# **EED** Model R2001 Infrared Thermometer Instruction Manual

### Warning

Do not point laser directly or indirectly (through reflective surfaces) at eye.

### Features

- Safely measure surface temperatures of hot, hazardous or hard-to-reach objects without contact
- User selectable °F or °C
- Built-in laser pointer identifies target area
- 8:1 Distance to Spot Size ratio
- Fixed emissivity covers 90% of all applications
- Automatic Data hold
- Display backlight
- Low battery indication with auto shut off
- Includes battery

### **Specifications**

Temperature Range:	-58 to 536°F (-50 to 280°C)
Accuracy:	±2% or ±2°C
Resolution:	1°F or (°C)
Response Time:	$\leq 0.8s$
Emissivity:	0.95 Fixed
Optical Resolution:	8:1
Spectral Response:	5 to 14µm
Power Supply:	9V (included)
Dimensions:	3.7 x 2.1 x 1" (94 x 56 x 28mm)
Weight:	2.7 oz (76g)

### **Instruments Description**





5. Laser

2-

6. Infrared Lens

8. Battery Cover

HOLD

7. Measuring Trigger

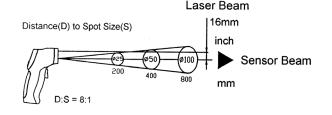
- 1. LCD Display
- 2. Back Light Button
- 3. Laser Button
- 4. °C / °F Button

### **Display Description**

- 1. Laser Signal
- 2. Data Hold Icon
- 3. Low Battery Symbol
- 4. °C / °F Symbol
- 5. Current Temperature

### **Optical Resolution Information:**

1. When taking measurements, point thermometer toward the desired object and hold the trigger. The object should be larger than the spot size.



- 2. Optical Resolution: As the distance from the object increases, the measuring spot size area becomes larger.
- 3. Field of view: Make sure the target is larger than the unit's spot size. The smaller the target the closer you must be. When accuracy is critical, make sure the target is at least twice as large as the spot size.
- 4. Emissivity: Most organic materials, painted or oxidized surfaces have an emissivity of 0.95 (pre-set in the unit). Inaccurate readings will result from measuring shiny or polished metal surfaces. To compensate, cover the surface to be measured with masking tape or black paint. Measure the covered surface when it reaches the same temperature as the material underneath.

#### Introduction

Compact, rugged and easy to use. Just aim and push the button, it reads current surface temperatures in less than a second press the trigger to display reading & battery icon. Release the trigger and the reading will hold for 15 seconds.

#### How it works

The Infrared thermometer measures the surface temperature of an object. The unit's optical sensor emits, reflects, and transmits energy which is collected and focused onto a detector. The unit's electronics translate the information into a temperature reading which is displayed on the unit.

#### Cautions

Infrared thermometers should be protected from the following:

- 1. EMF (electro-magnetic fields) from arc welders, induction heaters.
- 2. Thermal shock (caused by large or abrupt ambient temperature changes, it allows 30 minutes for unit to stabilize before use).
- 3. Do not leave the unit on or near objects of high temperature.

#### Maintenance

- 1. Lens cleaning: Use compressed air to blow off loose particles, use a soft brush to remove debris away, and clean it with damp cotton cloth.
- 2. Case cleaning: Clean the case with a damp sponge/cloth and mild soap.
- 3. Do not use solvent to clean lens.
- 4. Do not submerge the unit in water.

#### Battery Replacement

- 1. Pull battery cover away from unit
- 2. Replace with battery respecting the polarity 9v.

For service on this or any other REED product or information on other REED products, contact REED Instruments at info@reedinstruments.com

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