

BTMETER BT-980D

BTMETER BT-980D Infrared Thermometer User Manual

Model: BT-980D

1. INTRODUCTION

The BTMETER BT-980D is a non-contact infrared thermometer designed for safe and accurate temperature measurement. It features a wide temperature range, high precision, and a user-friendly interface. This device is suitable for various applications including industrial maintenance, electrical inspection, and household tasks. **Note: This device is not intended for measuring human body temperature.**

2. SAFETY INFORMATION

- Do not point the laser directly at eyes or indirectly off reflective surfaces.
- Do not use the thermometer for purposes other than its intended use.
- Keep the device away from children.
- Do not expose the device to extreme temperatures, humidity, or direct sunlight.
- Always replace the battery with the correct type (9V).

3. PRODUCT OVERVIEW

Familiarize yourself with the components of your BTMETER BT-980D infrared thermometer.



Figure 3.1: Labeled components of the BTMETER BT-980D Infrared Thermometer, including the laser to aim, thermometer probe, trigger, battery indicator, data hold, measure reading, emissivity, laser pointer on/off, MAX/MIN/AVG display, and alarm for Hi/Lo Temp.

- **Laser to Aim:** Guides the measurement target.
- **Thermometer Probe:** Infrared sensor for temperature detection.
- **Trigger:** Activates measurement and laser.
- **LCD Display:** Shows temperature readings, mode, and battery status.
- **Mode Button:** Cycles through measurement modes (MAX/MIN/AVG/DIFF).
- **Up/Down Buttons:** Adjust emissivity and alarm thresholds.
- **Set Button:** Confirms settings.
- **Battery Cover:** Access for 9V battery installation.

4. SETUP

4.1 Battery Installation

The BT-980D requires one 9V battery (included). To install or replace the battery:

1. Open the battery cover located at the bottom of the handle.
2. Connect a 9V battery to the battery connector, ensuring correct polarity.
3. Place the battery into the compartment and close the battery cover securely.

HIGH PRECISE WITH ADJUSTABLE EMISSIVITY

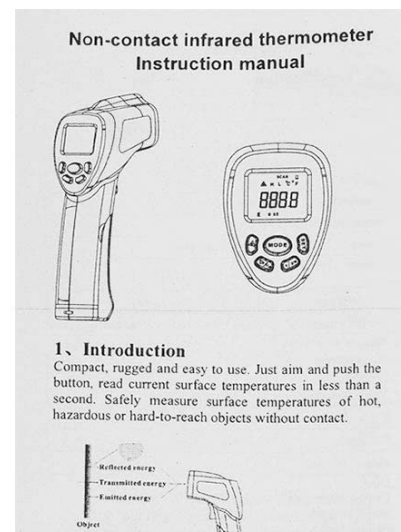
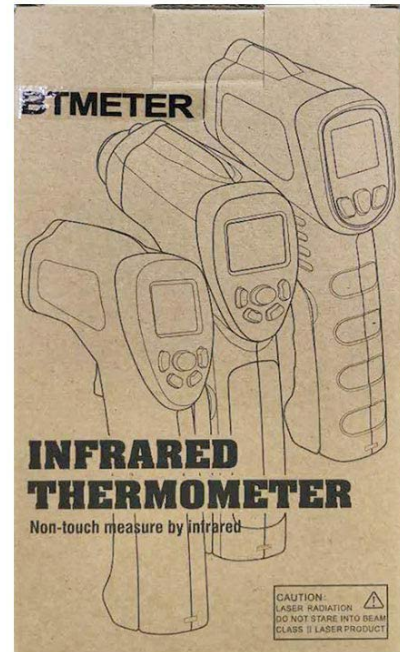


Figure 4.1: The BTMETER BT-980D thermometer, a 9V battery, and the included instruction manual, illustrating the components provided.

5. OPERATING INSTRUCTIONS

5.1 Basic Measurement

To take a temperature reading:

1. Point the thermometer at the target object.
2. Press and hold the trigger. The laser pointer will activate, and the temperature reading will appear on the LCD screen instantly.

