

INSTRUCTION MANUAL TEMPERATURE READER WITH DIGITAL DISPLAY AND LASER POINTER

057-4554-4

Temperature range	-30 - 480°C (-22 - 896°F)
Accuracy at ambient 23°C ±2°C (74°F ±4°F)	±3°C (-30 - 0°C) ±6°F (-22° - 32°F) ±2°C or 2% (0 - 100°C) ±4°F or 2% (32 - 212°F) ±3°C or 3% ±6°F or 3% for other range
Repeatability	1% of reading or 1
Response time	500 msec, 95% response
Spectral response	8-14 um
Emissivity	0.1 - 1.0 adjustable
Operating temperature	0 - 50°C (32 - 122°F)
Relative humidity	10-95% RH noncondensing
Storage temperature	-20 - 60°C (-4 - 140°F)
Weight/dimensions	155 g; 165x72x41 mm
Power	9 V block battery (included)
Battery life (alkaline)	12 hours
Display spot size	8:1

If any parts are missing or damaged, or if you have any questions, please call 1-800-689-9928.



Read and understand this instruction manual thoroughly before using the product. It contains important information for your safety as well as operating and maintenance advice.

Keep this instruction manual for future use. Should this product be passed on to a third party, then this instruction manual must be included.

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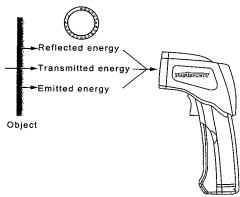
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SPECIFICATIONS

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QUICK START INSTRUCTIONS

Compact, rugged and easy to use. Just aim and push the button, read current surface temperatures in less than a second. Safely measure surface temperatures of hot, hazardous or hard-to-reach objects without contact.



HOW IT WORKS

Infrared thermometer measures the surface temperature of an object. The unit's optics sense emitted, reflected and transmitted energy, which is collected and focused onto a detector. The unit's electronics measure the transmitted energy, which is displayed on the unit. For increased ease and accuracy, the laser pointer makes aiming even more precise.

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QUICK START INSTRUCTIONS

- MODE button: Press MODE button for cycle options E-MAX-AVG-MIN-LAL-HAL mode
A-MAX: Measure maximum current data;
B-AVG: Calculate the average of all measured data;
C-MIN: Measure minimum current data;
D-LAL: Low-temperature alarm. In LAL mode, press "0" "0" button to set alarm temperature. When the LCD displays "L" it means the measured result is less than the alarm temperature.
E-HAL: High-temperature alarm. In HAL mode, press "0" "0" button to set alarm temperature. When the LCD displays "H" it means the measured result exceeds the alarm temperature.
- "0" button: In "Alarm temperature" and "Setting emissivity" mode use to adjust value down, or else, press this button to select °C / °F.
- "E" button: Press for setting emissivity. And press "0" "0" to adjust from 0.1-1.0. Press "E" button again to exit setting mode.
- LCD
- Battery door: When replacing batteries, please use the finger indents to pull open the battery door.

Note:

- When "AL" is showing, ambient temperature is lower than 0°C (32°F). When "AH" is showing, ambient temperature is higher than 60°C (122°F). If the above codes are displayed in normal ambient temperature, it probably means the unit is broken.
- When taking measurement, point thermometer toward the object to be measured and hold the blue trigger. The object should be larger than the spot size calculated by the field of view diagram.

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WARRANTY

- Lens cleaning: Blow off loose particles using clean, compressed air. Gently brush remaining debris away with a moist cotton cloth.
- Case cleaning: Clean the case with a damp sponge/cloth and mild soap.

Note:

- Do not use solvent to clean lens.
- Do not submerge the unit in water.

DISPOSAL OF THIS ARTICLE

Dear Customer,

If you at some point intend to dispose of this article, please keep in mind that many of its components consist of valuable materials, which can be recycled. Please do not dispose of it in the garbage. Check with your local council for recycling facilities in your area.



