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Sound Level Meter PCE-EV-KIT 3
Manual
Infrared Thermometer PCE-890U



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1 Introduction

Thank you for purchasing an Infrared Thermometer PCE-890U from PCE Instruments.
The Infrared Thermometer PCE-890U can provide fast, easy and accurate temperature readings. With the non-contact (infrared) technology, they can be used to measure the surface temperature of hard-to-reach objects like electrified equipment or moving objects, without any damage or pollution to them. These units are widely used in Food preparation, Safety and Fire inspection, Plastic mouldings, Asphalt, Marine, Printing ink and dryer temperature, Diesel and Fleet maintenance.

2 Safety notes

Please read this manual carefully and completely before you use the device for the first time. The device may only be used by qualified personnel and repaired by PCE Instruments personnel. There is no warranty of damages or injuries caused by non-observance of the manual.

Do not store it in high temperature or humidity.

Do not disassemble the unit, repair it by qualified personnel

Do not immerse it in water.

Do not use volatile liquids to clean the unit, wipe it with dry soft cloth.

If the surface of the object under test is covered with frost, oil, grime, etc., clean it before taking measurement.

Do not make measurement through transparent surface such as glass.

Not recommend for measuring shiny or polished metal surfaces like stainless steel, aluminium, etc.

Use extreme caution when the laser beam is turned on.

Do not point the beam toward anyone or any animals.

Do not allow the beam to strike the eye from a reflective surface.

Do not use the laser near explosive gases.

The device may only be used in approved temperature range.

The opening of the case should only be done by qualified personnel of the PCE Instruments.

The instrument should never be placed with the user interface (e.g. keyboard side on a table)

You should not make technical changes on the device

The appliance should only be cleaned with a damp cloth / use only pH-neutral cleaner

This user's handbook is published from PCE Instruments without any guarantee.

We expressly point to our general guarantee terms, they can be found in our general terms of business.

If you have any questions please contact PCE Instruments.

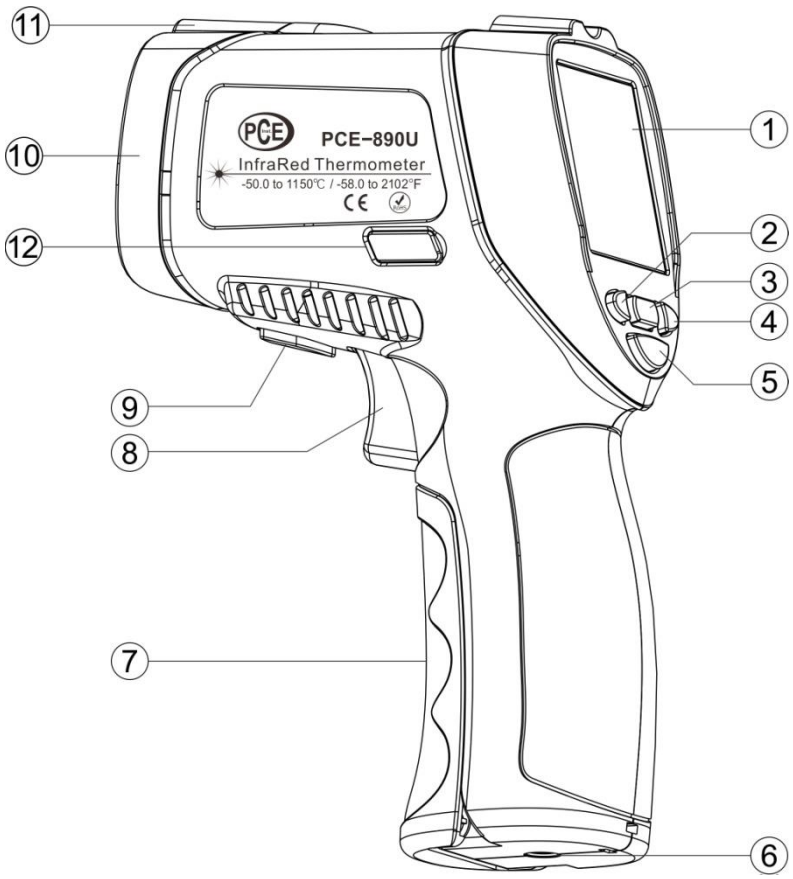
3 Specification

Range	50 … 1150 °C / -58 … 2102 °F
Accuracy	-50 … 0 °C / -58 … 32 °F : ±4 °C
	0 … 500 °C / 32 … 932 °F: 1.5% ±2 °C / 3.6 °F
	Above 500 °C / 932 °F: 2% ±2 °C / 3.6 °F
Optical Resolution	50:1
Emissivity	Adjustable: 0.10 … 1.0
Resolution	0.1 °F (0.1 °F) >1000; 1 °C (1 °F) <1000
Response Time	<250 ms
Spectral Response	8 … 14um
Data recording	PC real-time monitoring and recording
Polarity Display	Auto display, "-" indicates negative, while positive with no sign
Diode Laser	Output <1mW, 630 … 670nm, class 2(II)
Automatic Power Off	Meter shuts off automatically after 20 seconds
Operating Temperature	0 … 50 °C (32 … 122 °F)
Storage Temperature	-20 … 60 °C (-4 … 140 °F)
Relative Humidity	Operating : 10 … 95 % RH; Storage: <80 % RH
Power Supply	9V battery
Weight	290g
Dimensions (L x W x H)	191.5 x 126 x 60 mm

