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**XRCLIF -58°F~788°F**

# XRCLIF Infrared Thermometer Gun User Manual

Model: -58°F to 788°F

## 1. INTRODUCTION

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This XRCLIF Infrared Thermometer Gun is a non-contact device designed for measuring the surface temperature of various objects. It provides quick and accurate readings across a wide temperature range, making it suitable for diverse applications from cooking to industrial maintenance. This manual provides essential information for safe and effective use of your thermometer.



Image 1.1: The XRCLIF Infrared Thermometer Gun, showing its ergonomic design.

## 2. SAFETY INFORMATION

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Please read and understand all safety warnings before using this product. Failure to follow these instructions may result in injury or damage to the device.

- **Laser Safety:** This device uses a Class 2 laser. Do not stare directly into the laser beam or point it at people or animals. Avoid direct eye exposure.
- **Non-Contact Measurement:** This thermometer measures surface temperature only. It is **not intended for measuring human body temperature.**
- **Operating Environment:** Do not use the thermometer in environments with explosive gases, steam, or dust.
- **Maintenance:** Do not attempt to disassemble or modify the device. Refer all servicing to qualified personnel.
- **Battery Handling:** Dispose of used batteries properly according to local regulations. Do not mix old and new batteries.



Image 2.1: Visual warning against using the thermometer for human body temperature.

## 3. PRODUCT OVERVIEW

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### 3.1 Components

The product package typically includes the following items:

- 1 x XRCLIF Infrared Thermometer Gun
- 2 x AAA Batteries
- 1 x English User Manual (this document)
- 1 x Carrying Pouch

### 3.2 Display and Controls

Familiarize yourself with the device's display and control buttons for optimal operation.



Image 3.1: Detailed view of the thermometer's display and control buttons.

- **Trigger:** Press to activate the laser and begin measurement. Release to hold the reading.
- **°C/°F Button:** Toggles between Celsius and Fahrenheit temperature units.
- **MODE Button:** Cycles through various measurement modes (MAX, MIN, AT, EMS, CAL, HI, LOW).
- **Backlight & Laser Button:** Toggles the display backlight and the laser pointer on/off.
- **LCD Display:** Shows temperature readings, unit, mode indicators (HOLD, SCAN, MAX, MIN, AT, EMS, CAL, HI, LOW), laser on icon, backlight on icon, and battery power icon.

## 4. SETUP

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### 4.1 Battery Installation

The thermometer requires two AAA batteries for operation. Follow these steps to install them:

1. Locate the battery compartment cover on the handle of the thermometer.

2. Gently pull down the battery cover to open the compartment.
3. Insert two AAA batteries, ensuring correct polarity (+ and -).
4. Slide the battery cover back into place until it clicks securely.

## Easy Battery Replacement

Battery included inside hand-held unit



Image 4.1: Illustration of opening the battery compartment and inserting batteries.

Your browser does not support the video tag.

Video 4.1: This video demonstrates the unboxing and battery installation process for the infrared thermometer.

## 5. OPERATING INSTRUCTIONS

### 5.1 Basic Temperature Measurement

1. Point the thermometer at the target surface. Ensure the distance-to-spot ratio is appropriate for accurate measurement (16:1).
2. Press and hold the trigger. The laser pointer will activate, indicating the measurement area. The display will show the current temperature.
3. Release the trigger to hold the measured temperature on the display. The device will automatically power off after 7 seconds of inactivity to conserve battery.

### 5.2 Mode Functions

Press the **MODE** button to cycle through the following functions:

- **MAX:** Displays the maximum temperature recorded during the current measurement session.
- **MIN:** Displays the minimum temperature recorded during the current measurement session.
- **AT (Ambient Temperature):** Shows the current ambient temperature.
- **EMS (Emissivity):** Allows adjustment of the emissivity value (0.10 to 1.00). The default setting is 0.95.
- **CAL (Calibration):** Enables calibration of the infrared laser thermometer within a range of -5°F to +5°F (-5°C to +5°C).
- **HI/LOW:** Set upper and lower temperature limits. The thermometer will emit an audible alert ("BI BI" sound) if the measured temperature falls outside these set values.



