

Please read and save these instructions. Read through this owner's manual carefully before using product. Protect yourself and others by observing all safety information, warnings, and cautions. Failure to comply with instructions could result in personal injury and/or damage to product or property. Please retain instructions for future reference.



## NO CONTACT INFRARED THERMOMETER



### UNPACKING

After unpacking unit, inspect carefully for any damage that may have occurred during transit. Check for loose, missing, or damaged parts. If any damage is observed, a shipping damage claim must be filed with carrier. Do not use Infrared Thermometer if broken, bent, cracked or damaged parts (including labels) are noted. Infrared Thermometer damaged in any way, operates abnormally or is missing parts should be removed from service immediately. If you suspect that the Infrared Thermometer was subjected to a shock load (a load that was dropped suddenly, unexpectedly, etc.) immediately discontinue use until it has been checked by a factory authorized service center.

### ⚠ WARNING

The following safety information is provided as a guideline to help you operate your Infrared Thermometer under the safest possible conditions. Any tool or piece of equipment can be potentially dangerous to use when safety or safe handling instructions are not known or not followed. The following safety instructions are to provide the user with the information necessary for safe use and operation. Please read and retain these instructions for the continued safe use of your service system. Failure to follow instructions listed below may result in serious injury. In addition, make certain that anyone that uses the equipment understands and follows these safety instructions as well.

### Explanation of Safety Signal Words

**⚠ WARNING** : Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

**⚠ CAUTION** : Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

**CAUTION** : Used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

**Notes** : Provide clarity and helpful information.



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Thank you very much for choosing an OEMTOOLS Product!

For future reference, please complete the owner's record below:

**Model:** \_\_\_\_\_ **Purchase Date:** \_\_\_\_\_

Save the receipt, warranty and these instructions. It is important that you read the entire manual to become familiar with this product before you begin using it. This machine is designed for certain applications only. OEMTOOLS cannot be responsible for issues arising from modification. We strongly recommend this machine is not modified and/or used for any application other than that for which it was designed. If you have any questions relative to a particular application, DO NOT use the machine until you have first contacted OEMTOOLS to determine if it can or should be performed on the product.



### IMPORTANT INSTRUCTIONS AND SAFETY RULES

1. Know your tool. Read this manual carefully. Learn the tool's applications and limitations, as well as, potential hazards specific to it.
2. Keep work area clean and well lit. Cluttered or dark work areas invite accidents.
3. Keep children away. All children should be kept away from the work area. Never let a child handle a tool without strict adult supervision.
4. Do not operate this tool if under the influence of alcohol or drugs. Read warning labels on prescriptions to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt, do not attempt to operate.
5. Use safety equipment. Eye protection should be worn at all times when operating this tool. Use ANSI approved safety glasses. Everyday eyeglasses are NOT safety glasses. Dust mask, non-skid safety shoes, hard hat or hearing protection should be used in appropriate conditions.
6. Wear proper apparel. Loose clothing, gloves, neckties, rings, bracelets or other jewelry may present a potential hazard when operating this tool. Keep all apparel clear of the tool.
7. Don't overreach. Keep proper footing and balance at all times when operating this tool.
8. Check for damage. Check your tool regularly. If part of the tool is damaged it should be carefully inspected to make sure that it can perform its intended function correctly. If in doubt, the part should be repaired. Refer all servicing to a qualified technician. Consult your dealer for advice.
9. Keep away from flammables. Do not attempt to operate this tool near flammable materials or combustibles. Failure to comply may cause serious injury or death.
10. Store idle tools out of the reach of children and untrained persons. Tools may be dangerous in the hands of untrained users.
11. Maintain tools with care.
12. Keep tools dry and clean.
13. Properly maintained tools are less likely to bind and are easier to control. Do not use a damaged tool. Tag damaged tools "Do not use" until repaired.
14. Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tool's operation.
15. If damaged, have the tool serviced before using. Many accidents are caused by poorly maintained tools.
16. Use only accessories that are recommended by the manufacturer for your model. Accessories that may be suitable for one tool may become hazardous when used on another tool.
17. Tool service must be performed only by qualified repair personnel. Service or maintenance performed by unqualified personnel could result in a risk of injury.
18. When servicing a tool, use only identical replacement parts. Use of unauthorized parts or failure to follow maintenance instructions may create a risk of injury.
19. Maintain a safe working environment. Keep the work area well lit. Make sure there is adequate surrounding workspace. Keep the work area free of obstructions, grease, oil, trash, and other debris. Do not use this product in a damp or wet location.
20. Maintain labels and nameplates on this product. These carry important information. If unreadable or missing, contact OEM for a replacement.



