BIOS
Diagnostics ™/MC

PRECISION
⊕TEMP

1 SECOND
EAR THERMOMETER
with **❖ Bluetooth**®
Instruction Manual
Model: 240DI

CLINICAL ACCURACY
PRECISION CLINIQUE

240DI
PrecisionTemp 1 Second Ear Thermometer
with Bluetooth®
Instruction Manual

Table of Contents

PrecisionTemp 1 Second Ear Thermometer

Thank you for purchasing the BIOS Diagnostics PrecisionTemp 1 Second Ear Thermometer. This 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.

1. 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 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 1 Second

The innovative infrared technology allows measurement of ear temperature in only 1 second.

Multiple Reading Recall

Users will be able to recall the last 30 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 37.5°C / 99.5°F.

Illuminated Probe

This thermometer includes a probe LED light which enables the user to find the correct ear position in the dark. The probe will illuminate for approximately 10 seconds when the thermometer is turned ON.

"Clean Me" Technology

After each temperature measurement "clean me" will flash on the LCD to remind users to clean the probe. See Care and Cleaning section.

Accurate and Reliable

The unique probe assembly construction incorporates an advanced infrared sensor, ensuring that each measurement is accurate and reliable.

Free PrecisionTemp App

This thermometer accurately tracks each family member's temperature and connects via Bluetooth® to the FREE PrecisionTemp App. The App warns parents when a fever is rising and when to consult with a medical professional.

Includes normal temperature ranges, measurement techniques and symptoms parents should watch for.

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

2. Important Safety Instructions

This thermometer 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 thermometer if there are any signs of damage. **Do not** attempt to repair the thermometer.
- Earwax in the ear canal may cause a lower temperature reading, therefore it is important to ensure the patient's ear canal is clean.
- 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 thermometer is not going to be used for a prolonged period the battery should be removed.
- Battery cover should be installed correctly before use to avoid potential risk of electric shock.

⚠ 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.
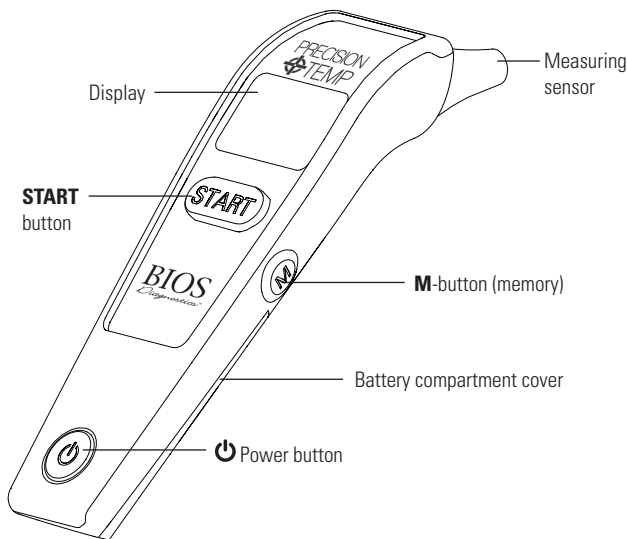
Using the unit in the immediate vicinity of mobile phones, microwave appliances or other devices with strong electromagnetic fields may result in impaired functioning.

Do not use this device close to strong electromagnetic fields, such as mobile telephones or radio installations. Keep a distance from such devices when using this unit.

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

(1) this device may not cause interference, and

(2) this device must accept any interference, including interference that may cause undesired operation of the device.

3. Product Diagram

- Display
- **START** button
- BIOS *Diagnostics*
- ⏻ Power button
- Measuring sensor
- **M**-button (memory)
- Battery compartment cover
- PRECISION TEMP

4. How This Thermometer Measures Temperature

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.

5. Setting The Date And Time

1. When using the Ear Thermometer for the first time please remove the plastic strip located in the battery compartment.
2. Once the Ear Thermometer is powered up, the year digits will flash on the screen. Or by pressing and holding the **M**-button for 3 seconds the year digits will flash. Press the **START** button to set the year digits. Press the **M**-button to confirm.
3. Next the month and day will appear on the screen. Press the **START** button to set the month digits. Press the **M**-button to confirm.
4. Follow the same process to set the day, 12/24 hour mode, hours and minutes.

MONTH DAY 12-08	24:00 TIME	12:08 TIME
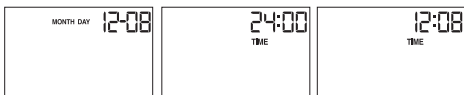
5. Once you have set the minutes and pressed the **M**-button the date and time are set and the time is displayed.
   - If no button is pressed for 20 seconds, the thermometer automatically switches to the measuring screen and you are ready to take a reading.
   - To cancel time setup, press the ⏻ button during time setup. The LCD will show Date / Time icons with "--:--". Press the ⏻ button to start the measurement. If no further action is taken within 60 seconds, the thermometer will automatically turn OFF.

