POPOMAN MTM120B

POPOMAN MTM120B Laser Distance Meter 50m User Manual

Comprehensive instructions for setup, operation, maintenance, and troubleshooting.

1. INTRODUCTION

Thank you for choosing the POPOMAN MTM120B Laser Distance Meter. This device is designed for precise and efficient distance measurements, offering various functions including area, volume, and Pythagorean calculations. It features a USB rechargeable battery, a clear LCD with backlight, and data storage capabilities. Please read this manual thoroughly before using the device to ensure safe and optimal performance.

2. SAFETY INSTRUCTIONS

To prevent injury and damage to the device, observe the following safety precautions:

- **Laser Safety:** This product emits a Class 2 laser. Do not stare directly into the laser beam or point it at other people. Avoid direct eye exposure.
- Do not disassemble or modify the device. Repairs should only be performed by authorized service personnel.
- Keep the device out of reach of children.
- Do not use the device in explosive environments or near flammable materials.
- Protect the device from extreme temperatures, moisture, and strong vibrations.
- Ensure the measurement surface is suitable for laser reflection; highly reflective or transparent surfaces may affect accuracy.

3. PACKAGE CONTENTS

Verify that all items are present in the package:

- 1 x POPOMAN MTM120B Laser Distance Meter
- 1 x USB Charging Cable
- 1 x User Manual
- 1 x Reflective Plate (Laser Target)
- 1 x Portable Pouch
- 1 x Hand Strap

Figure 3.1: Contents of the POPOMAN MTM120B package, including the laser distance meter, USB cable, user manual, laser target, portable pouch, and hand strap.

4. PRODUCT OVERVIEW

Familiarize yourself with the components and controls of your POPOMAN MTM120B Laser Distance Meter.

Figure 4.1: Front view of the POPOMAN MTM120B Laser Distance Meter with key components labeled.

4.1. Device Components

- **Laser On:** Indicates when the laser is active.
- **Power Supply:** Battery level indicator.
- **Angle:** Displays the current tilt angle (Electronic Angle Sensor).
- **Display:** LCD screen showing measurements, modes, and settings.
- **Turn on** / **Measuring (READ button):** Powers on the device, activates the laser, and initiates measurements.
- **Subtraction** / **Sound button:** Used for subtraction calculations and toggling sound on/off.
- **Addition button:** Used for addition calculations.
- **Area** / **Volume** / **Pythagorean Measuring (FUNC button):** Cycles through different measurement modes.
- **Reference Point** / **Unit Switch button:** Changes the measurement reference point (front/rear) and switches measurement units (m/in/ft/ft+in).
- **Save button:** Stores current measurement data.
- **Turn off** / **Remove (OFF CLEAR button):** Powers off the device or clears the current measurement.

5. SETUP

5.1. Charging the Battery

The POPOMAN MTM120B features a built-in rechargeable lithium battery. Before first use, fully charge the device.

