive rooms or areas. • Do not operate the device in a corrosive atmosphere. • Do not immerse the device in water. Do not allow liquids to enter the interior of the device. • The device must only be used in a dry environment and under no circumstances in rain or at a relative humidity exceeding the operating conditions. • Protect the device from prolonged 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 legible. • Do not open the device.

⚠ WARNING	
	Risk of injury from electric shock! • There is a risk of a short circuit if liquids enter the housing! • Do not immerse the device or its accessories in water. Ensure that no water or other liquids enter the housing. • Work on electrical components must only be performed by an authorized service provider!

⚠ WARNING	
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	Risk of suffocation! Do not leave packaging materials lying around carelessly. They could become a dangerous toy for children. • The device is not a toy and should not be left within reach of children. • This device can be dangerous if used improperly or for purposes other than those intended by untrained persons! Observe the qualification requirements for operating personnel!
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⚠ WARNING	
	Electrostatic-sensitive device! • The device can be damaged by electrostatic discharge. HF signal connections are particularly at risk. • Please follow the handling instructions for electrostatic-sensitive components.

⚠ WARNING	
 	If rechargeable or non-rechargeable batteries are used improperly, they may catch fire, explode, emit toxic fumes, or release corrosive liquids. Therefore, the following applies to rechargeable and non-rechargeable batteries: • Protect from fire and heat. • Never expose to high pressure or microwaves. • Do not allow contact with liquids or chemicals. • The electrical contacts of rechargeable batteries and rechargeable cells must never come into contact with metal objects or be short-circuited. • Never modify rechargeable batteries, batteries, or chargers. • Batteries must never be recharged. • Never use or charge a defective, damaged, or deformed battery. • Do not use power adapters that do not meet the technical specifications. This can shorten the battery's lifespan or even cause an electric shock, which may damage the device or cause a fire. • If the device is not used for an extended period, the external power adapter should be unplugged to prevent the device from overheating and causing a fire. • If you do not use the device for an extended period, you should charge it every two weeks; otherwise, the internal battery may be slightly damaged, rendering the device unusable.

CAUTION	
• Keep a sufficient distance from heat sources. • Do not use the device in environments with high humidity or water vapor.	

 NOTE

- To prevent damage to the device, do not expose it to extreme temperatures, extreme humidity, or moisture.
- Do not use harsh cleaning agents, abrasives, or solvents to clean the device.

6 Transport and Storage

Note

Improper storage or transport may damage the device. Follow the instructions for transporting and storing the device.

Transport

When transporting the device, use the carrying case included in the package to protect the device from external influences.

Storage

Follow these storage conditions when the device is not in use:

- dry and at a temperature between protected from frost and heat
- protected from dust in the carrying case
- the storage temperature complies with the technical specifications

Packaging/Return Shipping

Returns are only possible in accordance with the General Terms and Conditions. Keep all parts of the original packaging for any necessary return shipping.

- Only the original packaging may be used for return shipping.
- Before shipping, disconnect all connected cables and remove any loose or movable parts.
- Reattach all supplied transport securing devices.
- Secure all parts to prevent them from shifting and being damaged.

7 Unpacking and Setup

7.1 Unpacking



In the event of a return, please follow the instructions in the “Packaging/Return Shipping” section.

Upon receiving the device, you should first check that no damage occurred during transport and that the outer packaging, the housing, other parts, or even the device itself have not been damaged. If you notice any damage, please notify SAUTER GmbH immediately.

7.2 Initial Setup

To ensure the meter functions properly, insert the batteries into the device ().

8 Menu

8.1 Measurement Control and Function Keys

The following table contains information on the operation of the function keys

Button	Function Performed
HOLD 	• Turns the meter on and off. Press once to turn the meter on. Hold the button down for about 1 second to turn the meter off. • HOLD function: During sound measurement, press once to freeze the current reading on the display. Press the button again to resume normal operation.
A/C	• During sound measurement, press the A/C button to select the “A” or “C” frequency weighting. When “A” weighting is selected, the meter’s frequency response resembles that of the human ear. The “A” weighting is frequently used for environmental or hearing protection programs. The “C” weighting provides a much flatter response and is suitable for sound level analysis of machines, engines, etc. Most noise measurements are performed using the “A” weighting and the slow response. • By pressing the A/C button, you can also retrieve and delete data: ➤RECALL: • Hold down this button to display the most recently stored data and the index number on the LCD display. • Press the “↑↓” button to recall additional stored measurements. • Press the “ ” button to exit RECALL mode. ➤CLR: • While turning on the meter, hold down the A/C button until “CLR” and “RECORD” appear on the LCD display. All stored data will be deleted.