6. Directions For Use

PLEASE NOTE: When you turn the thermometer on by pressing the ⏻ button, all segments of the screen will be shown for 1 second and one beep is heard. **(Figure 1)**
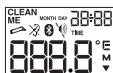
Figure 1

1. When the thermometer is ready to take a reading the °C or °F icon will be flashing, and you will see -- - on the screen.
2. Straighten the ear canal by gently pulling the middle of the ear back and up.

3. 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. The probe LED light will turn OFF once the **START** button is pressed to take the measurement.

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 section).
- 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.
- Readings from different measuring sites should not be compared as the normal body temperature varies by measuring site and time of day, being highest in the evening and lowest about one hour before waking up.

Normal body temperature ranges:
- Ear: 35.4 – 37.4°C / 95.7 – 99.3°F
- Axillary / Underarm: 34.7 – 37.3°C / 94.5 – 99.1°F
- Oral: 35.5 – 37.5°C / 95.9 – 99.5°F
- Rectal: 36.6 – 38.0°C / 97.9 – 100.4°F

7. Setting The Beeper

1. When the thermometer is OFF, press and hold the ⏻ button for 5 seconds to set the beeper.
2. Press the ⏻ button again to either turn the beeper ON or OFF. The beeper is activated when the beeper icon is not crossed out. **(Figure 2)**

NOTE: If no button is pressed for 5 seconds, the thermometer automatically switches to measuring mode.
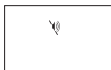

Figure 2

8. Fever Alarm

If the thermometer detects a body temperature greater than 37.5°C / 99.5°F, it will make 10 short beeping sounds and the LCD will light up RED, indicating a potential fever.

9. Changing Between Celsius And Fahrenheit

1. 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 **(Figure 3)**.

Figure 3

2. 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.
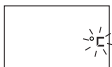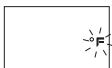
10 . Memory Storage

This thermometer recalls the last 30 readings.

- **Recall mode:** Press the **M**-button to enter Recall mode when the power is OFF. The memory icon << M >> will flash. **(Figure 4)**

Figure 4

- **Reading 1 - the last reading:** Press and release the **M**-button to recall the last reading. Number 1 and a flashing M are displayed. **(Figure 5)**

Figure 5

- The last reading displays the date and time of reading and the temperature taken. **(Figure 6)**
- **Reading 30 - readings in succession:** Press and release the **M**-button consecutively to recall the last 30 readings in succession. Pressing and releasing the **M**-button after the last 30 readings have been recalled will resume the above sequence from reading 1.
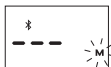
Figure 6

11. Measuring Surface Temperatures

1. Press the ⏻ button. After one beep sounds, the thermometer is ready for use.
2. Aim the thermometer probe at the desired surface and press the **START** button.

12. Bluetooth® And PrecisionTemp App

The App will work with the following operating systems:

iOS Support: iPhone 5, iPhone 5s, iPhone 6, iPhone 6p, 6s, 6sP, iOS 7, 7.1, and up, Bluetooth® 4.0

Android: System 4.3 and up, Bluetooth® 4.0

This ear thermometer and PrecisionTemp App can work independently of each other. You do not need to have the App running when you take a measurement with the ear thermometer. The measurements can be uploaded after you have taken a temperature.

1. To begin using the free PrecisionTemp App, download and install onto your smartphone or tablet.

 App Store   Google play   PrecisionTemp

2. Open the PrecisionTemp App. You will need to select what you are using this App for, Fever or Ovulation temperature monitoring. Select fever.

3. Once selected you will need to register a username and password. The App will ask you to create an account with an email and password of your choosing. Once this information is confirmed you can log into the App.
   Note: If you have another BIOS Diagnostics Bluetooth® product and App, you have to create a different username and password

4. Once in the App, you will be in the "Create a new Profile" screen. Here is where you can create all your profiles for your family members. You can enter a profile picture, gender, date of birth, medical history, medications, and doctor information. Once you have saved this information it will take you to the home screen. For your initial set up of the App you have to complete one profile set up before you can log out of the App.

5. On the home screen at the top you will see
   PrecisionTemp Status: Pull down to pair. Slide your finger down the screen and the App will start to locate your ear thermometer. Turn on the ear thermometer; you will now see connecting at the bottom of the home screen on the App. Once connected, **pull down to unpair** will now be on the screen.

6. You can now proceed to take an ear temperature reading. Once you are finished, the App will update the information under the profile of the person you are currently in. Here you can also include any symptoms or medications that you would like to record.

Important: If the time and date are not set on the ear thermometer, when you take a temperature reading and then download that reading to the App, the reading will not appear in the History Measurement screen.

Please Note: When you are taking a measurement, the Bluetooth® signal will disconnect and then reconnect once finished taking a measurement and will update to the App.

For more information on the App and how to use it, visit our website www.biosmedical.com or call our BIOS Medical Hotline: 1-866-536-2289

13. 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.

