User's Manual

EXTECH INSTRUMENTS
A FLIR COMPANY

Non-contact Forehead IR Thermometer

Model IR200



Introduction

Congratulations on your purchase of the Model IR200 IR Thermometer. This thermometer is intended for scanning groups of individuals or monitoring an individual for elevated temperatures. It is not a substitute for a clinical thermometer. Always use a clinical thermometer when high accuracy body temperature measurements are required.

Considerations and Warnings

- Read all instructions before using this product.
- For the most accurate results, make reading with an ambient (room) temperature of 73 to 82°F (23 to 27°C)
- Make sure the skin is dry and that no hair interferes with the measurement.
- Do not immerse the meter in water.
- Avoid touching and/or scratching the infrared sensor lens.
- Always use a clinical thermometer to verify any abnormal temperature measurements.
- Clean the lens area by gently blowing with compressed air and use a damp swab to wipe the lens. Do not use any solvents to clean the lens.

Measurement Notes

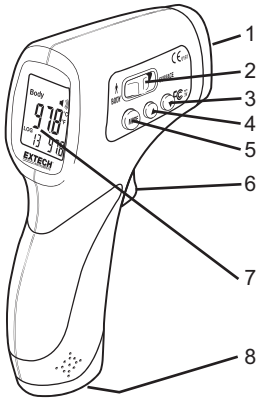
1. If the meter has been stored in a cold or hot environment, allow it at least 20 minutes to acclimate to room temperature before making measurements.
2. To prevent transmission of disease, avoid direct contact with the skin.
3. After heavy exercise always wait at least 10 minutes before taking forehead temperature readings.

Warranty

EXTECH INSTRUMENTS CORPORATION (a FLIR company) warrants this instrument to be free of defects in parts and workmanship for one year from date of shipment (a six month limited warranty applies on sensors and cables). If it should become necessary to return the instrument for service during or beyond the warranty period, contact the Customer Service Department at (781) 890-7440 ext. 210 for authorization or visit our website at www.extech.com (click on 'Contact Extech' and go to 'Service Department' to request an RA number). A Return Authorization (RA) number must be issued before any product is returned to Extech. The sender is responsible for shipping charges, freight, insurance and proper packaging to prevent damage in transit. This warranty does not apply to defects resulting from action of the user such as misuse, improper wiring, operation outside of specification, improper maintenance or repair, or unauthorized modification. Extech specifically disclaims any implied warranties or merchantability or fitness for a specific purpose and will not be liable for any direct, indirect, incidental or consequential damages. Extech's total liability is limited to repair or replacement of the product. The warranty set forth above is inclusive and no other warranty, whether written or oral, is expressed or implied.

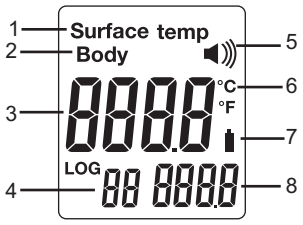
Meter Description

1. IR sensor
2. Body – Surface switch
3. ▼ button
4. ▲ button
5. MODE button
6. Measurement trigger
7. LCD display
8. Battery compartment



DISPLAY

1. Surface mode
2. Body mode
3. Temperature display
4. Memory location
5. Alarm active
6. Temperature units
7. Low battery icon
8. Memory temperature display



Operating Instructions

Body Temperature Measurements

1. Set the Body-Surface- switch for “Body” for accurate measurements in the range of .86.0 to 109˚F (30 to 43˚C).
2. Hold the meter by its handle and point it toward the surface to be measured. Measurement distance should be 2 to 6” (5 to 15cm).
3. Press the trigger to turn the meter on and take a temperature reading. The temperature reading appears in the large display and the logged data number and value appear in the smaller display.
4. Release the Trigger and the reading will hold for approximately 7 seconds after which the meter will automatically shut off. Trigger presses can occur up to a rate of one a second to quickly log samples.
5. If the temperature goes above 109°F or 43°C, Hi will appear in the display. If the temperature goes below 86°F or 30°C, Lo will appear in the display.

Body Temperature Mode settings

1. With the meter OFF, press the MODE button once to set the C/F temperature units. The temperature units will flash. Press the ▲ or ▼ buttons to change the units.
2. Press the MODE button a second time to set the alarm temperature limit. Press the ▲ or ▼ buttons to change the value.
3. Press the MODE button a third time to enter the long term calibration drift correction mode. On entering the mode, the previous temperature correction factor will appear on the display. To make a correction, measure a known, fixed temperature source. Enter the correction mode and press the ▲ or ▼ buttons to change the correction value and minimize the difference in readings. Repeat and adjust the correction value as needed until the measurement on the IR200 matches the known temperature.
4. Press the MODE button a fourth time to set the alarm buzzer status. Press the ▲ or ▼ buttons to switch from ON to OFF.

