I/R Thermometer Gun 12:1

800106

Instruction Manual

SPER
SCIENTIFIC

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**PLEASE REVIEW NOTES & PRECAUTIONS
BEFORE USING EQUIPMENT!**

AVOID EXPOSURE-LASER RADIATION
IS EMITTED FROM THIS APERTURE ▶

CAUTION

LASER RADIATION - DO NOT STARE INTO BEAM ☀

OUTPUT <1mW WAVELENGTH 630-670nm   **LASER PRODUCT**

COMPLIES WITH CFR 1040.10 EN61326-1 EMC / EN60825-1 Safety

INTRODUCTION

The **IR Thermometer** is a non-contact, infrared tempera-ture measuring instrument that can be used in : HVAC , vehicle diagnostics, process control industry, food indus-try, electrical maintenance, equipment diagnostics and many other industries and applications.

Simply hold the IR gun, press the trigger and aim the laser guide at the target. Temperature results immediately appear on the display.

Comes with a carrying case and a 9V battery.

FEATURES

- 4-digit backlit LCD.
- Min-max, average, 10pt data logger, wide measuring range and automatic shut-off.
- Switchable laser sighting.
- High DS ratio
- ˚F or ˚C selectable
- Electronic trigger lock.
- Audible alarms.
- E-mart: Smart Emissivity automatic measurement.
- CIS: Noticeable color signs alert the setting point of alarm temperature.

PANEL DESCRIPTION
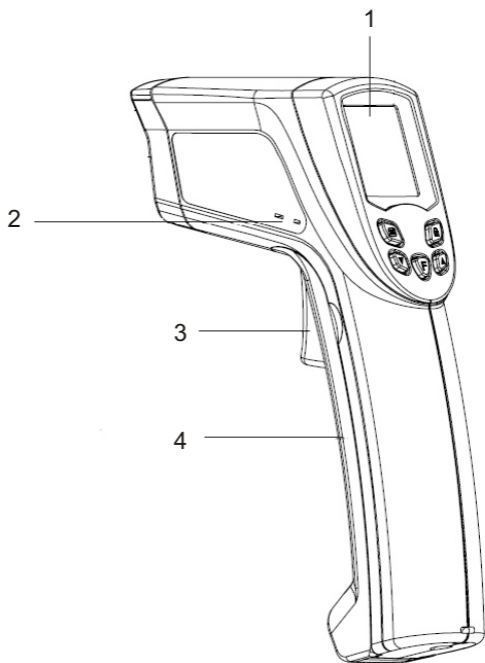
1. **Display Screen**

2. **Thermocouple Connector**

3. **Trigger**

4. **Battery Cover**

PANEL DESCRIPTION
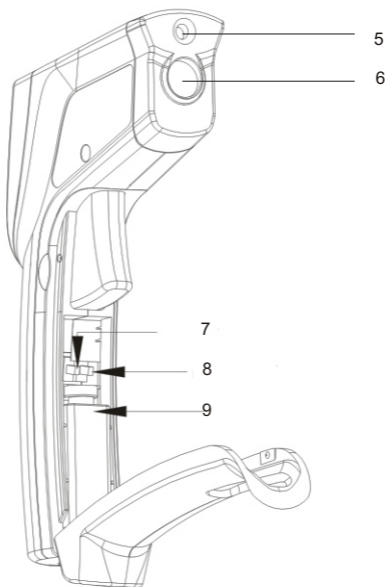
5. **Laser Guide**

6. **IR sensor**

7. **°C / °F selector**

8. **Laser On/ Off selector**

9. **9V Battery**

LCD DESCRIPTION
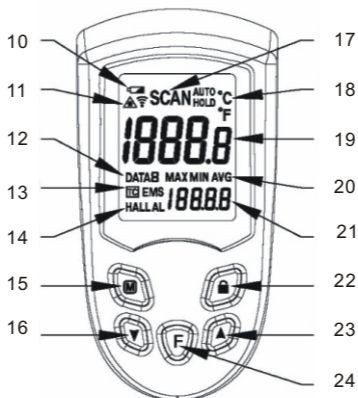
10. **Low Battery Indicator**
11. **Laser / Buzzer On / Off**
12. **Data Log**
13. **Thermocouple / Emissivity**
14. **High / Low Alarm**
15. **Memory Button**
16. **Down Button**

17. **SCAN/HOLD/ AUTO**
18. **°C / °F**
19. **Temperature Reading**
20. **Max / Min / Avg**
21. **Secondary Reading**
22. **Lock Button**
23. **Up Button**
24. **Function Button**

DISTANCE-TO-SPOT

The distance-to-spot ratio is 12:1. As the distance from
the object increases, the spot size of the area measured
also increases.
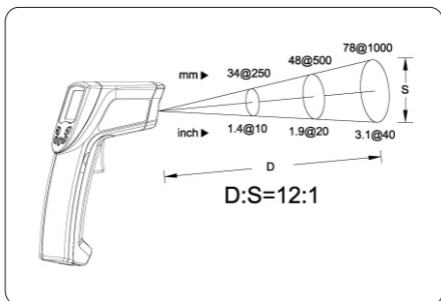
MEASUREMENT PROCEDURES

Measure Temperature(Scan)

1. Slide the **Laser** ON/OFF selector switch(8) to turn the **Laser Guide**(5) on or off.

2. Slide the **°C/°F** selector switch(7) to the desired temperature scale.

3. Point the IR Gun at the object to be measured, pull and hold the **Trigger** (3) to obtain a continually updated temperature.

4. **SCAN**(17) flashes on the display while the Trigger is depressed.

