

<b>RADIANCE INSTRUMENTS LTD</b>	<b>PRODUCT MANUAL</b>		REV.: 3
	PRODUCT	HANDHELD DIGITAL THERMOMETER	19 AUG 2014
	MODEL	RT904	PAGE 1 of 2

## FEATURES

- Wide measurement range
- Maximum / minimum temperature memory
- Celsius and Fahrenheit exchange
- Data hold function
- High / low alarm limit setting
- Low battery indication
- Key tone for operation confirmation
- Field calibration
- Protective PVC pouch
- Stainless steel probe
- Foldaway stand



## OPTIONS

- 1) With high / low alarm limit setting (RT904A)

## SPECIFICATION

Measuring range	-50~300 °C / -58~572 °F
Display accuracy	±0.5°C between -19.9~119.9°C / ±0.9°F between -3.8~247.8°F ±1°C between 120°C~149.9°C / ±1.8°F between 248~301.8°F ±2°C / ±3.6°F for other ranges
Display resolution	0.1° over full range
Alarm setting resolution	1° over full range (option 1 only)
Temperature reading update	1 second
Display size	45(W) x 37(H) mm
Battery	1.5 volt, type AA or equivalent x 2 pieces
Probe size	3.5(∅) x 165(L) mm
Product size	70(W) x 170(H) x 28(D) mm
Probe cord length	1,000 mm
Ambient temperature	0~50°C / 32~122°F

## INSTALLATION

1. Unpack the thermometer.
2. Full extend the probe cable.
3. Connect probe to the thermometer.
4. Open the battery cover on the back by using a suitable Philips screwdriver.
5. Install batteries with correct polar positioning.
6. Close the battery cover and tighten up the screw.

## OPERATION

1. As soon as the thermometer is switched on, it will perform a self test and show all display segments for about 2 seconds and then display the normal temperature reading.
2. Insert the probe into test substance about 25mm / 1" minimum; get the reading when it becomes stable.

### SELECT TEMPERATURE UNIT

1. Press [°C/°F] to select temperature unit.
2. For option 1, press and hold [°C/°F] for about 3 seconds then release to change temperature unit.

### DATA HOLD

3. Press [HOLD] once will retain the display reading and the "Hold" icon will be flashing.
4. Press the button again will return to normal display.

### MAXIMUM / MINIMUM TEMPERATURE MEMORY

1. Press [MAX/MIN] once will display the maximum reading and the "MAX" icon will be flashing.
2. Press the button once more will show the minimum reading and the "MIN" icon will be flashing.
3. Press the button again to return to normal display.
4. Reset the memory once before taking the maximum / minimum reading.
5. To reset the memory reading, switch the thermometer off then on.

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#### HIGH / LOW TEMPERATURE ALARM SETTING

1. Press [SET] and the high value (HI) will be flashing.
2. Press [▲] or [▼] to set the desired high alarm limit.
3. Press [SET] to confirm high alarm limit and start the low alarm limit (LO) setting.
4. Press [▲] or [▼] to set the desired low limit.
5. Press [SET] to finish alarm limit setting.
6. When the temperature reading is out of the set limits the alarm will sound. Press any key will stop the alarm sound but the HI or LO icon will still be flashing until the reading is within the set limit.

#### FIELD CALIBRATION

\* This calibration is required if the probe is replaced.

1. Open the battery cover.
2. Put the probe in a 0°C temperature calibrator and let the display become stable.
3. With a suitable screwdriver, adjust the "L" pot to have 0°C displayed.
4. Put the probe in a 290°C temperature calibrator and let the display become stable.
5. Adjust the "H" pot to have 290°C display.
6. Check the display accuracy in -19.9°C and 119.9°C respectively and adjust the "L" pot to have the reading within  $\pm 0.5^\circ\text{C}$  if needed.
7. Calibration completed.

#### NOTE

1. Clean the probe immediately with cleaning wipes after each measurement to avoid cross contamination.
2. When the maximum/minimum reading is being displayed or the data hold function is activated, the thermometer cannot be powered off until all the activated functions are released.
3. If thermometer shows abnormal operation, press the [RESET] button once by using a pointed object
4. Do not operate the thermometer in the environmental temperature lower than 0°C/32°F or higher than 50°C/122°F otherwise incorrect readings or damage to thermometer may result.
5. If the thermometer is not in use for a long period of time, please remove the battery to avoid battery leakage.

#### ERROR SYMBOLS

Symbol	Description	Action required
	Low battery voltage	Replace the batteries with the same type
LLL	1) Sensor open circuit 2) The reading is out of lower limit (-50°C)	1) Replace the probe 2) Keep the measurement above lower limit
HHH	1) Sensor short circuit 2) The reading is out of upper limit (300°C)	1) Replace the probe 2) Keep the measurement below upper limit