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SNDWAY SW-DM80

SNDWAY SW-DM80 Laser Distance Meter User Manual

Model: SW-DM80

1. PRODUCT OVERVIEW

The SNDWAY SW-DM80 is a professional laser distance meter designed for accurate and efficient measurement of distances, areas, and volumes. It features an 80-meter measurement range, incline measurement capabilities, Pythagorean theorem functions for indirect measurements, and storage for up to 30 readings. This device is ideal for various applications, providing reliable data with ease of use.





Figure 1: Front view of the SNDWAY SW-DM80 Laser Distance Meter, showing the display and control buttons.

2. SAFETY INFORMATION

Please read and understand all safety instructions before operating the device. Failure to follow these instructions may result in laser radiation exposure, electric shock, or personal injury.

- This device is a Class II laser product. Do not stare directly into the laser beam.
- Do not aim the laser beam at people or animals.
- Do not disassemble or modify the device. Repairs should only be performed by authorized service personnel.
- Keep the device out of reach of children.
- Avoid using the device in explosive environments or near flammable materials.
- The laser output is $P \leq 1\text{mW}$ with a wavelength of 630-670nm.



Figure 2: Back view of the device, highlighting the battery compartment and laser safety label.

3. DEVICE COMPONENTS

Familiarize yourself with the main parts of your SW-DM80 laser distance meter:

1. **Laser Emitting/Receiving Lens:** Located at the top of the device, used for sending and receiving laser signals.
2. **Display Screen:** Multi-line LCD for showing measurements, modes, battery status, and other information.
3. **READ Button:** Activates the laser and initiates measurements.
4. **OFF/CLEAR Button:** Powers the device off or clears the current measurement/selection.
5. **Plus (+) Button:** Used for addition in calculations or navigating menus.
6. **Minus (-) Button:** Used for subtraction in calculations or navigating menus.
7. **Unit Button:** Changes measurement units (meters, feet, inches).
8. **Memory/History Button:** Accesses stored measurement data.
9. **Function Button:** Cycles through various measurement modes (Area, Volume, Pythagorean, Incline).
10. **Reference Point Button:** Switches the measurement reference point (front or rear of the device).
11. **Battery Compartment:** Located on the back for inserting AAA batteries.

4. BATTERY INSTALLATION

The SW-DM80 requires two (2) 1.5V AAA alkaline batteries for operation.

1. Locate the battery compartment cover on the back of the device.
2. Gently slide or unclip the cover to open the compartment.
3. Insert two AAA batteries, ensuring correct polarity (+ and -) as indicated inside the compartment.
4. Close the battery compartment cover securely until it clicks into place.

Note: Remove batteries if the device will not be used for an extended period to prevent leakage and damage.

5. BASIC OPERATION

5.1 Powering On/Off

- **To Power On:** Press the **READ** button once. The laser will activate, and the display will light up.
- **To Power Off:** Press and hold the **OFF/CLEAR** button for approximately 3 seconds. The device will automatically power off after 150 seconds of inactivity to conserve battery life.

5.2 Single Distance Measurement

1. Ensure the device is powered on and in single distance measurement mode (default mode).
2. Aim the laser beam at the target point.
3. Press the **READ** button once. The measured distance will be displayed on the screen.

6. MEASUREMENT MODES

Press the **Function** button repeatedly to cycle through the available measurement modes.

6.1 Continuous Measurement (Tracking)

This mode allows for real-time distance updates as you move the device. It is useful for finding minimum and maximum distances or for layout tasks.

1. Select continuous measurement mode.
2. Press **READ** once to start. The display will continuously update with the current distance.
3. Press **READ** again to stop the continuous measurement.

6.2 Area Measurement

To calculate the area of a rectangular space:

1. Select area measurement mode.
2. Measure the first side (length) by pressing **READ**.
3. Measure the second side (width) by pressing **READ**.
4. The device will automatically calculate and display the area.

