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Sauter HKR-SW 1000

Sauter SW 1000 Professional Sound Level Meter User Manual

Model: HKR-SW 1000

Introduction

The Sauter SW 1000 is a professional, premium-class sound level meter designed for precise acoustic measurements across a wide frequency range of 0.003 to 20 kHz. This device is ideal for environmental noise monitoring, industrial hygiene, product noise testing, and research applications. Its advanced features and robust design ensure reliable and accurate data collection.

This manual provides essential information for the proper use and maintenance of your Sauter SW 1000 sound level meter.



Figure 1: The Sauter SW 1000 Professional Sound Level Meter with its microphone and foam windscreen.

Setup

Before operating your Sauter SW 1000, please follow these setup instructions to ensure proper functionality and accurate

measurements.

1. **Unpacking:** Carefully remove the sound level meter and all accessories from its protective carrying case. Verify that all components listed in the packing list are present.
2. **Power Supply:** The device can be powered by internal batteries or an external power adapter. Insert fresh batteries into the battery compartment, observing polarity. Alternatively, connect the provided power adapter to the 'PWR' port and a suitable power outlet.
3. **Microphone Attachment:** Ensure the microphone is securely attached to the device. Place the foam windscreen over the microphone to reduce wind noise during outdoor measurements.
4. **Initial Configuration:** Upon first power-on, the device may prompt you to set the date, time, and language. Use the navigation buttons to select the appropriate settings.



Figure 2: The Sauter SW 1000 Sound Level Meter and its accessories, including the power adapter and cables, neatly organized within its protective carrying case.

Operating Instructions

The Sauter SW 1000 offers various modes and functions for comprehensive sound analysis.

Basic Measurement

- **Power On:** Press the 'ON/OFF' button located on the top of the device to power it on.
- **Measurement Mode:** The device typically defaults to real-time sound level measurement (e.g., dB(A) or dB(C)).
- **Weighting Selection:** Use the appropriate buttons to switch between A-weighting (for general noise assessment, mimicking human ear response) and C-weighting (for measuring peak sound pressure levels or low-frequency noise).
- **Time Weighting:** Select 'Fast' for rapidly changing noise levels or 'Slow' for more stable, average readings.

Advanced Display Modes

The SW 1000 features a clear display capable of showing various measurement parameters and graphical representations.

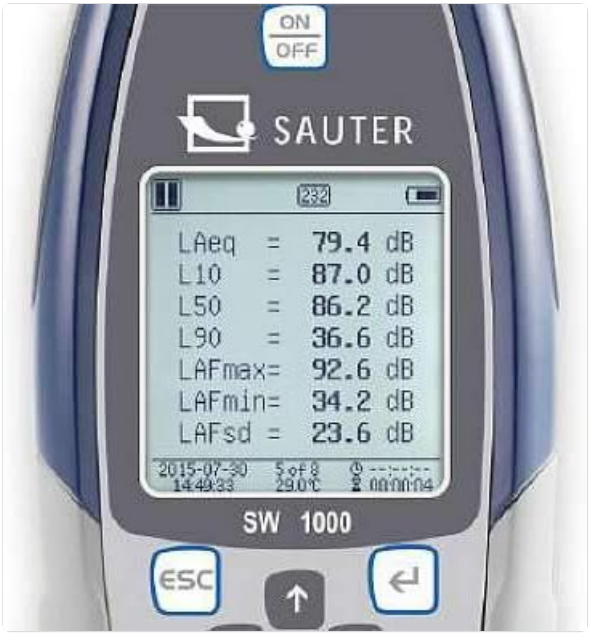


Figure 3: The device display showing statistical noise parameters such as LAeq (equivalent continuous sound level), L10, L50, L90 (percentile levels), LAFmax (maximum A-weighted fast sound level), LAFmin (minimum A-weighted fast sound level), and LAFsd (standard deviation).

