

DUAL

**EAR/FOREHEAD
THERMOMETER**

BIOS
Diagnostics[™]



**INSTRUCTION
MANUAL**

194DI Dual Ear/Forehead Thermometer

Instruction Manual

Table of Contents

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|----|---|
| 1 | Important Safety Instructions |
| 2 | Product Diagram |
| 3 | How this Thermometer Measures Temperature |
| 4 | Directions for Use - Ear Mode |
| 5 | Directions for Use - Forehead Mode |
| 6 | Fever Alarm |
| 7 | Changing from Celsius to Fahrenheit |
| 8 | Memory Storage |
| 9 | Measuring Surface Temperatures |
| 10 | Care and Cleaning |
| 11 | Battery Replacement |
| 12 | Technical Specifications |
| 13 | Troubleshooting |
| 14 | Lifetime Warranty |
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Dual Ear/Forehead Thermometer

Thank you for purchasing the BIOS Diagnostics™ Dual Ear/Forehead Thermometer.

The BIOS Diagnostics™ Dual Ear/Forehead Thermometer is a high quality product incorporating the latest technology and tested in accordance with international standards.

With its unique technology, this thermometer can provide safe, accurate and reliable readings with each measurement on people over 2 years of age.

Features:

Multiple Uses (Wide Range Measurement)

This thermometer offers a wide measurement range feature from 0°C to 100.0°C (32.0°F to 212.0°F), meaning the unit can be used as a forehead or an ear thermometer to measure body temperature or it can be used to measure surface temperature of the following:

- Milk surface temperature in a baby's bottle
- Surface temperature of a baby's bath
- Ambient temperature

Measurement in a matter of seconds

The innovative infrared technology allows measurement of ear temperature in only 1 second and forehead temperature in only 3 seconds.

Auto-Display Memory

The last reading is automatically displayed for 2 seconds when the unit is switched ON.

Multiple Reading Recall

Users will be able to recall the last 12 readings when entering the recall mode, enabling efficient tracking of temperature variations.

Fever Alarm

10 short beeps and a red LCD backlight alerts the patient that he/she may have a temperature above 37.4°C/99.3°F.

Please read these instructions carefully before using this thermometer and keep both in a safe place.

1. IMPORTANT SAFETY INSTRUCTIONS

This instrument may only be used for the purposes described in this booklet. The manufacturer cannot be held liable for damage caused by incorrect application.

Never immerse this instrument in water or other liquids. For cleaning please follow the instructions in the «Care and Cleaning» section.

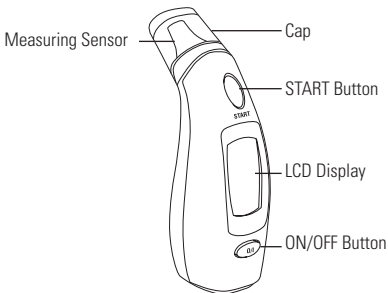
- Do not use the instrument if there are any signs of damage. Do not attempt to repair the instrument.
- Earwax in the ear canal may cause a lower temperature reading. Therefore it is important to ensure the patient's ear canal is clean.
- A basic physiological effect called vasoconstriction can occur in the early stages of fever, resulting in a "cool skin effect", which shows the recorded temperature using a forehead thermometer may be suspiciously low.
- If the measurement result is not consistent with the patient's finding or suspiciously low, repeat the measurement every 15 minutes or double check the result by another core body temperature measurement.

- This thermometer consists of high quality precision parts. Do not drop this instrument. Protect it from severe impact and shock.
- Keep the thermometer away from direct exposure to the sun and keep it in a dust-free dry area.
- If the instrument is not going to be used for a prolonged period the battery should be removed.

WARNING:

- Use of this thermometer is not intended as a substitute for consultation with your physician.
- Ensure that children do not use the instrument unsupervised; some parts are small enough to be swallowed.
- It is not recommended to use infrared thermometers on children under 2 years of age.
- Infrared thermometers should not be used to manage important health concerns, and therefore parents should not rely solely on temperature readings to evaluate the status of your child's health. If you have any concerns, consult with your doctor.

2. PRODUCT DIAGRAM



3. HOW THIS THERMOMETER MEASURES TEMPERATURE

Forehead Measurement

The thermometer measures infrared energy radiated from the skin above the eyebrow area and the surrounding tissue. This energy is collected through the lens and converted to a temperature value.