4 System description

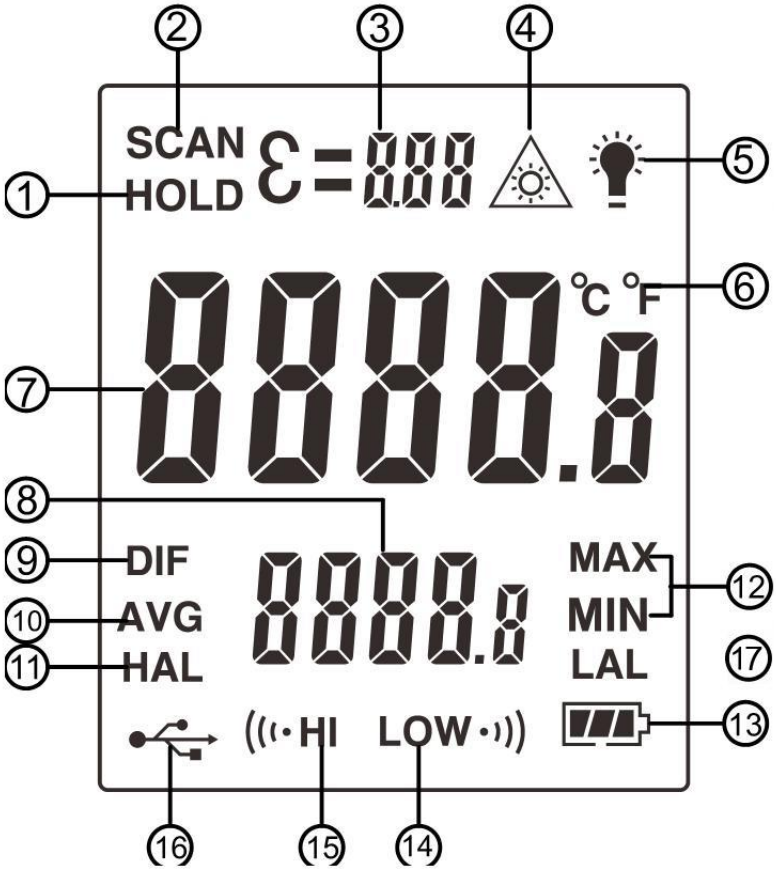
4.1 Meter description

1. LCD Display
2. Shift Up Button
3. Laser Pointer / Backlight Button
4. Shift Down Button
5. Function Button
6. Tripod Nut
7. Battery cover
8. Trigger Button
9. Button to open the Battery cover
10. IR Sensor
11. Laser Pointer
12. USB – Interface



4.2 Display description

1. Data Hold Icon
2. Measurement Icon
3. Emissivity Icon
4. Laser Icon
5. Backlit Icon
6. Temperature Unit(℃/℉)
7. Measurement Readings
8. MAX/MIN/AVG/DIF display area
9. DIF Icon
10. AVG Icon
11. High Alarm Value
12. Max/Min Icon
13. Low Battery Icon
14. Low Alarm Icon
15. High Alarm Icon
16. USB Connection Icon
17. Low Alarm Value



5 Operating Instructions

5.1 Operating steps

Hold the meter by its handle grip and point it toward the surface to be measured. Pull and hold the Trigger to turn the meter on, the "SCAN" icon will appear and begin testing. The surface temperature being tested will be displayed on the LCD screen. Release the trigger, the "HOLD" icon will appear, and the reading will be held for several seconds. The meter will automatically shut off after 20 seconds.

Note: If the meter used in an ambient temperature with wide temperature change, awaiting it at least 30 minutes to adjust it. The laser is designed for aiming only; it can be shut off while operating in short distance to save the battery.

5.2 Button Function

1. °C/°F button: In Measurement Mode, press button “ ” and“ ”to switch the temperature unit ℃ or ℉.

2. Laser pointer/Backlight button: In Measurement Mode, press button“ ”to turn on/off laser pointer, In “HOLD” Mode, press button “ ”to turn on/off backlight.