1. Locate the USB charging port on the side of the device.
2. Connect the provided USB charging cable to the device and to a standard USB power source (e.g., laptop, power bank, AC adapter, car charger).
3. The battery indicator on the display will show charging status. A full charge typically takes approximately 30 minutes and provides power for up to 8,000 measurements.
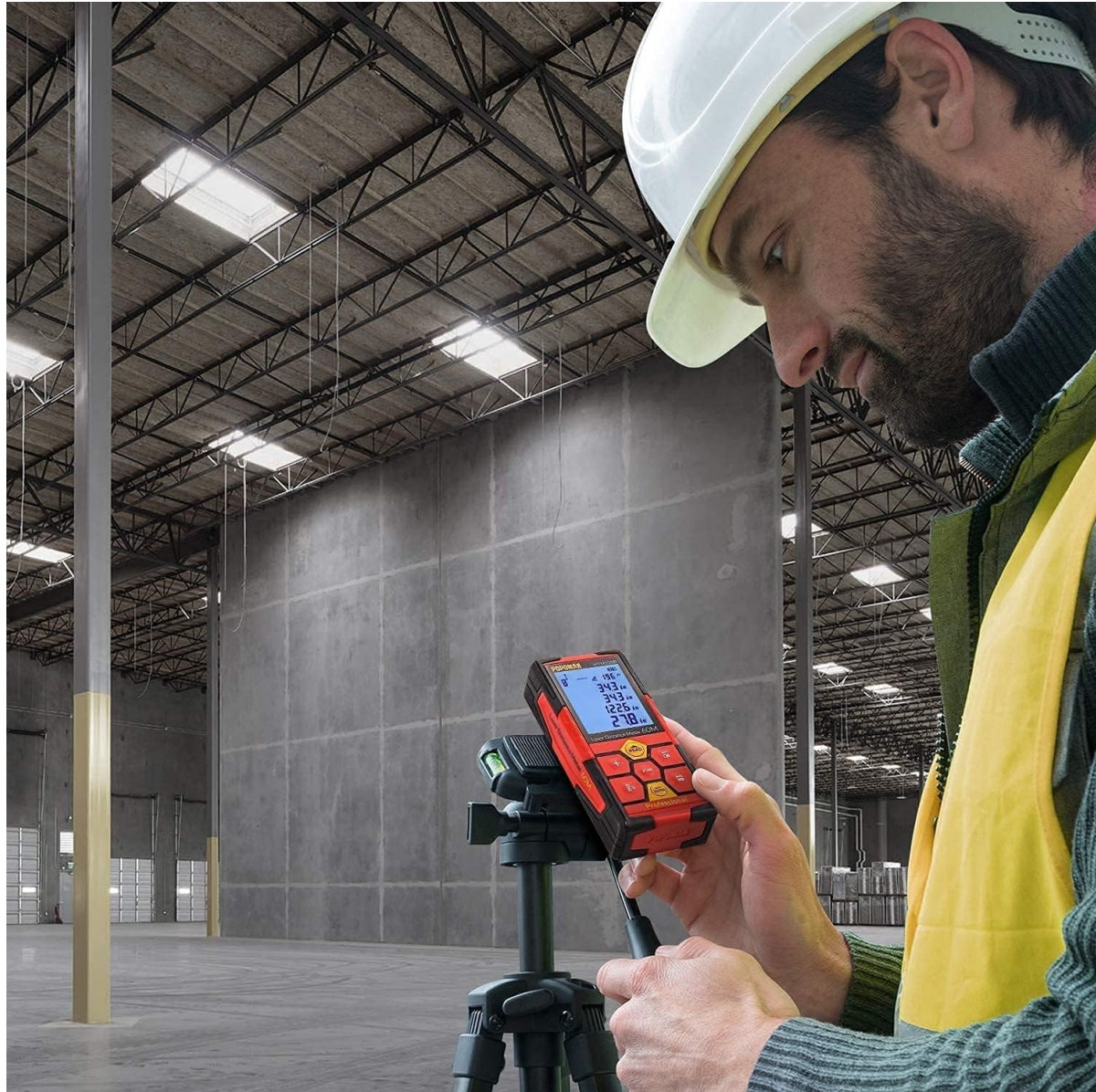

Figure 5.1: Various methods for charging the POPOMAN MTM120B, including laptop, power bank, AC adapter, and car charger.

5.2. Powering On/Off

- **To Power On:** Press the **READ** button. The display will light up.
- **To Power Off:** Press and hold the **OFF CLEAR** button for a few seconds. The device will also automatically power off after a period of inactivity to conserve battery.

6. OPERATING INSTRUCTIONS

6.1. Basic Measurement

1. Press the **READ** button once to activate the laser. A red laser dot will appear.

2. Aim the laser dot at the target point.

3. Press the **READ** button again to take a single measurement. The measured distance will be displayed on the screen.

6.2. Changing Measurement Units

Press the **Reference Point** / **Unit Switch** button repeatedly to cycle through available units: meters (m), inches (in), feet (ft), and feet + inches (ft+in).

6.3. Changing Reference Point

The device can measure from its front edge or its rear edge. Press and hold the **Reference Point** / **Unit Switch** button to toggle between front and rear reference points. An icon on the display will indicate the active reference point.

6.4. Continuous Measurement (Tracking)

In continuous measurement mode, the device constantly updates the distance as you move it.

1. From standby, press and hold the **READ** button until "MIN/MAX" appears on the display.

2. Move the device slowly. The display will show the current distance, as well as the minimum and maximum distances recorded during the session.