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21. Keep the handle dry, clean, and free from brake fluid, oil, and grease.
22. Before use, read and understand all warnings, safety precautions, and instructions as outlined in the vehicle manufacturer's service manual. It is beyond the scope of this manual to properly describe the correct procedure and test data for each vehicle.
23. Always perform vehicle service in a properly ventilated area. Never run an engine without proper ventilation for its exhaust. Stop work and take necessary steps to improve ventilation in the work area if you develop momentary eye, nose, or throat irritation as this indicates inadequate ventilation.
24. Engine parts that are in motion and unexpected movement of a vehicle can injure or kill. When working near moving engine parts, wear snug fit clothing and keep hands and fingers away from moving parts. Keep hoses and tools clear of moving parts. Always stay clear of moving engine parts. Hoses and tools can be thrown through the air if not kept clear of moving engine parts. The unexpected movement of a vehicle can injure or kill. When working on vehicles always set the parking brake or block the wheels.
25. Avoid accidental fire and/or explosion. Do not smoke near engine fuel and battery components.
26. The warnings, precautions, and instructions discussed in this manual cannot cover all possible conditions and situations that may occur. The operator must understand that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.
27. For safety purposes and the prevention of damage to expensive components it is advised that the user have an understanding of basic automotive repair and a working knowledge of automotive systems.
28. We believe the information contained herein to be reliable. However, general technical information is given by us without charge and the user shall employ such information at his own discretion and risk. We assume no responsibility for results or damages incurred from the use of such information in whole or in part. Always refer to specific instructions and technical information supplied by vehicle manufacturer.
29. The manufacturer declines any and all responsibility for damage to vehicles or components if said damage is the result of unskillful handling by the operator or of failure to observe the basic safety rules set forth in the instruction manual.

### DISPOSAL

At the end of the useful life of the Infrared Thermometer, dispose of the components according to all state, federal, and local regulations.

### PURPOSE

This Infrared Thermometer is used for measuring the temperature of an object's surface without contact. Use for various hot, hazardous or hard-to-reach objects.

This unit consists of optics, temperature sensor signal amplifier, processing circuit and LCD display. The optics collect the infrared energy emitted by the object and focus onto the sensor. Then the sensor translates the energy into an electricity signal. This signal will show as a digital image on the LCD after the signal amplifier and processing circuit.



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## PRODUCT SPECIFICATIONS

<b>Temperature range</b>	(-58°F to 716°F) (-50°C to 380°C)
<b>Accuracy: Whichever is greater</b>	-50°C (-58°F) ~0°C (32°F): ±3°C (±5°F) 0°C (-32°F) ~716°C (1321°F): ±1.5°C (±2.7°F) or ±1.5%
<b>Resolution</b>	0.1°C or 0.1°F
<b>Repeatability</b>	1% of Reading or 1°C
<b>Response time</b>	500mS, 95% Response
<b>Spectral response</b>	8-14um
<b>Emissivity</b>	0.95 Preset
<b>Distance to spot size</b>	12:1
<b>Operating temperature</b>	0~40°C (32~104°F)
<b>Operating humidity</b>	10~95% RH Non-Condensing, Up to 30°C (86°F)
<b>Storage temperature</b>	-20~60°C (-4~140°F)
<b>Power</b>	(1) 9V Battery
<b>Typical battery life (Alkaline)</b>	Non-Laser Mode: 22 Hours Laser Mode: 12 Hours
<b>Weight</b>	5.2 oz (147.5 g)
<b>Resolution</b>	6" x 4" x 1.7" (153 x 101 x 43 mm)

## OPERATIONS:

1. View in Celsius or Fahrenheit
2. Equipped with a laser for aiming
3. Temperature hold
4. LCD backlight
5. 7 seconds delay auto power off
6. Light weight and easy operation

## ⚠ WARNING

This manual contains information that relates to PROTECTING PERSONAL SAFETY and PREVENTING ACCIDENT AND INJURY:

1. Before you use this unit, check on the plastic housing carefully. If there is any damage, do not use it.
2. Do not point laser directly at eye or indirectly off reflective surfaces. Uses Laser Radiation; do not stare into the beam. Class II Laser product.
3. Do not use this unit near explosive gas, steam or dust.