Temperature readings obtained by scanning above the eyebrow area will provide the greatest accuracy.

Ear Measurement

This thermometer measures infrared energy radiated from the eardrum and the surrounding tissue. This energy is collected through the lens and converted to a temperature value. The measured reading obtained directly from the eardrum (Tympanic Membrane) ensures the most accurate ear temperature.

Measurements taken from the surrounding tissue of the ear canal generate lower readings and may result in misdiagnosis of fever.

4. DIRECTIONS FOR USE - EAR MODE

IMPORTANT: If using the thermometer for the first time, remove the plastic strip located in the battery compartment.

1. If the forehead probe is attached, remove to setup thermometer in Ear Mode.
2. Switch on the thermometer by pressing the **ON/OFF** button. The last measurement reading will automatically be shown on the display for 2 seconds with the “**M**” icon.
3. The thermometer is ready for use after you see the “?” icon on the display screen and one beep is heard.
4. Straighten the ear canal by gently pulling the middle of the ear back and up.
5. Place the probe firmly into the ear canal, press the **START** button and keep the probe in the ear until the thermometer beeps to signal the completion of the measurement.




Ages 2 years to adult

NOTE:

- Always insert the thermometer in the same ear with the same direction and depth.

- Always clean the probe accordingly before and after each use (See Care and Cleaning).
- It is recommended that you measure the temperature 3 times in the same ear. If the 3 measurements are different, select the highest one. (Allow 30 seconds between each measurement).
- Before measurements, remain in a stable environment and avoid exercise and bathing for 30 minutes.

5. DIRECTIONS FOR USE - FOREHEAD MODE

1. If probe is not attached, attach following the steps below:
Attaching Forehead Probe: underneath the measuring probe you will see a small silver button. When attaching the forehead probe line up the silver probe line up the silver button with the extended plastic piece on the inside of the forehead probe.
2. Press the **ON/OFF** button. The last measurement reading will automatically be shown on the display for 2 seconds with the “**M**” icon.
3. When the “” icon is displayed on the screen and a beep sound is heard, the thermometer is ready for measurement.
4. Place the probe gently onto the area approximately 1 cm above the center of the eyebrow. If the eyebrow area is covered with hair, sweat or dirt, please remove the obstacle beforehand to improve the reading accuracy.



5. Press the **START** button once and release it. Start to move the instrument steadily from 1 cm above the center of the eyebrow to the temple area. A long beep sound will emit after 3 seconds to acknowledge the completion of measurement. If the probe movement is too slow to reach the temple area before the long beep sound is heard, repeat the measurement as described above, but simply move the probe a little quicker this time.
6. Read the recorded temperature from the LCD display.

NOTE:

- Don't take a measurement while or immediately after nursing a baby.
- Don't use the thermometer in high humidity environments.
- Don't move the measurement device from the measuring area before hearing the thermometer beep.
- Always take the temperature in the same location, since temperature readings may vary according to location.
- Before measurement, remain in a stable environment and avoid exercise and bathing for 30 minutes prior.
- Always clean the probe accordingly (see Care and Cleaning) before and after each use.
- It is not recommended to use infrared thermometers on children under 2 years of age.
- Use of this thermometer is not intended as a substitute for consultation with your physician.

6. FEVER ALARM

If the thermometer detects a body temperature greater than 37.4°C/99.3°F, it will make 10 short beeping sounds and the LCD will light up RED, indicating a potential fever.

7. CHANGING BETWEEN CELSIUS AND FAHRENHEIT

This thermometer can display temperature measurements in either Celsius or Fahrenheit. To switch the display between °C and °F, simply turn OFF the unit, press and hold the **START** button for 5 seconds; after 5 seconds, the current measurement scale (°C or °F icon) will flash on the display



. Change the measurement scale between °C and °F by pressing the **START** button. When the measurement scale has been chosen, wait for 5 seconds and the unit will automatically enter the ready for measuring mode.

8. MEMORY STORAGE

This thermometer recalls the last 12 readings.



- **Recall mode**

Press the **START** button to enter Recall mode when the power is off. The memory icon << **M** >> will flash.



- **Reading 1 - the last reading**

Press and release the **START** button to recall the last reading. Display 1 alone with memory icon.

- **Reading 12 - reading in succession:**

Press and release the **START** button consecutively to recall the last 12 readings in succession.

