

# IRT220

## 12:1 IR Thermometer



### ***Introduction***

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Congratulations on your purchase of the Triplett IRT220 12:1 IR Thermometer. This Infrared thermometer measures and displays non-contact temperature readings up to 500°C (932°F). The built-in laser pointer increases target accuracy while the backlit LCD and handy push buttons combine for convenient, ergonomic operation. Operational functions include MIN-MAX mode.

### ***Safety***

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Use extreme caution when the laser pointer is on

Do not point the beam toward anyone's eye or allow the beam to strike the eye from a reflective surface

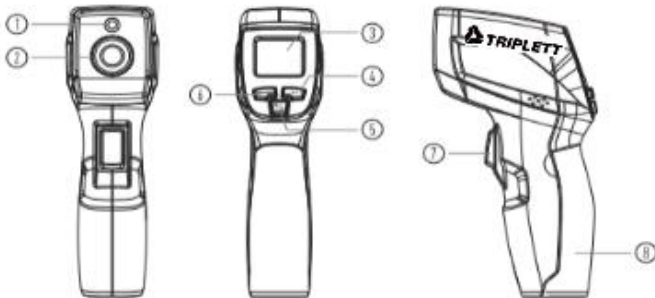
Do not use the laser near explosive gases or in other potentially explosive areas



## Meter Description

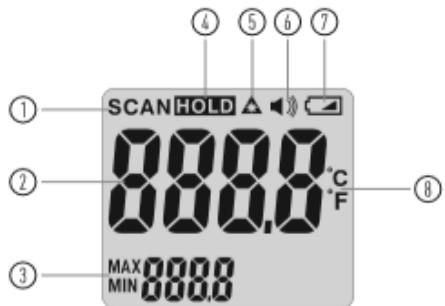
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1. Laser Pointer
2. Infrared Sensor
3. LCD Display
4. Units ( $^{\circ}\text{C}/^{\circ}\text{F}$ ) Button
5. Laser/Backlight Button
6. MAX/MIN Button
7. Power ON/ Measure Trigger (APO 10 seconds after released)
8. Battery Compartment



## Display Description

1. SCAN, measurement in progress
2. Temperature Measurement Data
3. MAX/MIN Data
4. HOLD, last measurement locked in display
5. Laser pointer active
6. Audible On (Not available for this model)
7. Low Battery Indicator
8. C or F temperature units



# Operating Instructions



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## Temperature Measurements

1. Hold the meter by its handle and point it toward the surface to be measured.
2. Pull and hold the trigger to turn the meter on and begin testing. The temperature reading will change as the user scans various targets.
3. The 'SCAN' icon remains on until the user releases the trigger.
4. When the trigger is released, the reading will hold for approximately 7 seconds (HOLD will replace SCAN on the LCD) after which the meter will automatically shut off. The only exception to this is if the LOCK mode is set to ON.

## Laser Pointer

The Laser pointer optimizes the user's aim during scanning. To turn the Laser on/off:

1. Press and release the Trigger
2. While HOLD is on the display, press the laser button  once to turn the Laser on or off.
3. The laser icon  will appear in the LCD when the Laser is on.
4. The status of the Laser is remembered by the meter and will remain as the ON condition until changed.

## Backlight

1. Press and release the trigger
2. While HOLD is on the display, press the Laser/Backlight button once to turn the backlight on or off.
3. The backlight will illuminate the LCD when the feature is enabled.
4. The status of the backlight will be stored in memory and will remain as the ON condition until changed.
5. Note: The backlight will shorten the battery life; use sparingly and only as necessary.

## Over-range Indication

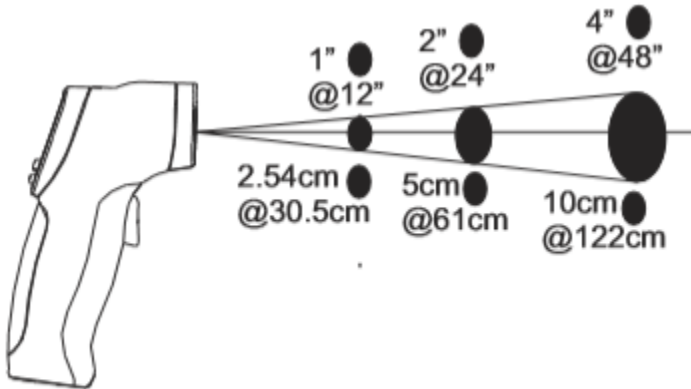
If the temperature measurement exceeds the specified temperature range, the thermometer will display dashes in place of a temperature reading.