5. Release the **Trigger**(3),**HOLD**(17) and the last temperature reading is displayed for approximately six seconds until the thermometer turns off.

ADVANCED FUNCTIONS

To access the advanced functions, pull and hold **Trigger** (3) and press the **Function** (24) button, then release the Trigger.

Press the **Function** (24) button to cycle through the advanced functions :Scan, Max, Min, Avg, Thermocouple (TC), Data, Emissivity Adjustable(EMS),High Alarm(HAL) and Low Alarm(LAL).

Data Record

1. While DATA# flashes on the left button, the value on the **Secondary Reading**(12) can be recorded in "#"log. Simply press "M" button.

2. Activate the record function by push the "M" (15) button to delete all the records, press **up**(23) or **down** (16)buttons to DATA 0 and press "M" (15) button.

3. Recorded temperatures remain in memory until over-written.

4. Review the stored readings by using the **up**(23) or **down** (16) buttons.

Maximum/Minimum

The maximum and minimum temperature levels are continually recorded while the Thermometer is in use. Previously recorded max/min temperatures are erased when the thermometer turn off.

1. Pull the **Trigger** (3) ,then press the **Function**(24)button until **Max**(20) appears on the display.

2. The highest recorded temperature is displayed. The display will change only if/when a higher temperature is recorded.

3. Press the **Function** (24) button until the **Min** (11) appears on the display.

4. The lowest recorded temperature is displayed .The displayed will change only if/when a lower temperature is recorded.

Average

1. Pull the **Trigger**(3),then press the **Function**(24) button as needed until **Avg (20)** appears on the display.

2. The average recorded temperatures is displayed.

3. Max/Min/ and Average temperatures are erased when the thermometer turns off.

Thermocouple

1. Pull the **Trigger** (3) ,then press the **Function**(24)button until **TC**(13) appears on the display.

2. Activate the functions just by connecting to the connect (2) and switch to TC function.

E-smart

1. Pull the **Trigger** (3) ,then press the **Function**(24)button until **EMS**(13) appears on the display.

2. In Emissivity mode, push the **Lock** (22) button to enter the E-smart function.

3. Contact(2)the target surface with thermocouple.

4. Point the target with infrared thermometer and push the measure trigger till the buzzer beep. The cross-reference Emissivity value will be memorized in the unit.

5. Press the "F"(24)button to leave the E-smart function.

High Alarm (HAL)

1.   Pull the **Trigger** (3) ,then press the **Function**(24)button until **HAL**(14) appears on the display.

2.   Use the **up**(23) or **down**(16) buttons to set the high alarm value.

3.   The Thermometer will beep when the temperature reading is higher than the alarm setting.

4.   When the adjustments are complete, the thermometer will return to the **SCAN**(17) mode after approximately six seconds.

Low Alarm (LAL)

1.   Pull the **Trigger** (3) ,then press the **Function**(24)button until **LAL** (14) appears on the display.

2.   Use the **up** (23) or **down** (16) buttons to set the low alarm value.

3.   The Thermometer will beep when the temperature reading is lower than the alarm setting.

4.   When the adjustments are complete, the thermometer will return to the **SCAN**(17) mode after approximately six seconds.

Auto Function

In Auto mode the Thermometer will continuously scan temperature without pulling the **Trigger**(3).

1. Push the **Lock**(22)button to continuously measure and display the temperature without pull the measuring trigger.

2. Pressing the **Lock** (22)button again will disable the AUTO. AUTO icon will disappear from the display.

CIS Function

The color of backlight will change when the target temperature exceeds the setting point of alarm temperature.

CLEANING

Clean the lens with compressed air , soft brush or a moist cotton swab, Do not use solvents on the lens. Clean the housing with mild soap on a cloth or sponge.

SPECIFICATIONS

D : S Ratio	12:1
Range / Res	-25~1400°F, -32~760°C / 0.1°C or °F
Accuracy	±5°F@ -25~-4°F,±3°C@-32~-20°C
	±3°F@ -4~212°F,±2°C@-20~100°C
	±2%@212~1400°F,±2%@-100~760°C
Thermopile	5~14μm
Dim Weight	7.09"x5.12"x1.57",180x130x40mm 6.9 oz (195 g).
Response Time	500 ms
Thermocouple Range	- 328 ~2516°F,-200~1380°C
Thermocouple Accuracy	±1.5%+1degree
Emissivity	Adjustable 0.1~1.0
Oper. Temp.	32~122°F (0~50°C) and10~95%RH

STANDARDS

EN61326: Electrical equipment for measurement, control and laboratory use.
IEC61000-4-2: Electrostatic discharge immunity test.
IEC61000-4-3: Radiated, radio-frequency, Electromagnetic field immunity test.
IEC61000-4-8: Power frequency magnetic field immunity test.
CFR 1040.10 subchapter J Class II Laser Product

BATTERY REPLACEMENT

Replace the battery when the **Low Battery Indicator** (10) is displayed. Open the battery cover, install a fresh 9V battery and close the cover.

NOTES & PRECAUTIONS

Read the following information carefully before attempting to operate or service the IR Gun. Only qualified technicians should perform repairs.

- DO NOT submerge the IR Gun in water.
- Protect the IR Gun from water, shock, dust and extreme environments.
- The IR Gun may be used to measure body temperature simply for reference, but is not intended for medical evaluations.
- Dispose of properly.
- Contains a laser pointer.
- Keep away from children.
- Your reading may fluctuate if the IR Gun is moved during measurement.
- For best results, allow the Gun to adjust to the ambient temperature for 30 minutes before use.

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