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

6.5. Area Measurement

1. Press the **FUNC** button once until the area icon (a square) appears on the display.

2. Measure the first side (e.g., length) by pressing **READ**.

3. Measure the second side (e.g., width) by pressing **READ**.

4. The calculated area will be displayed.

6.6. Volume Measurement

1. Press the **FUNC** button twice until the volume icon (a cube) appears on the display.

2. Measure the length by pressing **READ**.

3. Measure the width by pressing **READ**.

4. Measure the height by pressing **READ**.

5. The calculated volume will be displayed.

6.7. Pythagorean Measurement (Indirect Measurement)

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

1. Press the **FUNC** button three or four times until a Pythagorean icon appears (e.g., a triangle with one side flashing).

2. Follow the on-screen prompts to measure the required sides of the triangle (e.g., hypotenuse, base).

3. The device will calculate and display the unknown side.

6.8. Addition and Subtraction

After taking a measurement, you can add or subtract subsequent measurements.

- Take a first measurement.

- Press the **+** button for addition or the **-** button for subtraction.

- Take the next measurement. The result will be added to or subtracted from the previous total.
- Repeat as needed. Press **READ** to finalize the calculation.

6.9. Electronic Angle Sensor

The device features an electronic angle sensor that displays the tilt angle in real-time on the screen, useful for leveling or specific indirect measurements.

Figure 6.1: The device display indicating the real-time electronic angle measurement.

6.10. Data Storage (Memory)

The POPOMAN MTM120B can store up to 99 sets of measurement data.

- After a measurement is displayed, press the **Save** button to store it.
- To recall stored data, press and hold the **Save** button. Use the **+** and **-** buttons to navigate through the stored records.
- To exit memory view, press the **OFF CLEAR** button.

Figure 6.2: The device display showing multiple stored measurement data sets, indicating the 99-set memory feature.

6.11. Mute Mode

To operate the device silently, press the **Subtraction / Sound** button to toggle the sound on or off. This is useful in quiet environments.

7. MAINTENANCE

- **Cleaning:** Use a soft, damp cloth to clean the device. Do not use abrasive cleaners or solvents. Pay special attention to keeping the laser lens clean.
- **Storage:** Store the device in its portable pouch in a cool, dry place when not in use. Avoid direct sunlight and extreme temperatures.
- **Battery Care:** Although the device has a built-in lithium battery, it is recommended to charge it periodically if not used for extended periods to maintain battery health.
- The device has an IP54 rating, meaning it is protected against dust ingress and splashing water from any direction. However, it is not waterproof and should not be submerged.

8. TROUBLESHOOTING

If you encounter issues with your POPOMAN MTM120B, refer to the table below for common problems and solutions.

Problem	Possible Cause	Solution
Device does not power on.	Low battery.	Charge the device using the provided USB cable.
Inaccurate measurements.	Laser lens is dirty. Measurement surface is too reflective, transparent, or absorbent. Device is not stable during measurement. Environmental factors (e.g., strong light, fog).	Clean the laser lens with a soft cloth. Use the reflective plate for difficult surfaces. Ensure the device is stable or use a tripod. Measure in more favorable conditions.
Display is dim or unreadable.	Low battery or strong ambient light.	Charge the device. Move to an area with less direct sunlight.
No sound feedback.	Mute mode is active.	Press the **Subtraction** / **Sound** button to toggle sound on.

9. SPECIFICATIONS

Model	POPOMAN MTM120B
Measurement Range	0.05 m to 50 m
Accuracy	± 2.0 mm
Measurement Units	m / in / ft / ft+in
Laser Class	Class 2
International Protection (IP) Rating	IP54 (Dust and splash water protected)
Display	2.25-inch LCD with backlight
Data Memory	99 sets
Battery Type	Rechargeable Lithium Battery
Charging Time	Approx. 30 minutes (for full charge)
Battery Life	Approx. 8,000 measurements per charge
Automatic Laser Shut-off	30 seconds (approx.)
Automatic Device Shut-off	180 seconds (approx.)
Product Dimensions	11.7 x 5.2 x 2.6 cm
Product Weight	260 g
Tripod Thread	1/4 inch

10. WARRANTY AND SUPPORT

10.1. Warranty Information

The POPOMAN MTM120B Laser Distance Meter comes with a **24-month quality commitment** from the date of purchase. This warranty covers manufacturing defects and ensures the product meets its specified performance standards under normal use.

The warranty does not cover damage caused by misuse, unauthorized modification, accidents, or normal wear and tear.

10.2. Customer Support

If you have any questions, require technical assistance, or need to claim warranty service, please contact POPOMAN customer support. Refer to the contact information provided on the product packaging or the official POPOMAN website for the most up-to-date support channels.