LEVEL	Press this button to switch between automatic and manual range selection. • The meter's default setting is automatic range selection. • Press the "LEVEL" button to switch to the manual measurement range. Press the "↕" button to switch between the low and high measurement ranges. Hold down the "LEVEL" button to exit the manual measurement range.
FAST/SLOW	• Press this button to select a fast (125 ms) or slow (1 second) response time. Select "FAST" to detect noise spikes and very rapid changes in sound levels. Select the slow response time to monitor a sound source with a constant sound level and to average out rapidly changing levels. For most applications, select the slow response time. • Press and hold the FAST/SLOW button to turn on the display backlight. Press and hold the FAST/SLOW button again to turn off the display backlight. • Press the FAST/SLOW button to save data: ➤ Press the HOLD button to freeze the data. The LCD display will show HOLD and the M symbol, along with the stored data. ➤ Press FAST/SLOW to save the data. The RECORD symbol and the index number will flash for 0.5 seconds. ➤ The meter automatically exits HOLD mode. ➤ The meter can store up to 63 data points.

MAX MIN	• Press MAX/MIN to display the maximum or minimum reading. The display is updated only when the measured value exceeds the currently displayed value. ➤ Press the MAX/MIN button, and the MAX symbol will appear next to the reading. The displayed reading is the highest reading measured since entering MAX mode. ➤ Press the MAX/MIN button again. The MIN symbol appears on the display. The displayed reading is the lowest reading measured since entering MIN mode. ➤ Press the MAX/MIN button again to exit MAX/MIN display mode. • Press and hold the MAX/MIN button to disable or enable the auto-off function. The meter automatically turns off after approximately 15 minutes of inactivity. The "🔌" symbol indicates that the auto-off function is active.
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8.2 Calibration

1. Turn on the meter.
2. Set the meter to weighting mode "A," response mode "FAST," range 60–110 dB, and the lock to MAX.
3. Place the microphone on the calibrator's 1/2-inch sound source.
4. Turn on the calibrator and use a standard sound source with 94 dB at 1 kHz.
5. Adjust the CAL potentiometer on the side of the meter until 94.0 dB is displayed on the LCD screen.