Surface Temperature Measurements

1. Set the Body-Surface- switch for “Surface” for wide range surface measurements of most materials.
2. Hold the meter by its handle and point it toward the surface to be measured.
3. Press the trigger to turn the meter on and take a temperature reading. The temperature reading appears in the large display and the logged data number and value appear in the smaller display.
4. Release the Trigger and the reading will hold for approximately 7 seconds after which the meter will automatically shut off. Trigger presses can occur up to a rate of one a second to quickly log samples.
5. If the temperature goes above 140°F or 60°C, “Hi” will appear in the display. If the temperature goes below 32°F or 0°C, “Lo” will appear in the display.

SurfaceTemperature Mode settings

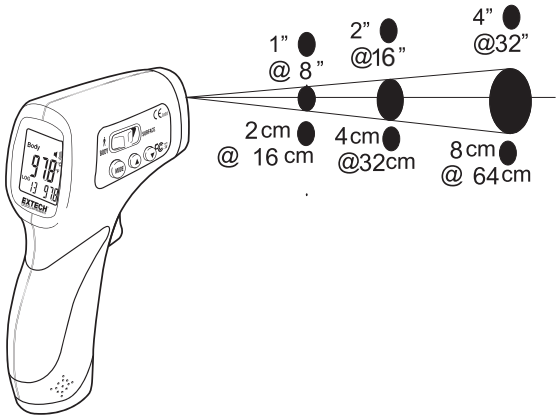
1. With the meter OFF, press the MODE button once to set the C/F temperature units. The temperature units will flash. Press the ▲or ▼ buttons to change the units.
2. Press the MODE button a second time to set the alarm temperature limit. Press the ▲or ▼ buttons to change the value.
3. Press the MODE button a third time to set the alarm buzzer status. Press the ▲or ▼ buttons to switch from ON to OFF.

Data memory

To review the logged data points, press both the ▲ and ▼ buttons while the unit is OFF. Use the ▲ or ▼ buttons to scroll through the memory locations. To clear logged data, select the "0" memory location and press the MODE button. The unit will beep twice to indicate memory has been cleared.

Field of View

The meter's field of view is 8:1. For example, if the meter is 8" (20cm) from the target (spot), the diameter of the target must greater than 1" (2.5cm). Other distances are shown in the field of view diagram. Measurements should normally be made as close as possible to the device under test. The meter can measure from greater distances but the measurement may be affected by external sources of light. In addition, the spot size may be so large that it encompasses surface areas not intended to be measured.



Battery Replacement

When the low battery symbol appears on the display, replace the meter's battery. The battery compartment is located on the bottom of the handle. Open the compartment by removing one screw and sliding the cover off. Replace the (2) "AA" batteries and close the battery compartment cover.

IR Measurement Notes

1. The object under test should be larger than the spot (target) size calculated by the field of view diagram (printed on the side of the meter and in this guide).
2. Before measuring, be sure to clean surfaces that are covered with frost, oil, grime, etc.
3. If an object's surface is highly reflective, apply masking tape or flat black paint to the surface before measuring. Allow time for the paint or tape to adjust to the temperature of the surface it is covering.
4. Measurements through transparent surfaces such as glass may not be accurate.
5. Steam, dust, smoke, etc. can obscure measurements.
6. The meter automatically compensates for deviations in ambient temperature. However, it can take up to 30 minutes for the meter to adjust to extremely wide changes.

Specifications

	Range	Accuracy
Body Temp	86.0 to 109°F (30 to 43°C)	±0.5°F/0.3°C
Surface Temp	32.0 to 140°F (0 to 60°C)	±1.5°F/0.8°C

Emissivity	0.95 fixed
Field of View	D/S = Approx. 8:1 ratio (D = distance; S = spot *or target*)
IR Spectral response	6 to 14 μm (wavelength)
Display	Backlit LCD display with function indicators
Response time	500ms
Over range indication	"Hi" or "Lo"
Operating Temperature	32°F to 122°F (0°C to 50°C)
Operating Humidity	10% to 90%RH operating, <80%RH storage.
Storage Temperature	-4 to 140°F (-20 to 60°C)
Power Supply	(2) AA" Batteries
Automatic Power Off	7 seconds (approx.),
Weight	6.24oz. (177g)
Dimensions	6.3 x 3.2 x 1.7" (160 x 82 x 42mm)

Calibration and Repair Services

Extech offers repair and calibration services for the products we sell. Extech also provides NIST certification for most products. Call the Customer Service Department for information on calibration services available for this product. Extech recommends that annual calibrations be performed to verify meter performance and accuracy.

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Support line (781) 890-7440

Technical support: Extension 200; E-mail: support@extech.com

Repair & Returns: Extension 210; E-mail: repair@extech.com

Product specifications subject to change without notice

For the latest version of this User's Guide, Software updates, and other up-to-the-minute product information, visit our website: www.extech.com

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