Image 5.1: Icons representing the various functions of the thermometer.

### 5.3 Emissivity Adjustment

Emissivity is a measure of an object's ability to emit infrared energy. Different materials have different emissivity values. For accurate readings, adjust the emissivity setting to match the material being measured.

1. Press the **MODE** button until "EMS" appears on the display.
2. Use the up/down buttons (often the backlight/laser buttons double as adjustment buttons in EMS

mode) to change the emissivity value between 0.10 and 1.00.

3. Refer to common emissivity tables for typical materials. The default setting of 0.95 is suitable for most organic materials and painted surfaces.

## Better Accuracy with Adjustable Emissivity

Adjustable emissivity from 0.1 to 1.0 ( Preset 0.95 ) .allow you to get precisely temperatureven measure on different surfacesQuick know the Max or Min readings



Image 5.2: Examples of emissivity values for different materials like oil, ice, and aluminum.

## 6. APPLICATIONS

The XRCLIF Infrared Thermometer Gun is versatile and can be used for a wide range of non-contact temperature measurement tasks, including but not limited to:

- Cooking, baking, and grilling (e.g., checking pizza oven, BBQ, food surface temperatures).
- Automotive maintenance (e.g., engine temperature, tire temperature).
- Home inspection and maintenance (e.g., checking insulation, HVAC systems, water pipes).
- Industrial applications (e.g., machinery, electrical components).
- Monitoring pool or aquarium temperatures.

# ENDLESS APPLICATIONS

Measure objects temperatures from a safe and hazard-free distance



Image 6.1: Visual representation of various applications for the thermometer, including cooking, automotive, and home use.

## 7. SPECIFICATIONS

Feature	Specification
Temperature Range	-58°F to 788°F (-50°C to 420°C)
Accuracy	±2% or 2°C (3.6°F) (whichever is greater)
Emissivity	Adjustable from 0.10 to 1.00 (Preset 0.95)
Distance Spot Ratio (D:S)	16:1
Response Time	500 Milliseconds
Spectral Response	8-14μm
Power Source	2 x AAA Batteries (included)
Automatic Power Off	7 seconds (approx.)

Feature	Specification
Display Type	Digital LCD with Backlight
Dimensions	6.42 x 3.7 x 1.73 inches
Weight	5.9 ounces
Material	Plastic
Certifications	CE

## 8. MAINTENANCE

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Proper care and maintenance will ensure the longevity and accuracy of your thermometer.

- **Cleaning:** Wipe the device with a soft, damp cloth. Do not use abrasive cleaners or immerse the device in water. Keep the lens clean and free of dust or debris.
- **Storage:** Store the thermometer in its carrying pouch in a cool, dry place when not in use. Remove batteries if storing for extended periods to prevent leakage.
- **Battery Replacement:** Replace batteries when the low battery indicator appears on the display.

## 9. TROUBLESHOOTING

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If you encounter issues with your thermometer, refer to the following common problems and solutions:

- **No Power:**
  - Check if batteries are installed correctly with proper polarity.
  - Replace old or depleted batteries with new AAA batteries.
- **Inaccurate Readings:**
  - Ensure the emissivity setting matches the material being measured.
  - Verify the distance-to-spot ratio is appropriate. Measurements taken too far from the target may be less accurate.
  - Clean the infrared lens if it appears dirty.
  - Consider calibrating the device if consistently inaccurate (refer to CAL mode).
- **Laser Not Working:**
  - Ensure the laser is enabled via the backlight & laser button.
  - Check battery level.

## 10. WARRANTY AND SUPPORT

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For warranty information, technical support, or service inquiries, please refer to the documentation included with your purchase or contact XRCLIF customer service directly. Keep your purchase receipt as proof of purchase.

