Sndway SW-M80

SNDWAY SW-M80 Digital Laser Rangefinder User Manual

Model: SW-M80

1. Introduction

The SNDWAY SW-M80 Digital Laser Rangefinder is a precision instrument designed for quick and accurate measurement of distances, areas, and volumes. Utilizing advanced laser technology, this device offers reliable performance for various applications, from home renovation to professional construction. This manual provides essential information for the safe and effective operation, setup, and maintenance of your device.



Figure 1: SNDWAY SW-M80 Digital Laser Rangefinder

2. Safety Information

WARNING: Laser Radiation

- This device emits Class II laser radiation. Do not stare directly into the laser beam. Avoid direct eye exposure.
- The laser output is <1mW at 635nm.
- Do not disassemble or modify the device. Unauthorized modifications can result in hazardous laser exposure.
- Keep the device out of reach of children.

- Operate the device only in accordance with the instructions provided in this manual.
- The device has an International Protection Rating of IP54, meaning it is protected against dust ingress and splashing water from any direction. However, it is not waterproof and should not be submerged.

3. Package Contents

Upon opening the package, please verify that all items listed below are present and in good condition:

- 1 x Laser Distance Meter (SNDWAY SW-M80)
- 1 x Pouch bag
- 1 x Holding Rope



Figure 2: Package contents including the device, pouch, and holding rope

4. Product Overview

Familiarize yourself with the components and display elements of your SW-M80 Laser Rangefinder:

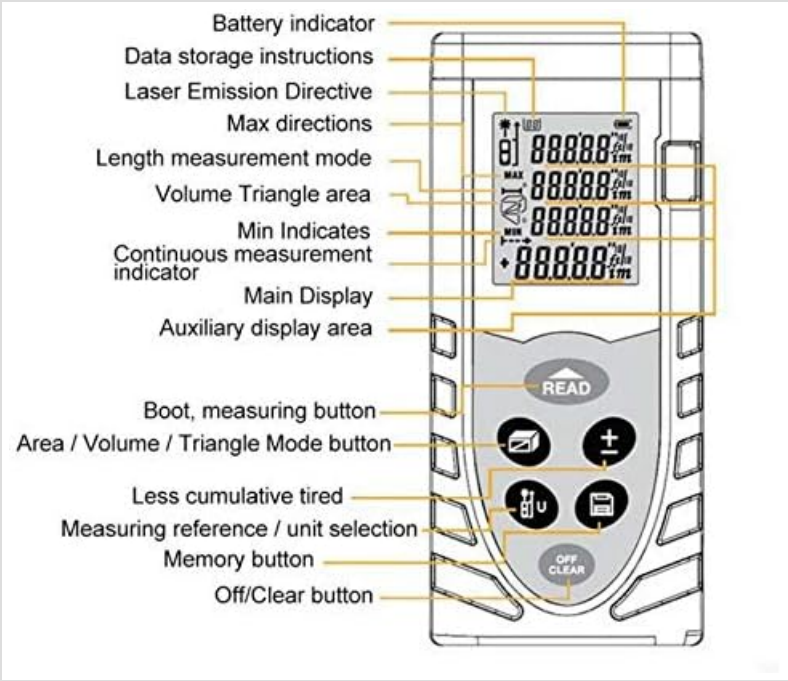


Figure 3: SW-M80 Device Components and Display Layout

4.1. Display Elements

- **Battery indicator:** Shows current battery level.
- **Data storage instructions:** Indicates memory status.
- **Laser Emission Directive:** Icon indicating laser is active.
- **Max directions:** Displays maximum measured value in continuous measurement.
- **Length measurement mode:** Icon for single distance measurement.
- **Volume Triangle area:** Icon for volume or triangle area measurement.
- **Min Indicates:** Displays minimum measured value in continuous measurement.
- **Continuous measurement indicator:** Icon for continuous measurement mode.
- **Main Display:** Shows the primary measurement result.
- **Auxiliary display area:** Shows previous measurements or calculated values.

4.2. Buttons

- **Boot, measuring button (READ):** Powers on the device and initiates measurement.
- **Area / Volume / Triangle Mode button:** Cycles through area, volume, and indirect measurement modes.
- **Less cumulative tired (+/-):** Used for addition and subtraction of measurements.
- **Measuring reference / unit selection (U):** Changes the measurement reference point (front/rear) and switches units (m/in/ft).
- **Memory button:** Accesses stored data records.
- **Off/Clear button:** Powers off the device or clears the current measurement.

5. Setup

5.1. Battery Installation

1. Locate the battery compartment cover on the back of the device.

2. Slide the cover open.
3. Insert two (2) 1.5V AAA batteries, ensuring correct polarity (+/-). Batteries are not included in the package.
4. Close the battery compartment cover securely.