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WARRANTY

Mastercraft® warranty



This Mastercraft product carries a one-year warranty against defects in workmanship and materials. This product is not guaranteed against wear, breakage or misuse.

Made in China

Imported by
Mastercraft Canada Toronto, Canada M4S 2B8

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WARRANTY

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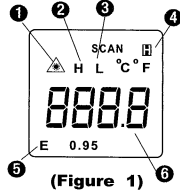
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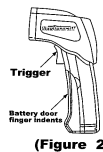
QUICK START INSTRUCTIONS

LCD display:

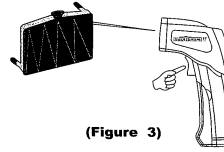
- Laser pointer activated
- High-temperature alarm
- Low-temperature alarm
- Data hold
- Emissivity
- Measured result



- Press battery door clip, install battery correctly. Pull the trigger to see LCD display reading and battery icon. For any hard start, the built-in compensation system will automatically adjust the temperature reading according to the ambient operating condition. Hold the trigger until the reading stabilizes. Then, release the trigger and the reading will hold for 10 seconds.



(Figure 2)

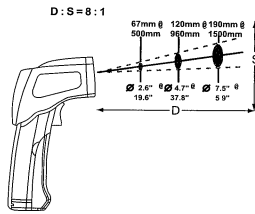


(Figure 3)

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QUICK START INSTRUCTIONS

- Distance & spot size: As the distance from the object increases, the spot size of measuring area becomes larger.



- Field of view: Make sure the target is larger than the unit's spot size. The smaller the target, the closer the measuring distance. When accuracy is critical, make sure the target is at least twice as large as the spot size.
- Emissivity: Most organic materials and painted or oxidized surfaces have an emissivity of 0.95. Inaccurate readings will result from measuring shiny or polished metal surfaces. To compensate, cover the surface to be measured with masking tape or flat black paint. Measure the tape or painted surface when the tape or painted surface reach the same temperature as the material underneath.

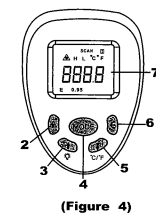
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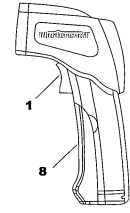
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QUICK START INSTRUCTION

- To locate a hot spot, aim the thermometer outside the area of interest, then scan across with up and down motions until you locate the hot spot. (Turn on the laser for accurate measuring.)



(Figure 4)



(Figure 5)

DIAGRAM DESCRIPTION

- Trigger: Press to turn on. Test result will display and hold automatically ("HOLD") for ten seconds. The reader will turn off automatically after not being used for 10 seconds.
- Laser pointer button: Press to turn on laser pointer. Press again to turn it off.
- Back light/Up button: In "Alarm temperature" and "Setting emissivity" mode, use this to adjust values up. In other modes, it turns on the back light. When the reader is on, press it to turn on the back light. Press it again to turn it off.

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QUICK START INSTRUCTIONS

Applicable Emissivity for Various Material (For reference only)

Material	Emissivity	Material	Emissivity
Asphalt	0.90 to 0.98	Textile (black)	0.98
Beton	0.94	Human skin	0.98
Cement	0.96	Soap bubble	0.75 to 0.80
Sand	0.90	Charcoal (powder)	0.96
Soil	0.92 to 0.96	Lacquer	0.80-0.95
Water	0.92 to 0.96	Lacquer (reluster)	0.97
Ice	0.96 to 0.98	Rubber (black)	0.94
Snow	0.83	Plastic	0.85-0.95
Glass	0.90 to 0.95	Timber	0.90
Ceramic	0.90 to 0.94	Paper	0.70-0.94
Marble	0.94	Chromic oxide	0.81
Gypsum	0.80 to 0.90	Copper oxide	0.78
Compo	0.89 to 0.91	Iron oxide	0.78 to 0.82
Brick	0.93 to 0.96	Stainless steel and aluminum	0.2-0.3

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