

SW-524

SW-524 Portable Sound Level Meter

INSTRUCTION MANUAL

Brand: Generic

1. INTRODUCTION

The Generic SW-524 is a digital handheld sound level meter designed for measuring sound pressure levels in various environments. It provides accurate readings within a range of 30 to 130dB, featuring A and C frequency weighting, FAST/SLOW response times, and data logging capabilities. This manual provides detailed instructions for the proper use, maintenance, and troubleshooting of your SW-524 device.





Figure 1: Front view of the SW-524 Portable Sound Level Meter.

2. SAFETY INFORMATION

- Do not attempt to disassemble or modify the device.
- Avoid exposing the device to extreme temperatures, humidity, or direct sunlight.
- Keep the device away from strong electromagnetic fields.
- Remove batteries if the device will not be used for an extended period to prevent leakage.
- Use only the specified battery type (3x 1.5V AAA).

3. PRODUCT OVERVIEW

3.1 Device Components



Figure 2: Labeled components and dimensions of the SW-524.

1. **Sponge Ball:** Windscreen to reduce wind noise interference.
2. **Condenser Microphone Sensor:** Captures sound waves.
3. **Double Injection Molding Case:** Durable housing for the device.
4. **1.62 inch Display:** Digital screen for displaying measurements and settings.
5. **Area Measurement Key (MAX/MIN):** Toggles between maximum and minimum value hold.
6. **A/C Right Key (A/C):** Selects A or C frequency weighting.
7. **Response Time Selection Key (FAST/SLOW):** Switches between fast and slow response times.
8. **Power Switch Key:** Turns the device on or off.
9. **Length Measurement Key (Up/Down Arrows):** Used for navigation or setting parameters.
10. **Backlit Display Key (Light Bulb):** Toggles the display backlight.

3.2 Display Interface

HD Backlit Display

1.62-inch high-definition energy-saving screen, backlight and light are clear



Figure 3: High-definition backlit display showing a sound level reading.

The 1.62-inch HD backlit display shows the current sound pressure level (SPL) in decibels (dB), along with indicators for selected frequency weighting (A or C), response time (FAST or SLOW), and MAX/MIN hold status. A dynamic scale also provides a visual representation of the sound level.

4. SETUP

4.1 Battery Installation

The SW-524 requires three 1.5V AAA batteries (not included). To install:

1. Locate the battery compartment cover on the back of the device.
2. Slide or unclip the cover to open.
3. Insert three AAA batteries, ensuring correct polarity (+/-) as indicated inside the compartment.
4. Replace the battery compartment cover securely.

4.2 Powering On/Off

Press the **Power Switch Key** (red button with power symbol) to turn the device on. Press and hold the same button for a few seconds to turn the device off.

5. OPERATING INSTRUCTIONS

5.1 Basic Measurement

Once powered on, the device will immediately begin measuring sound levels. The current sound pressure level will be displayed on the screen in decibels (dB).

5.2 MAX/MIN Hold Function

Press the **MAX/MIN** button to cycle through:

- **MAX:** Displays the maximum sound level recorded since the function was activated.
- **MIN:** Displays the minimum sound level recorded since the function was activated.
- **Normal:** Returns to real-time measurement.

5.3 A/C Frequency Weighting

Press the **A/C** button to select the desired frequency weighting:

- **A-weighting:** Simulates the human ear's response to sound, commonly used for environmental noise measurements.
- **C-weighting:** Provides a flatter response, suitable for measuring peak sound levels or noise from machinery.

5.4 FAST/SLOW Response Time

Press the **FAST/SLOW** button to select the response time:

- **FAST:** (125ms) Captures rapid changes in sound level.
- **SLOW:** (1 second) Provides an averaged reading, suitable for stable noise sources.

5.5 Backlight Control

Press the **Light Bulb** button to turn the display backlight on or off, improving visibility in low-light conditions.

5.6 Data Logging and PC Communication (SW-524 Only)

The SW-524 model includes advanced features for data logging and computer communication:

- **Memory Function:** The device can continuously store data at 1-second intervals for up to 17 hours.
- **Time Display:** The SW-524 can display the current time.
- **PC Communication:** Connect the device to a computer via the MicroUSB port to download stored data, perform real-time sampling, and print reports using compatible software.

