## NJTY JD-10

# NJTY Infrared Thermometer Gun JD-10 Instruction Manual

Model: JD-10 | Brand: NJTY

## Introduction

The NJTY Infrared Thermometer Gun Model JD-10 is a high-precision, non-contact temperature measurement device designed for a wide range of applications. This manual provides essential information for safe and effective operation, maintenance, and troubleshooting.

## Safety Information

- **Laser Safety:** This device uses a Class 2 laser. Avoid direct eye exposure to the laser beam. Do not aim the laser at people or animals.
- **Not for Human/Pet Use:** This thermometer is designed for industrial, automotive, cooking, and general household surface temperature measurements. It is not intended for measuring body temperature of humans or pets.
- **Avoid Hazardous Environments:** Do not use the thermometer in environments with smoke, glass, or steam, as these can interfere with accurate readings.
- **Electrical Safety:** Exercise caution when measuring live electrical components. Maintain a safe distance.
- **Storage:** Store the device in a cool, dry place, away from extreme temperatures and direct sunlight.

**Adjustable Emissivity for Accurate Readings**
(Set the right value based on the surface you're measuring)

| Material / Surface Type | Recommended Emissivity | Typical Use Case |
|---|---|---|
| Painted Metal / Oxidized Surface | 0.85 – 0.95 | BBQ grills, oven interiors, exhaust pipes |
| Wood (unfinished or treated) | 0.90 – 0.95 | Firewood, carpentry tools, pallets |
| Plastic / Rubber (matte) | 0.90 – 0.95 | Automotive hoses, tool handles, seals |
| Ceramic / Brick / Concrete | 0.90 – 0.95 | Kilns, furnaces, masonry, fireplace walls |
| Rusted or Dull Steel | 0.70 – 0.85 | Automotive engines, industrial machinery |
| Paper / Cardboard | 0.90 – 0.95 | Packaging lines, warehouse monitoring |
| Food Surface (e.g. steak, bread) | 0.90 – 0.95 | Grilling, baking, food safety checks |
| Shiny Metals (polished steel, copper, aluminum) | 0.10 – 0.40 | Not ideal for direct reading – apply black tape first |

Image: The thermometer is not designed for measuring human or pet body temperature.

## Product Features

- **Wide Temperature Range:** Measures from -58°F to 1472°F (-50°C to 800°C).
- **Fast and Precise Targeting:** Equipped with a 13-point laser system for accurate aiming and a 0.5-second response time.
- **Adjustable Emissivity:** Fine-tune emissivity from 0.10 to 1.00 for reliable results on various surfaces like metal, wood, and plastic.
- **Clear Backlit LCD Display:** Shows real-time temperature, maximum/minimum records, battery level, laser status, °C/°F switch, and high/low alarms.
- **Non-Contact Measurement:** Safely measure temperatures from a distance with a Distance-to-Spot Ratio of 12:1.
- **Auto Power-Off:** Conserves battery life by automatically shutting off after a period of inactivity.
- **Data Hold Function:** Freezes the current temperature reading on the display.


Image: Overview of the thermometer's display and key functions.


Image: Detailed illustration of the thermometer's features and benefits.

## Package Contents

The package includes:

- NJTY Infrared Thermometer Gun (Model JD-10)
- Temperature measuring gun holster
- 2 x AAA Batteries
- Instruction Manual


Image: All items included in the product package.

## Setup

### Battery Installation

1. Locate the battery compartment on the handle of the thermometer.
2. Slide open the battery compartment cover.
3. Insert two AAA batteries, ensuring correct polarity (+/-).

4. Close the battery compartment cover securely.

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Video: This video demonstrates the battery installation process and basic operation of the JD-10 Infrared Thermometer.

## Operating Instructions

### 1. Basic Measurement

1. Point the thermometer at the target surface.
2. Press and hold the trigger to activate the laser and begin scanning. The display will show the real-time temperature.
3. Release the trigger to hold the reading on the display.

### 2. Temperature Unit Switching (°C/°F)

Press the **°C**/**°F** button to toggle between Celsius and Fahrenheit units.


Image: Demonstrates how to switch between Celsius and Fahrenheit temperature units.

### 3. Adjustable Emissivity (EMS)

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

1. Press the **EMS** button. The tenths digit of the emissivity setting will flash.
2. Use the **°C**/**°F** button to increase the value and the **EMS** button to decrease the value.
3. Press **MODE** to move to the hundredths digit and repeat the adjustment.
4. Press **MODE** again to confirm and complete the setting.


Image: Recommended emissivity values for common materials.

## 4. Alarm Mode Settings (HAL/LAL)

The thermometer features High Alarm (HAL) and Low Alarm (LAL) modes to alert you when temperatures exceed or fall below set thresholds.

1. Press the **MODE** button repeatedly until HAL or LAL appears on the display.
2. Hold the **MODE** button for approximately 5 seconds. The first digit of the HAL or LAL setting will flash.
3. Use the **°C**/**°F** button to increase the value and the **EMS** button to decrease the value.
4. Press **MODE** to move to the next digit and repeat the adjustment.
5. Once done, press **MODE** to confirm the setting.


Image: Setting high and low temperature alarms.

### 5. Laser On/Off Switch

Press the laser button (triangle icon) to turn the laser pointer on or off. The laser helps in precise targeting.

### 6. Sound Switch

The device includes a beep symbol on the display. This sound can be turned on or off via the settings, typically by cycling through MODE options or a dedicated button if available.