## IR Measurement Notes

1. The object under test should be larger than the spot (target) size calculated by the field of view diagram (printed on the side of the meter and in this guide).
2. Before measuring, be sure to clean surfaces that are covered with frost, oil, grime, etc.
3. If an object's surface is highly reflective, apply masking tape or flat black paint to the surface before measuring. Allow time for the paint or tape to adjust to the temperature of the surface it is covering.
4. Measurements through transparent surfaces such as glass may not be accurate.
5. Steam, dust, smoke, etc. can obscure measurements.
6. The meter automatically compensates for deviations in ambient temperature. However, it can take up to 30 minutes for the meter to adjust to extremely wide changes.
7. To find a hot spot, aim the meter outside the area of interest then scan across (in an up and down or side to side motion) until the hot spot is located.

## Field of View

The meter's field of view is 12:1. For example, if the meter is 24 inches from the target (spot), the diameter of the target must be greater than 2 inches. Other distances are shown in the field of view diagram. Measurements should normally be made as close as possible to the device under test. The meter can measure from moderate distances but the measurement may be affected by external sources of light. In addition, the spot size may be so large that it encompasses surface areas not intended to be measured.



When the Low Battery indicator appears it is time to replace the 9V battery (9V). The battery compartment is located behind the panel that surrounds the meter's trigger. Open the compartment by pulling the panel down from the trigger area. Replace the 9V battery and close the battery compartment cover.



You, as the end user, are legally bound (**EU Battery ordinance**) to return all used batteries, **disposal in the household garbage is prohibited!** You can hand over your used batteries / accumulators at collection points in your community or wherever batteries / accumulators are sold!

**Disposal:** Follow the valid legal stipulations in respect of the disposal of the device at the end of its lifecycle

## Specifications

Range / Resolution Accuracy	0.1° resolution from -20.0 to 500°C (-4.0.0 to 932°F); -20.0°C to 20.0°C (-4.0°F to -932°F) ±3°C/5.4°F 20.0 to 500°C (68.0°F to 932°F) ±2%/±-2°C /3.6°F Note: Accuracy is specified for the following ambient temperature range: 18 to 28°C (64 to 82°F)
Emissivity	Fixed @ 0.95
Field of View	D/S = Approx. 12:1 ratio (D = distance; S = spot or target)
Laser pointer	Class 2 laser < 1mW power; Wavelength: 630 to 670nm
IR Spectral response	8 to 14 m
Repeatability	1°C/1.8°F; whichever is greater

### General

#### Specifications

Display	Backlit LCD display with function indicators
Response time	500ms
Over range indication	"-----"
Operating Temperature	0°C to 50°C (32°F to 122°F)
Operating Humidity	10% to 90%RH operating, <80%RH storage.
Storage Temperature	-10 to 60°C (14 to 140°F)
Power Supply	9V battery
Automatic Power Off	10 seconds
Weight	5.2 oz. / 148.5g
Dimensions	137x 73 x 39 mm (5.4 x 2.9 x 1.5")

## Warranty Information

Triplett / Jewell Instruments extends the following warranty to the original purchaser of these goods for use. Triplett warrants to the original purchaser for use that the products sold by it will be free from defects in workmanship and material for a period of (1) one year from the date of purchase. This warranty does not apply to any of our products which have been repaired or altered by unauthorized persons in any way or purchased from unauthorized distributors so as, in our sole judgment, to injure their stability or reliability, or which have been subject to misuse, abuse, misapplication, negligence, accident or which have had the serial numbers altered, defaced, or removed. Accessories, including batteries are not covered by this warranty.

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