14. Battery Replacement

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

1. The battery needs replacing when only the ▼ icon is shown on the display. **(Figure 7)**

Figure 7

2. Remove the battery cover by loosening the screw with a screwdriver and then removing the battery cover by sliding it in the direction shown. Remove the battery and replace with a new one.
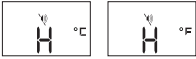
NOTE: Battery cover should be installed correctly before use to avoid potential risk of electric shock.
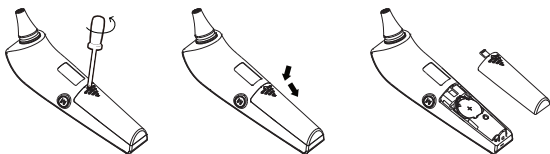
15. Error Messages

Display	Error
❄))) H °C ❄))) H °F	**Measured temperature too high:** Displays "H" when measured temperature is higher than 100°C / 212°F
❄))) L °C ❄))) L °F	**Measured temperature too low:** Displays "L" when measured temperature is lower than 0°C / 32°F
))) H °C))) H °F	**Ambient temperature too high:** Display "H" when ambient temperature is higher than 40.0°C / 104.0°F.

[L °C icon] [L °F icon]	**Ambient temperature too low:**	
	Displays "L" when ambient temperature is lower than 10.0°C / 50.0°F.	
[Err icon]	**Error function display:**	
	The system has a malfunction	
	Make sure the probe (sensor) is clean and doesn't have any ear wax buildup.	
	Allow 30 minutes for the thermometer to acclimate to the environment temperature where the thermometer is being used before starting measurements	
[blank display]	**Blank display:**	
	Check if the battery has been loaded correctly. Also check polarity of the battery.	
[blank display with ▼ icon]	**Flat battery indication:**	
	If only the "▼" icon is shown on the display, the battery should be replaced immediately.	

16. Technical Specifications

Type	PrecisionTemp 1 Second Ear Thermometer with Bluetooth® 240DI
Measurement Range	0°C to 100.0°C/32°F to 212.0°F
Resolution	0.1°C/°F
Measurement Accuracy	Body mode: ±0.2°C, 35.0 - 42.0°C / ±0.4°F, 95.0 - 107.6°F ±0.3°C, 32.0 - 34.9°C and 42.1 - 43.0°C / ±0.5°F, 89.6 - 94.8°F and 107.8 - 109.4°F Object mode: ±1.0°C, 0 - 100.0°C / ±2°F, 32.0 - 212°F
Display	**L**iquid **C**rystal **D**isplay, 4 digits plus special icons

Acoustic	• The unit is turned ON and ready for the measurement: 1 short beep • Complete the measurement: 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	• Auto-Display the last measured temperature • 30 readings recall in the Memory Mode
Backlight	• The display light will be **GREEN** for 1 second, 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/99.3°F
Operating Temperature	10°C to 40°C/50°F to 104°F 15% - 95% relative maximum humidity
Storage Temperature	-25°C to 55°C/-13°F to 131°F 15% - 95% relative maximum humidity
Automatic Switch-Off	Approximately 1 minute after last measurement has been taken.
Battery	CR2032 Battery 3V - at least 700 measurements
Expected Service Life	5 years
Dimensions	139 (L) x 39 (W) x 42 (H) mm
Weight	54.5 g (with battery), 51 g (without battery)
Reference to Standards	EN 12470-5; ASTM E1965; IEC 60601-1; IEC 60601-1-2 (EMC), IEC 60601-1-11 This device complies with the requirements of the Medical Device Directive 93/42/EEC.

Follow Instructions for Use. This document provides important product operation and safety information. Please read this document thoroughly before using the device and keep for future reference.

Type BF Applied part

Batteries and electronic devices must be disposed of in accordance with the locally Applicable regulations, not with domestic waste.

IP22: Protected against solid foreign objects of 12.5 mm diameter and greater. Protected against vertically falling water drops when the device is tilted up to 15°.

17. 5 Year Warranty

PrecisionTemp 1 Second Ear Thermometer has a 5 year warranty to be free of manufacturing defects for the life of the original owner. The warranty does not cover damage from misuse or tampering.

100% Satisfaction Guarantee

If at any time, you are not completely satisfied with the performance of this device, call our BIOS Medical Hotline and speak with a customer service representative, who will make arrangements to have the device repaired or replaced to your full satisfaction.

If you have questions regarding the operation of your thermometer call the **BIOS Medical Hotline: 1-866-536-2289**

Should repair be necessary, return the unit with all component pieces. Enclose proof of purchase and $5.00 for return shipping and insurance. Ship the unit **prepaid** and insured (at owners option) to:

> **Thermor Ltd.**
> Repair Department
> 16975 Leslie Street
> Newmarket, ON L3Y 9A1
> www.biosmedical.com
> Email: support@biosmedical.com

Please include your name, return address, phone number, and email address. Thermor will repair or replace (at Thermor's option) free of charge any parts necessary to correct the defect in material or workmanship.

Please allow 10 days for repair and return shipping.