## ⚠ CAUTION

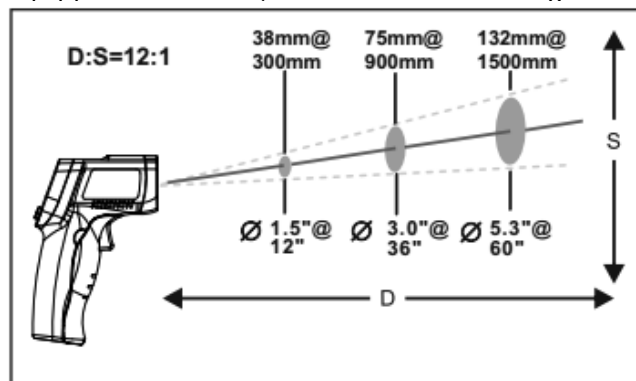
To avoid the damage of the unit or the target, please protect from the following situations:

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

## Distance to spot size:

When taking a measurement, pay attention to the distance to spot size. As the distance (D) from the target surface increases, the spot size (S) of the area measured by the unit gets larger.

The distance to spot size of the unit is 12:1. This unit is equipped with a laser, which is used for aiming.



## Field of view:

Make sure the target is larger than the unit's spot size. The smaller the target is the closer the measurement of the distance. When accuracy is critical, make sure the target is at least twice as large as the spot size.

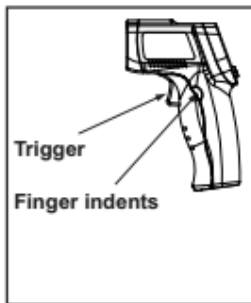


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## Emissive:

Most organic materials and painted or oxidized surfaces have an emissive of 0.95 (pre-set in the unit). Inaccurate readings will result from measuring shiny or polished metal surfaces. To compensate, cover the target surface 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.

## Operating:

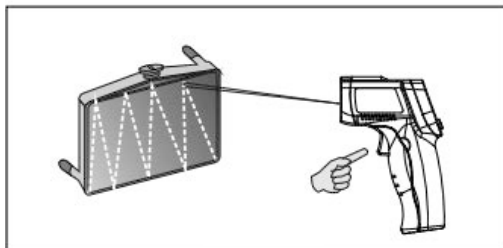


### 1. Operating the unit:

- 1) Make sure the 9 volt battery is inserted correctly.
- 2) Press the trigger to turn on the unit.
- 3) Aim at the target surface and pull the trigger, then temperature will be shown on the LCD. This unit is equipped with a laser, which is only used for aiming.

### 2. Locating a Hot Spot:

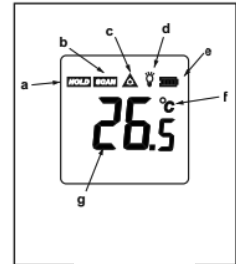
To find a hot spot, aim the thermometer outside of interest, and then scan across with an up and down motion until you locate the hot spot. (Figure Below)



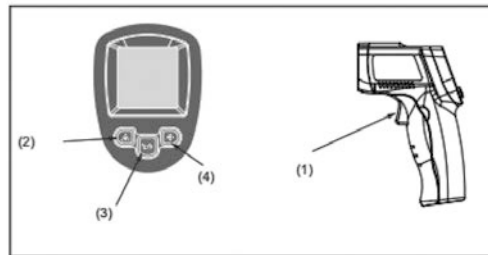
## LCD display & buttons:

### 1. LCD display:

- a. Data hold icon
- b. Scanning icon
- c. Laser on icon
- d. Backlight on icon
- e. Battery power icon
- f. Temperature unit
- g. Temperature reading



### 2. Buttons:



- 1) Trigger: When pressing the trigger, LCD display reading with SCAN icon. Release the trigger, display reading with HOLD icon for 7 seconds (approx). Built-in 7 seconds auto power off function.
- 2) Laser on/off button
- 3) Celsius/Fahrenheit switch button
- 4) Back light on/off button: When backlight is on, any operations will activate the backlight for 7 seconds.

## Maintenance

### 1. Lens Cleaning

Blow off loose particles using clean compressed air. Gently brush remaining debris away with a moist cotton swab. The swab may be moistened with water.

### 2. Case cleaning:

Clean the case with a damp sponge/cloth and mild soap.

## NOTE:

- 1) Do not use solvent to clean plastic lens.
- 2) Do not submerge the unit in water.