3. Release the trigger. The measured data will automatically hold on the display for 7 seconds, allowing you to record the reading.

Press, Scan & Lock

Press the trigger, temp reading shows on LCD screen instantly
Release the trigger, automatically hold the reading for easy recording



Figure 5.1: Illustration of the 'Press, Scan & Lock' function, demonstrating how to hold the trigger for scanning and release for data hold.

5.2 High/Low Temperature Alarm

The device can alert you if the measured temperature exceeds or falls below a set threshold.

1. Press the "MODE" button until "HAL" (High Alarm) or "LAL" (Low Alarm) appears on the display.
2. Use the Up/Down buttons to set your desired high or low temperature threshold.
3. Press "SET" to confirm.
4. If the measured temperature goes above the high alarm or below the low alarm, the device will emit a loud beep and the "H" or "L" indicator will flash.

HIGH / LOW TEMP ALARM

Press "MODE" to select "HAL" for high temp alarm, "HAL" for low temp alarm



HIGH TEMP ALARM

"H" display on LCD screen, means the temp has exceeded the set temp

LOW TEMP ALARM

"L" display on LCD screen, means the temp is lower than set temp



Figure 5.2: Display showing the High (H) and Low (L) temperature alarm indicators, which flash and beep when thresholds are exceeded.

5.3 Emissivity Adjustment

Emissivity (ϵ) is the ability of a material to emit energy by radiation. Different materials have different emissivity values. For accurate readings, adjust the emissivity setting (0.1 to 1.0) to match the target material.

- Press the "MODE" button until " ϵ " appears on the display.
- Use the Up/Down buttons to adjust the emissivity value.
- Press "SET" to confirm.

5.4 Distance to Spot Ratio (D:S)

The BT-980D has an 8:1 Distance to Spot Ratio. This means that at a distance of 8 units, the measurement spot diameter will be 1 unit. For example, at 8 inches from the target, the measurement spot will be 1 inch in diameter. To ensure accurate readings, make sure the target object completely fills the measurement spot.

Further measuring distance.