6.3 Volume Measurement

To calculate the volume of a rectangular space:

1. Select volume measurement mode.
2. Measure the length, width, and height sequentially by pressing **READ** after each measurement.
3. The device will automatically calculate and display the volume.

6.4 Pythagorean Measurement (Indirect Measurement)

This mode uses the Pythagorean theorem to calculate inaccessible distances (e.g., height of a building) by measuring two or three other sides of a right-angled triangle.

1. Select the desired Pythagorean mode (e.g., two-point or three-point). The display will show a diagram indicating which sides to measure.
2. Follow the on-screen prompts to measure the required distances (hypotenuse, base, etc.).
3. The device will calculate and display the indirect measurement.

6.5 Incline Measurement

The built-in tilt sensor allows for measuring angles of inclination.

1. Select incline measurement mode.
2. Place the device on the surface or hold it against the object whose incline you wish to measure.
3. The angle of inclination will be displayed on the screen.



Figure 3: The device display showing multiple measurement lines, indicating various functions and data storage.

7. SETTINGS AND MEMORY

7.1 Unit Switching

Press the **Unit** button to cycle through measurement units: meters (m), feet (ft), and inches (in).

7.2 Reference Point

The device can measure from its front edge or its rear edge. Press the **Reference Point** button to switch between these two options. An icon on the display will indicate the current reference point.

7.3 Data Storage (Memory)

The SW-DM80 can store up to 30 measurement readings.

1. Press the **Memory/History** button to view stored data.
2. Use the **+** and **-** buttons to scroll through the stored readings.
3. Press the **OFF/CLEAR** button to exit memory mode.

8. MAINTENANCE

- **Cleaning:** Use a soft, damp cloth to clean the device. Do not use abrasive cleaners or solvents. Clean the laser lens carefully with a soft cloth, similar to cleaning camera lenses.
- **Storage:** Store the device in a cool, dry place, away from direct sunlight and extreme temperatures. If storing for a long period, remove the batteries.
- **Battery Care:** Replace batteries when the low battery indicator appears on the display. Dispose of used batteries responsibly.
- **Avoid Impact:** Protect the device from drops and strong impacts, which can affect its accuracy and functionality.

9. TROUBLESHOOTING

Problem	Possible Cause	Solution
Device does not power on	Dead or incorrectly inserted batteries.	Replace batteries with new AAA alkaline batteries. Ensure correct polarity.
"Error" message on display	Measurement out of range, laser beam obstructed, or strong light interference.	Ensure target is within 0.05m-80m range. Clear any obstructions. Measure in a less bright environment or use a reflective target.
Inaccurate measurements	Unstable measurement surface, dirty laser lens, or incorrect reference point.	Ensure device is stable. Clean the laser lens. Verify the correct reference point is selected.
Laser beam not visible	Bright ambient light or laser not activated.	Use in lower light conditions. Press the READ button to activate the laser.

10. SPECIFICATIONS

Parameter	Value
Measurement Range	0.05 - 80 meters
Measurement Accuracy	±2mm (typical)
Measurement Units	m / ft / in
Laser Class	Class II
Laser Type	630-670nm, <1mW
Data Storage	30 readings

Parameter	Value
Automatic Laser Off	30 seconds
Automatic Power Off	150 seconds
Battery Type	2 x 1.5V AAA Alkaline
Operating Temperature	0°C to 40°C (32°F to 104°F)
Storage Temperature	-20°C to 60°C (-4°F to 140°F)
Dimensions	16.4 x 8.6 x 5 cm
Weight	190 grams (without batteries)

11. WARRANTY AND SUPPORT

The SNDWAY SW-DM80 Laser Distance Meter comes with a standard manufacturer's warranty. For specific warranty terms and conditions, please refer to the documentation included with your purchase or contact the seller directly.

For technical support, troubleshooting assistance, or service inquiries, please contact your retailer or the official SNDWAY customer service. Keep your purchase receipt as proof of purchase for warranty claims.

You can often find additional resources, FAQs, and contact information on the manufacturer's official website.