9 Maintenance, Servicing, and Disposal

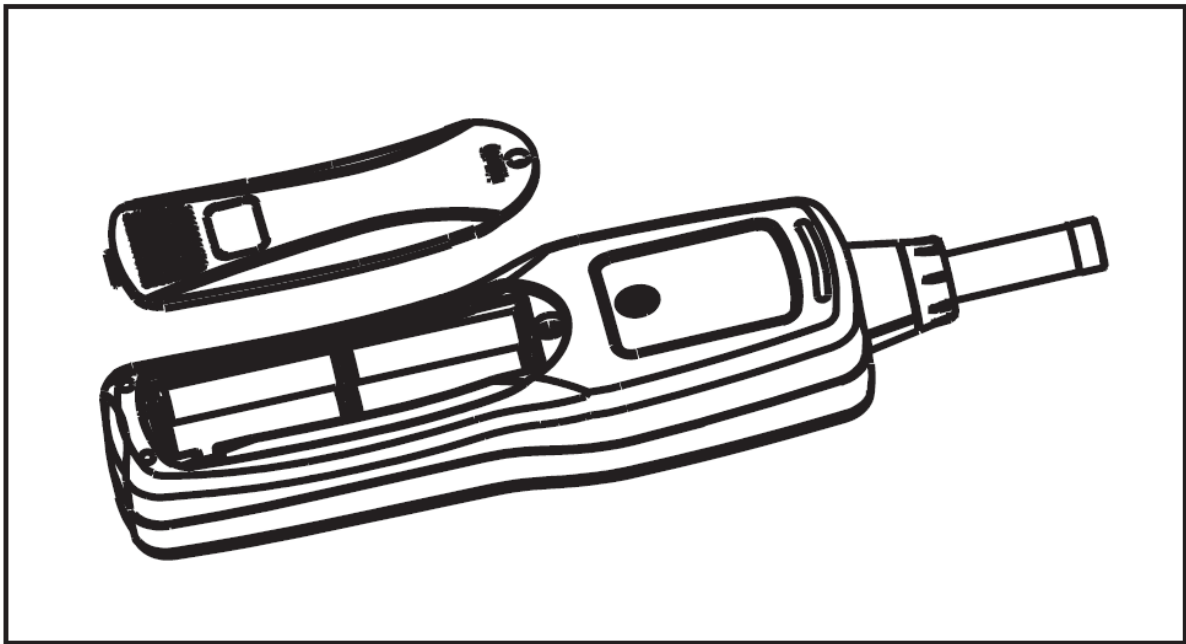


Unplug the device from the power source before performing any maintenance, cleaning, or repair work.

9.1 Cleaning

Clean the device with a damp, soft, lint-free cloth. Make sure no moisture gets inside the housing. Do not use sprays, solvents, alcohol-based cleaners, or abrasive cleaners; use only plain water to dampen the cloth.

9.2 Battery Replacement



To replace the batteries:

- Turn off the sound level meter.
- Remove the screw from the battery compartment, open the battery compartment cover, and remove the batteries.
- Replace the batteries (4 x AA). Pay attention to the polarity of the batteries.
- Close the battery compartment cover and tighten the screw.

9.3 Maintenance , and Repair

Do not make any modifications to the device or install any replacement parts. Contact the manufacturer for repairs or device inspections.

9.4 Disposal



Old devices and accessories must not be disposed of with household waste.

The operator must dispose of the packaging and the device in accordance with applicable national or regional regulations at the location of use.

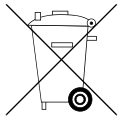
The device consists of various components and materials, such as

- Electronic components (circuit boards, electrical cables)
- Plastic (housing)
- Metal

Improper disposal of the device can have harmful effects on people and the environment.

Proper and environmentally sound disposal can prevent harmful effects and recover raw materials.

Disposal of batteries:



Rechargeable batteries and batteries do not belong in household waste.

The operator must dispose of batteries and rechargeable batteries in accordance with the applicable national or regional laws of the place of use.

10 Battery Act

Note in accordance with the Battery Act – BattG:

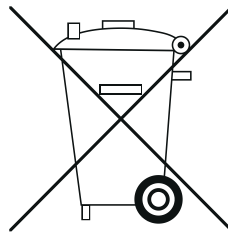
INFORMATION



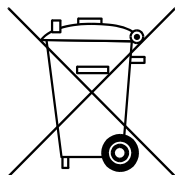
- The following information applies to Germany.

In connection with the sale of batteries and rechargeable batteries, we, as a retailer, are required by the Battery Act to inform end users of the following:

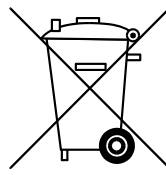
- End consumers are legally required to return used batteries and rechargeable batteries.
- After use, batteries and rechargeable batteries can be returned free of charge to municipal collection points or specialty retailers. The batteries/rechargeable batteries must have reached the end of their normal service life; otherwise, precautions must be taken to prevent short circuits.
- The return option is limited to batteries and rechargeable batteries that we currently carry or have carried in our product range, as well as to the quantity that end consumers typically dispose of.
- A crossed-out trash can symbol means that you must not dispose of batteries or rechargeable batteries in household waste. Old batteries or rechargeable batteries may contain harmful substances that can harm people and the environment if disposed of improperly.



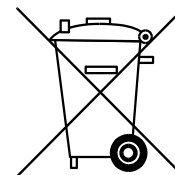
- Batteries containing hazardous substances are marked with a symbol consisting of a crossed-out trash can and the chemical symbol (Cd = cadmium, Hg = mercury, or Pb = lead) of the heavy metal responsible for the classification as a hazardous substance.



Cd



Hg



Pb