## Applications

The NJTY JD-10 Infrared Thermometer is versatile and suitable for numerous applications:

- **Cooking:** Ideal for checking temperatures of grills, griddles, ovens, deep fryers, and baked goods.
- **Automotive:** Useful for measuring engine components, brake discs, and other vehicle parts.
- **HVAC:** Perfect for identifying hot or cold spots in air vents and HVAC systems.
- **Industrial Use:** Suitable for monitoring steam pipes, smelters, switchboards, and other industrial machinery.
- **Home Use:** Can be used for various tasks around the house, such as checking appliance temperatures or insulation efficiency.


Image: Common household and cooking applications.


Image: Automotive and HVAC applications.


Image: Industrial applications.

## Important Measurement Tips

- **Distance-to-Spot Ratio (D:S):** The JD-10 has a D:S ratio of 12:1. This means that from 12 inches away, the measurement area is a 1-inch circle. Ensure your target is larger than the spot size to get accurate readings.
- **Avoid Obstructions:** Do not measure through smoke, glass, or steam, as these can significantly affect accuracy.
- **Measuring Reflective Surfaces:** For shiny or reflective surfaces (e.g., polished steel, aluminum), apply a

piece of black opaque tape or paint to the surface and measure the temperature of the tape/paint after it has reached thermal equilibrium with the object.


Image: Correct and incorrect measurement practices.

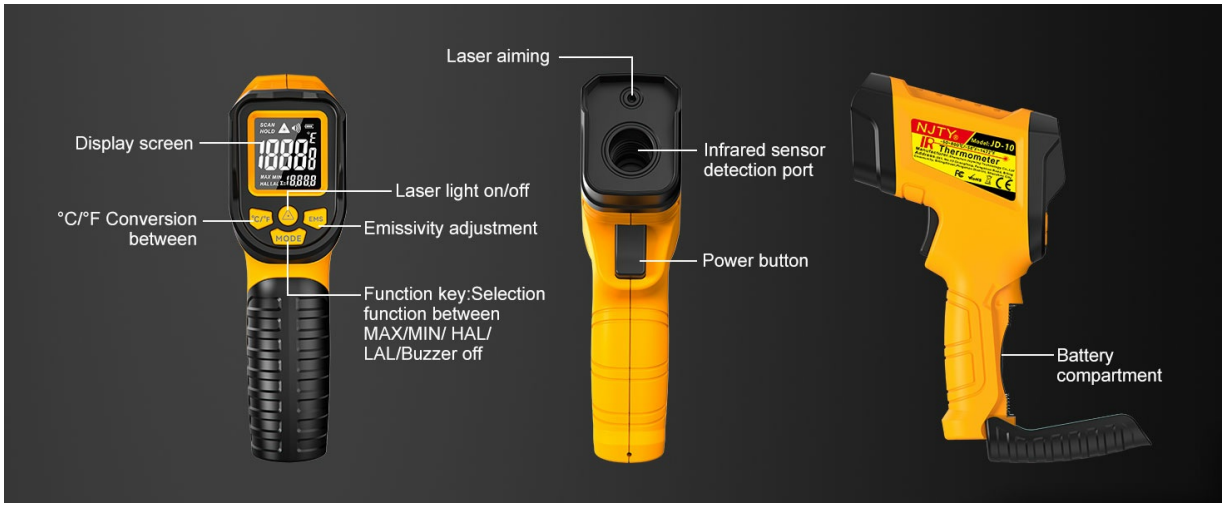


Image: Tip for measuring through glass or on reflective surfaces.

## Maintenance

- **Cleaning:** Use a soft, damp cloth to clean the device. Do not use abrasive cleaners or immerse the device in water.
- **Lens Care:** The infrared lens is the most delicate part. Clean it gently with a soft cloth or cotton swab and rubbing alcohol.
- **Battery Replacement:** Replace batteries when the low battery indicator appears on the display.
- **Storage:** When not in use for extended periods, remove the batteries and store the thermometer in its holster in a dry, dust-free environment.

## Troubleshooting

| Problem | Possible Cause | Solution |
|---|---|---|
| Inaccurate Readings | Incorrect emissivity setting; Obstruction (smoke, steam, glass); Distance too far; Dirty lens. | Adjust emissivity; Remove obstructions; Move closer to target (within 12:1 D:S ratio); Clean lens. |

| Problem | Possible Cause | Solution |
| --- | --- | --- |
| Display Not Working | Low or dead batteries; Incorrect battery installation. | Replace batteries; Check battery polarity. |
| Laser Not Activating | Laser function turned off; Low battery. | Press laser button to activate; Replace batteries. |

## SPECIFICATIONS

- **Model Name:** JD-10
- **Temperature Range:** -58°F to 1472°F (-50°C to 800°C)
- **Temperature Accuracy:** ≥100°C, ±2%; <100°C, ±2°C
- **Distance-to-Spot Ratio (D:S):** 12:1
- **Adjustable Emissivity:** 0.10-1.00
- **Response Time:** <0.5 seconds
- **Display Type:** Digital Backlit LCD
- **Power Source:** 2 AAA batteries (included)
- **Special Feature:** Auto Off
- **Outer Material:** Plastic (TPE + ABS)
- **Item Weight:** 8.8 ounces
- **Item Length:** 6.6 inches


Image: Key specifications and physical dimensions of the thermometer.

## Warranty and Support

NJTY is committed to quality and reliability. This product comes with **Lifetime Customer Support**. For any questions, concerns, or assistance, please contact NJTY customer service.
Contact information can typically be found on the product packaging or the official NJTY website.