Keep you far away from heat and dangerous

D:S = 12:1

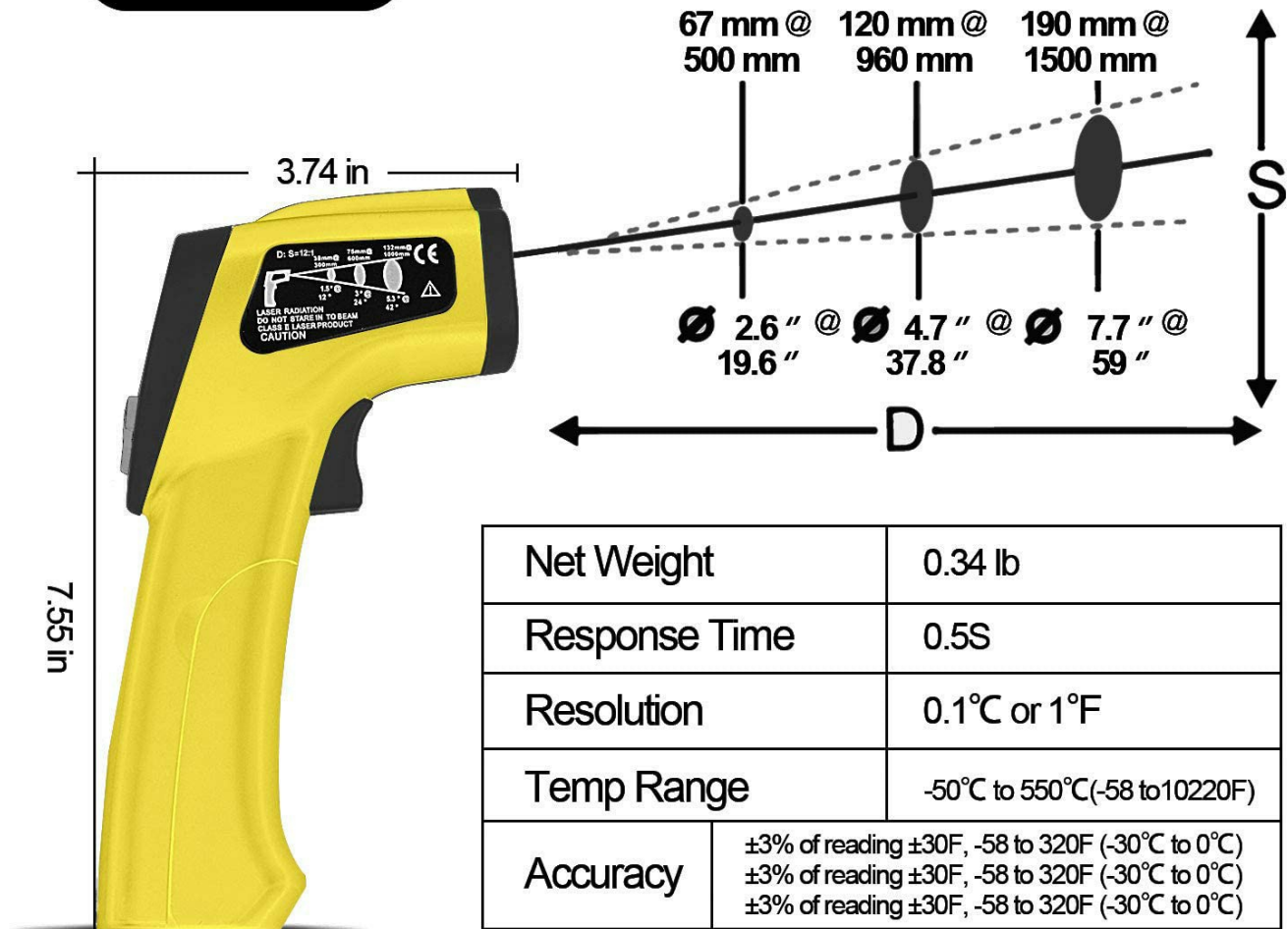


Figure 5.3: Diagram explaining the Distance to Spot (D:S) ratio, showing how the measurement spot size increases with distance from the target.

6. MAINTENANCE

6.1 Cleaning

- Clean the lens with a soft, damp cloth. Do not use abrasive cleaners or solvents.
- Wipe the casing with a damp cloth.

6.2 Battery Replacement

When the low battery indicator appears on the display, replace the 9V battery as described in Section 4.1.

6.3 Auto-Off Feature

The thermometer automatically turns off after 10 seconds of inactivity to conserve battery life.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
No display/Device won't turn on	Dead or incorrectly installed battery	Replace the 9V battery, ensuring correct polarity.
Inaccurate readings	Incorrect emissivity setting; Target too small for D:S ratio; Lens is dirty	Adjust emissivity; Ensure target fills the measurement spot; Clean the lens.
Laser not working	Laser function disabled; Device malfunction	Check settings to enable laser; If problem persists, contact support.
Alarm not sounding	Alarm thresholds not set; Alarm function disabled	Set HAL/LAL thresholds; Ensure alarm is enabled.

8. SPECIFICATIONS

Feature	Specification
Temperature Range	-50°C to 550°C (-58°F to 1022°F)
Accuracy	±2°C or ±2% (whichever is greater)
Distance to Spot Ratio (D:S)	8:1
Response Time	0.5 seconds
Emissivity	Adjustable 0.1 to 1.0
Power Source	1 x 9V Battery
Automatic Shut-off	10 seconds
Display Type	Digital
Product Dimensions	19.3 x 9.4 x 6.35 cm (7.6 x 3.7 x 2.5 inches)
Product Weight	199.58 grams (0.44 lbs)

9. WARRANTY AND SUPPORT

The BTMETER BT-980D Infrared Thermometer comes with a **365-day warranty** from the date of purchase. BTMETER is committed to providing high-quality and precise measuring instruments. For technical assistance or warranty claims, please contact BTMETER customer support. We offer lifetime technical support for our products.

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Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

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Model number, symptoms, what you tried, or the section of the manual you are using.

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