5.2. Powering On/Off

- **To Power On:** Press the **READ** button.
- **To Power Off:** Press and hold the **OFF/CLEAR** button for a few seconds. The device will also automatically power off after 150 seconds of inactivity. The laser will automatically cut off after 30 seconds of inactivity.

6. Operating Instructions

6.1. Single Distance Measurement

1. Power on the device by pressing **READ**.
2. Point the laser at the target.
3. Press **READ** again to take a measurement. The result will be displayed on the main screen.

6.2. Area Measurement

1. Press the **Area / Volume / Triangle Mode** button once to enter Area mode (indicated by a square icon).
2. Measure the first side (e.g., length) by pressing **READ**.
3. Measure the second side (e.g., width) by pressing **READ** again.
4. The device will automatically calculate and display the area.

6.3. Volume Measurement

1. Press the **Area / Volume / Triangle Mode** button twice to enter Volume mode (indicated by a cube icon).
2. Measure the length, then the width, then the height, pressing **READ** after each measurement.
3. The device will automatically calculate and display the volume.

6.4. Indirect Measurement (Pythagorean Theorem)

This mode allows measurement of inaccessible heights or distances using the Pythagorean theorem.

1. Press the **Area / Volume / Triangle Mode** button three or four times to select the desired Pythagorean mode (e.g., single Pythagorean, double Pythagorean). The display will show a diagram indicating the required measurements.
2. Follow the on-screen prompts to measure the necessary sides (hypotenuse, base).
3. The device will calculate and display the unknown side.

6.5. Continuous Measurement (Tracking)

This mode allows for dynamic measurement, displaying minimum, maximum, and current distances as you move the device.

1. From single measurement mode, press and hold the **READ** button.
2. The device will continuously measure and display the current distance, along with the minimum and maximum distances recorded during the session.

3. Press **READ** again to stop continuous measurement.

6.6. Addition and Subtraction of Measurements

- After taking a measurement, press the **+/-** button to enter addition or subtraction mode.
- Take another measurement. The device will add or subtract it from the previous value.
- Repeat as needed.

6.7. Unit Switching and Reference Point

- **Unit Switching:** Press the **U** button to cycle through measurement units: meters (m), inches (in), and feet (ft).
- **Reference Point:** Press and hold the **U** button to switch the measurement reference point between the front edge and the rear edge of the device. An icon on the display will indicate the active reference point.

6.8. Data Records

The device can store up to 99 data records.

- Press the **Memory** button to view stored measurements.
- Use the arrow buttons (if available, or cycle through with Memory button) to navigate through the records.

6.9. Bubble Level

The integrated bubble level assists in ensuring the device is held horizontally for more accurate measurements, particularly for long distances or when using indirect measurement functions.

7. Maintenance

7.1. Cleaning

- Use a soft, damp cloth to clean the device casing. Do not use abrasive cleaners or solvents.
- For the lens, use a clean, lint-free cloth specifically designed for optical lenses.

7.2. Battery Replacement

When the low battery indicator appears on the display, replace the batteries promptly to ensure accurate operation. Refer to Section 5.1 for battery installation instructions.

7.3. Storage

- Store the device in its pouch bag when not in use.
- Store in a dry place, away from direct sunlight and extreme temperatures. The recommended storage temperature is -20 °C to 60 °C (-4 °F to 140 °F).
- Remove batteries if the device will not be used for an extended period to prevent leakage.

8. Troubleshooting

The SW-M80 features auto-correction and error reporting technology. If you encounter issues, consider the following:

Problem	Possible Cause	Solution
Device does not power on	Dead or incorrectly installed batteries	Replace batteries, ensure correct polarity.
Measurement error / Inaccurate readings	Target surface too reflective/absorbent; Obstruction in laser path; Device not stable; Out of range	Use a target plate for difficult surfaces; Clear path; Hold device steady; Ensure target is within 80m range.
Display shows "Error"	Internal error or measurement outside limits	Restart the device. If persistent, contact support.
Laser not visible	Laser auto-off; Bright ambient light	Press READ to reactivate laser; Use in less bright conditions or closer to target.

9. Specifications

Feature	Specification
Measuring Range	0.05m - 80m (0.16ft - 197ft)
Accuracy	±1.5mm (±0.06 inch)
Laser Class	Class II
Laser Type	635nm, <1mW
Data Records	99 records
Operating Temperature	0 ~ 40 °C (32 ~ 104 °F)
Storage Temperature	-20 ~ 60 °C (-4 ~ 140 °F)
Auto Power Off	After 150 seconds of inactivity
Auto Laser Cut Off	After 30 seconds of inactivity
Power Supply	2 x 1.5V AAA batteries (Alkaline recommended)
International Protection Rating	IP54
Manufacturer	SNDWAY

10. Warranty and Support

For warranty information and customer support, please refer to the documentation provided at the time of purchase or visit the official SNDWAY website. Keep your purchase receipt as proof of purchase for warranty claims.

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