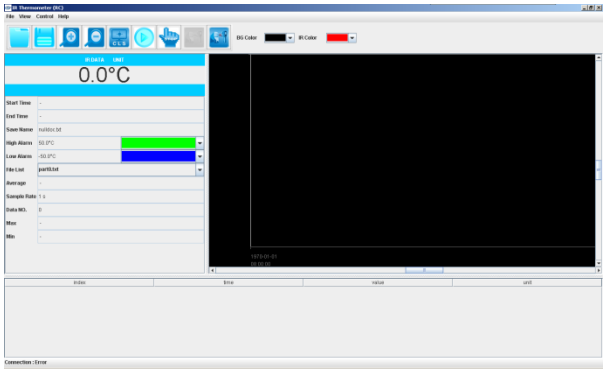
3. Mode button: During measuring, press button“MODE”to display MAX, MIN, AVG, DIF, High/Low Alarm readings. During measuring, press button“MODE”until“ε”icon flashes on the screen, then loose button“MODE”enter into Emissivity Mode, press button“ ”and“ ”to adjust emissivity value, then keep pressing button“MODE” return to the normal measurement mode (After entering Emissivity Mode, press button “MODE” can set the High/Low alarm value).

5.3 PC Software operating

5.3.1 Software installation

Insert the CD into the CD-drive, double-click the 

icon and follow the installation tips to install software. After installed the software successfully, click the desktop shortcut icon to open the software, see the software interface as below:



Connect the meter with PC via USB cable and power on the meter. The software will automatically connect the meter and conduct real-time data transmission.

5.4 Toolbar introduction;

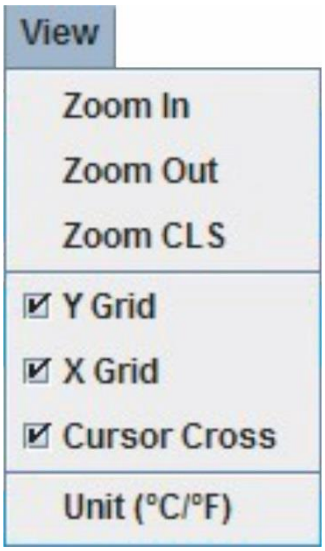
5.4.1 File menu



Pull-down menu see as below:

1. Open: Open the saved data file
2. Save: Save data
3. Print: Printing charts
4. Exit: Exit the software

5.4.2 View menu



Pull-down menu see as below:

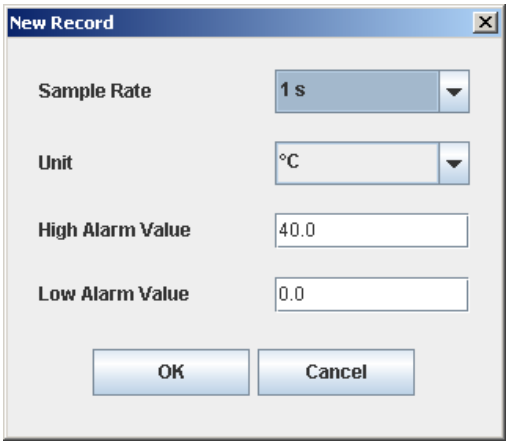
1. Zoom In: Zoom in the graph curve
2. Zoom Out: Zoom out the graph curve
3. Zoom CLS: Graph curve returns to the normal ratio
4. Y Grid: Y Grid of the graph
5. X Grid: X Grid of the graph
6. Cursor Cross: data the cursor points
7. Unit:°C/°F selection

5.4.3 Control menu



Pull-down menu see as below:

1. Start: Start recording
2. Stop: Stop recording
3. Connect: Connection establishment
4. Disconnect：Disconnect connection



5.5 Short-cut icon explanation



Save



Open file



Disconnect connection



Zoom in graph curve



Start recording



Connection establishment



Zoom out graph curve



Graph curve returns to the normal ratio



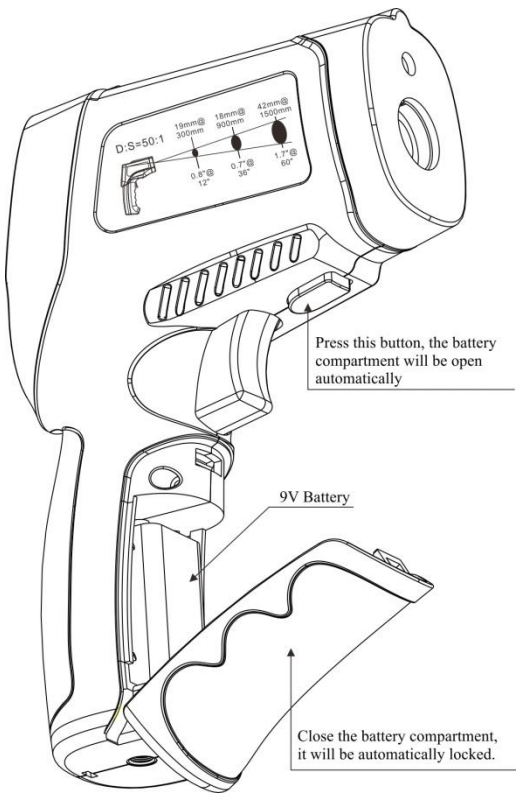
Graph curve background colour



Data curve colour

5.6 Battery Replacement

When the low battery icon "" appears, replace the meter's battery. Open the battery compartment, replace the 9V battery and close the battery compartment.



6 Contact

If you have any questions about our range of products or measuring instruments please contact PCE Instruments.

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