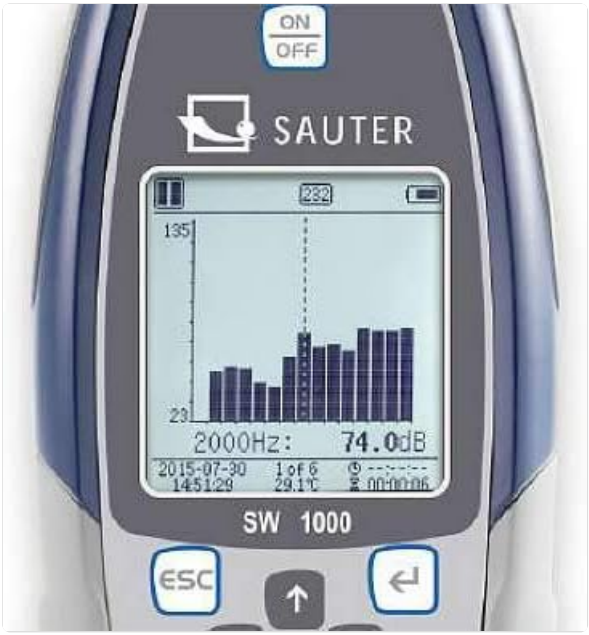


Figure 4: The device display showing a real-time frequency spectrum analysis, indicating sound levels across different frequency bands (e.g., 2000Hz at 74.0 dB).

Data Management and Connectivity

The SW 1000 allows for data logging and external connectivity.

- **Data Logging:** Measurements can be stored internally or on a MicroSD card inserted into the 'MicroSD' slot. Refer to the on-screen menu for logging settings and data retrieval.
- **PC Connection:** Use the 'MiniUSB' port to connect the device to a computer for data transfer or real-time monitoring with compatible software. The 'RS-232' port provides an alternative serial communication interface.
- **Analog Outputs:** The 'DC OUT' and 'AC OUT' ports provide analog voltage signals proportional to the measured sound level, useful for connecting to external recording devices or data acquisition systems. The 'TRIGGER' port can be used for external synchronization.



Figure 5: Bottom view of the Sauter SW 1000, highlighting its connectivity ports: PWR (power input), MiniUSB, TRIGGER, DC OUT, AC OUT, MicroSD card slot, and RS-232 serial port.

Maintenance

Proper maintenance ensures the longevity and accuracy of your sound level meter.

- **Cleaning:** Use a soft, dry cloth to clean the device's exterior. Do not use abrasive cleaners or solvents. Keep the microphone free from dust and debris.
- **Calibration:** For professional and accurate measurements, regular calibration by a certified laboratory is recommended. Refer to local regulations and industry standards for calibration intervals.
- **Storage:** When not in use, store the device in its protective carrying case in a cool, dry place, away from direct sunlight, extreme temperatures, and high humidity. Remove batteries if storing for extended periods to prevent leakage.
- **Battery Care:** Replace batteries when the low battery indicator appears. Use only recommended battery types. Dispose of used batteries responsibly.

Troubleshooting

If you encounter issues with your Sauter SW 1000, refer to the following common problems and solutions.

Problem	Possible Cause	Solution
Device does not power on.	Low or dead batteries; power adapter not connected properly.	Replace batteries or ensure power adapter is securely connected.
Readings are inconsistent or inaccurate.	Microphone obstructed; device needs calibration; environmental interference.	Check microphone for obstructions; consider professional calibration; minimize external noise sources.
Display is blank or frozen.	Software glitch; low battery.	Try restarting the device. If issue persists, replace batteries.

Problem	Possible Cause	Solution
Cannot transfer data to PC.	Incorrect cable; driver issue; software not running.	Ensure correct USB/RS-232 cable is used; install necessary drivers; verify data transfer software is active.

If the problem persists after attempting these solutions, please contact customer support.

Specifications

Key technical specifications for the Sauter SW 1000 Sound Level Meter:

- **Brand:** Sauter
- **Model:** HKR-SW 1000
- **Manufacturer:** HKR-Welt
- **Frequency Range:** 0.003 - 20 kHz (3 Hz - 20 kHz)
- **Measurement Range:** Typically 30 dB to 130 dB (A-weighted, dependent on model variant)
- **Accuracy:** Class 1 or Class 2 (dependent on model variant, professional models are typically Class 1)
- **Time Weighting:** Fast, Slow, Impulse (common for professional meters)
- **Frequency Weighting:** A, C, Z (Linear)
- **Display:** LCD with backlight, capable of showing real-time values, statistical analysis, and frequency spectrum.
- **Data Storage:** Internal memory and MicroSD card slot.
- **Interfaces:** MiniUSB, RS-232, AC Out, DC Out, Trigger.
- **Power Supply:** Batteries (e.g., AA or AAA) or external DC power adapter.
- **ASIN:** B074X9W8F2

Warranty and Support

For warranty information, please refer to the documentation provided at the time of purchase or contact your authorized Sauter dealer or the manufacturer, HKR-Welt. Keep your proof of purchase for warranty claims.
For technical support, service, or spare parts, please contact the seller or manufacturer directly. Provide your product model number (HKR-SW 1000) and ASIN (B074X9W8F2) when seeking assistance to expedite the support process.
Manufacturer Contact Information: HKR-Welt

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