USB cable connection to computer communication

Supports downloading and storing records, real-time sampling, printing icons and data (SW-524 only)



Figure 4: USB connection for data transfer and real-time monitoring on a computer.

5.7 Alarm Function (SW-524 Only)

The SW-524 allows you to set a high limit alarm. If the measured sound level exceeds this preset limit, the device will provide an alert. Refer to the device's on-screen menu or accompanying software for specific instructions on setting the alarm threshold.

5.8 AC/DC Signal Output

The device features dual analog signal outputs (AC and DC) to connect to external recording devices, data loggers, or analyzers.

- **DC Output:** 10mV/dB, output impedance approx. 100Ωhm.
- **AC Output:** 0.65Vrms/full scale per gear, output impedance approx. 600Ωhm.

Dual analog signal output

Dual analog signal output to meet your various needs



Figure 5: AC and DC analog signal output ports.

6. MAINTENANCE

6.1 Cleaning

Wipe the device with a soft, dry cloth. Do not use abrasive cleaners or solvents. Ensure the microphone and sponge ball are kept clean and free from dust or debris.

6.2 Storage

Store the device in a cool, dry place away from direct sunlight and extreme temperatures. If storing for an extended period, remove the batteries to prevent leakage and potential damage to the device.

7. TROUBLESHOOTING

- **Device does not power on:** Check battery installation and ensure batteries are not depleted. Replace if

necessary.

- **Inaccurate readings:** Ensure the microphone is clean and unobstructed. Check for strong electromagnetic interference.
- **Display is dim or unreadable:** Activate the backlight function. If batteries are low, replace them.
- **No data transfer to PC:** Ensure the USB cable is securely connected and the correct software/drivers are installed on your computer.

8. SPECIFICATIONS



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| SW-523 | SW-524 |
| Accuracy: $\pm 1.5\text{dB}$ Frequency response: 31.5Hz~8.5KHz AC, DC signal output Measurement range: 30~130dB A rights and C rights Resolution 0.1dB, The sampling frequency is 2 times/second 6mm condenser microphone Battery: 3x1.5VAAA | Accuracy: $\pm 1.5\text{dB}$ Frequency response: 31.5Hz~8.5KHz AC, DC signal output Measurement range: 30~130dB A rights and C rights Resolution 0.1dB, The sampling frequency is 2 times/second 6mm condenser microphone Battery: 3x1.5VAAA <ul style="list-style-type: none">● USB cable connection to computer communication● data storage● time display● Alarm upper limit can be set |

Figure 6: Comparison of key specifications between SW-523 and SW-524 models.

| Feature | Specification (SW-524) |
|--------------------------------|---|
| Measuring Range | 30~130dB |
| Accuracy | ±1.5dB |
| Frequency Response | 31.5Hz~8.5KHz |
| Dynamic Range | 50dB |
| Frequency Weighting | A weighting and C weighting |
| Digital Display | 4 digits, resolution 0.1dB, sampling frequency 3 times/second |
| Dynamic Scale Display | 30-130dB (1 scale represents 2dB or 1dB) |
| Overload Indication | Over/UNDER symbol |
| AC Signal Output | Yes |
| DC Signal Output | Yes |
| Response Time | FAST and SLOW |
| Microphone | 6mm condenser microphone |
| Battery | 3x 1.5V AAA (not included) |
| Working Temperature & Humidity | 0~40°C, 10~80%RH |
| Storage Temperature & Humidity | -10~60°C, 10~70%RH |
| Time Display | Yes |
| Memory Function | 1 time/second, continuous storage for 17 hours |
| Communication with Computer | Via MicroUSB |
| Alarm Function | High limit alarm can be set |
| Dimensions | 215mm x 63.5mm x 27mm |
| ASIN | B0FMKBFD2G |
| Manufacturer | Generic |

9. WARRANTY INFORMATION

This product is covered by a standard manufacturer's warranty against defects in materials and workmanship. The warranty period typically begins from the date of purchase. Please retain your proof of purchase for any warranty claims. For specific warranty terms and conditions, refer to the documentation provided with your purchase or contact customer support.

10. CUSTOMER SUPPORT

If you encounter any issues or have questions regarding your Generic SW-524 Portable Sound Level Meter that are not addressed in this manual, please contact our customer support team. You can typically find contact information on the product packaging, the seller's website, or through your purchase platform.