Pressing and releasing the **START** button after the last 12 readings have been recalled will resume the above sequence from reading 1.

9. MEASURING SURFACE TEMPERATURES


1. Remove the forehead probe.
2. Press the **ON/OFF** button, after one beep sounds the thermometer is ready for use.
3. Aim the thermometer probe at the desired surface and press the **START** button.

10. CARE AND CLEANING

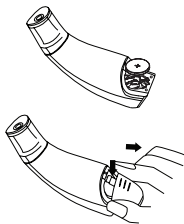
Use an alcohol swab or cotton tissue moistened with alcohol (70% Isopropyl) to clean and disinfect the thermometer casing and the measuring probe. Ensure that no liquid enters the interior of the thermometer. Never use abrasive cleaning agents, thinners or benzene for cleaning and never immerse the instrument in water or other cleaning liquids. Take care not to scratch the surface of the probe lens and the display.

11. BATTERY REPLACEMENT

This instrument is supplied with one lithium battery type, CR2032.

Replace with a new CR2032 battery when the flashing battery symbol  appears on the display.

Remove the battery cover by sliding it in the direction shown. Remove the battery and replace with a new one.

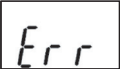


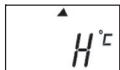
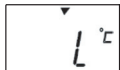




12. TECHNICAL SPECIFICATIONS

Type :	Dual Ear/Forehead Mode Thermometer 194DI
Measurement range:	Ear Mode: 0°C to 100.0°C/32°F to 212.0°F Forehead Mode: 34°C to 42.2°C/93.2°F to 108.0°F
Resolution:	0.1°C/°F
Measurement accuracy:	Laboratory: +/- 0.2°C, 32°C to 42.2°C/ +/-0.4°F, 89.6°F to 108.0°F
Display:	Liquid C rystal D isplay, 4 digits plus special icons

Acoustic:	<ul style="list-style-type: none"> • The unit is turned ON and ready for the measurement: 1 short beep • Complete the measurement: <ul style="list-style-type: none"> 1 long beep (1 second) if the reading is less than 37.5°C/99.5°F, 10 short beeps sound, if the reading is equal to or greater than 37.5°C/99.5°F • System error or malfunction: 3 short beep sounds
Memory:	<ul style="list-style-type: none"> • Auto-Display the last measured temperature • 12 readings recall in the Memory Mode
Backlight:	<ul style="list-style-type: none"> • The display light will be GREEN for 4 seconds, when the unit is turned ON. • The display light will be GREEN for 5 seconds, when a measurement is completed with a reading less than 37.5°C/99.5°F • The display light will be RED for 5 seconds, when a measurement is completed with a reading equal to or higher than 37.5°C/99.5°F
Operating Temperature:	<p>Ear Mode: 5°C to 40°C/41°F to 104°F</p> <p>Forehead Mode: 16°C to 40.0°C/60.8°F to 104.0°F</p>
Storage Temperature:	-25°C to 55°C/-13°F to 131°F
Automatic Switch-off:	Approximately 1 minute after last measurement has been taken.
Battery:	CR2032 Battery 3V - at least 1,000 measurements
Dimensions:	107 (L) x 50 (W) x 34 (H) mm
Weight:	55 g (with battery), 52 g (without battery)
Reference to Standards:	Complies with ASTM E-1965 requirements

13. TROUBLESHOOTING

Error Message	Problem	Solution
	The system is not functioning properly.	Unload the battery, wait for 1 minute and repower it.
	Temperature taken is higher than 100.0°C/212.0°F in the ear mode or 42.2°C/108.0°F in the forehead mode.	
	Temperature taken is lower than 0°C/32.0°F in the ear mode or 34.0°C/93.2°F in the forehead mode.	
	Ambient temperature is higher than 40.0°C/104.0°F.	
	Ambient temperature is lower than 16.0°C/60.8°F.	

	<p>Please check if the steady battery icon is the only symbol shown on the display.</p>	<p>Battery should be replaced immediately.</p>
	<p>Please check if the battery has been loaded correctly.</p>	<p>Reinstall the battery. Check the polarity of the battery.</p>

14. LIFETIME WARRANTY

This product is warranted to be free from defects in material or workmanship for the life of the original owner. It will be repaired or replaced without charge upon receipt of the unit prepaid with \$5.00 to cover handling, packaging and return postage to the address below. Please include your full name, address and daytime phone number or email address.

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