

BIOS

Diagnostics TM/UK

 **MediLink**

1 SECOND

EAR THERMOMETER

with  **Bluetooth®**

Instruction Manual

Model: 240DI



01.02.2023

240DI

1 Second Ear Thermometer with Bluetooth® Instruction Manual

Table of Contents

1	Features	
2	Important Safety Instructions	
3	Product Diagram	
4	How this Thermometer Measures Temperature	
5	Setting Date and Time	
6	Directions for Use	
7	Setting the Beeper	
8	Fever Alarm	
9	Changing Between Celsius and Fahrenheit	
10	Memory Storage	
11	Measuring Surface Temperatures	
12	Bluetooth® & MediLink App	
13	Care and Cleaning	
14	Battery Replacement	
15	Error Messages	
16	Technical Specifications	
17	5 Year Warranty	

1 Second Ear Thermometer with Bluetooth

Thank you for purchasing the BIOS Diagnostics 1 Second Ear Thermometer with Bluetooth. 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.

Indications for Use:

This digital ear thermometer (240DI) is intended to measure the human body's temperature in regular mode, within the ear canal from energy radiated from the eardrum and the surrounding tissue. This device was designed to be reusable for clinical or home use, 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 they 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 MediLink App

This thermometer accurately tracks each family member's temperature and connects via Bluetooth® to the FREE MediLink App. The App provides health insights on fevers, and when to contact a healthcare 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 a healthcare professional.

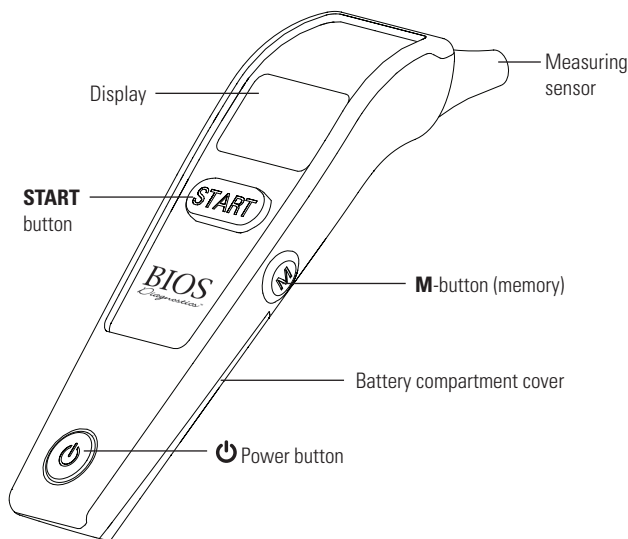
Using the unit in the immediate vicinity of mobile phones, microwave appliances, or other devices with strong electromagnetic fields may result in impaired functioning.

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



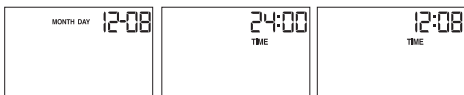
4. How This Thermometer Measures Temperature

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.



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 **ON** button. The LCD will show Date / Time icons with "--:--". Press the **ON** button to start the measurement. If no further action is taken within 60 seconds, the thermometer will automatically turn OFF.
 - If the time and date need to be changed at a later time, press and hold the **M** button, while the thermometer is OFF, until the year digits start to flash. Follow steps above to update the time and date

6. Directions For Use

PLEASE NOTE: When you turn the thermometer on by pressing the **ON** 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**).
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.

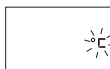
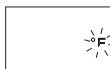


Figure 3



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**)
- **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**)
- 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.
- **Deleting memory:** If you want to permanently delete all stored memory in the thermometer, press and hold the **START** button, when in memory mode, until CLR appears. Then press the **START** button again, the screen will show PASS and the memory will be deleted.

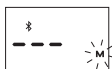


Figure 4



Figure 5



Figure 6

11. Measuring Surface Temperatures

1. Press the **ON** 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 MediLink App

For the most up to date information on what Android and iOS operating systems are compatible with our device applications please visit: biosmedical.com, the Apple Store, or the Play Store.

PLEASE NOTE: Android and iOS system and software updates may render the app obsolete on older devices.

This thermometer and the MediLink App can work independently of each other. However, you will want to pair the thermometer and the App before using the thermometer, as it will send the reading to the App once it is completed.

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



2. Turn ON Bluetooth on your device.
3. Open the MediLink App. First time users, will need to register and create a password.
4. With the app open to the temperature tab, select 'Add Thermometers'.
(Figure 7)
5. Select your device from the list of thermometers. **(Figure 8)**
6. Follow the instructions on your phone screen to pair the device. A pop up asking you 'Is this your thermometer?' will appear. Select Yes. **(Figure 9)**
- ***Note:** Ensure that Bluetooth settings are enabled on your phone before attempting to pair.
7. Device has paired successfully when you can see the device listed at the bottom of your app home screen. **(Figure 10)**

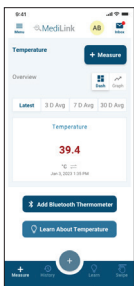


Figure 7

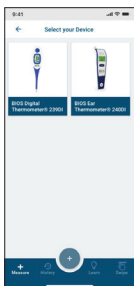


Figure 8



Figure 9

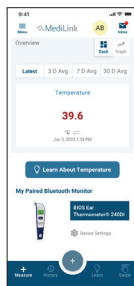


Figure 10

Note: 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.

It is important to clean the thermometer before and after each use. A build up of ear wax on the lens reduces the infrared picked up by the sensor, which can result in lower temperatures. Ear wax is also acidic and can corrode the lens of the thermometer if not cleaned regularly.

14. Battery Replacement

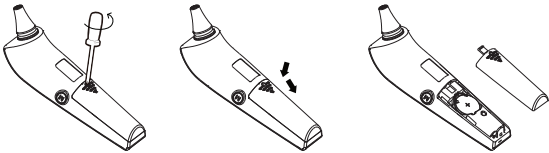
This thermometer is supplied with one lithium battery type, CR2032.

1. The battery needs replacing when only the ▼ icon is shown on the display. **(Figure 11)**
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.

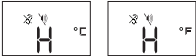
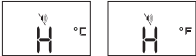
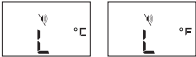


Figure 11

NOTE: Battery cover should be installed correctly before use to avoid potential risk of electric shock.



15. Error Messages

Display	Error
	Measured temperature too high: Displays "H" when measured temperature is higher than 100°C / 212°F
	Measured temperature too low: Displays "L" when measured temperature is lower than 0°C / 32°F
	Ambient temperature too high: Display "H" when ambient temperature is higher than 40.0°C / 104.0°F.
	Ambient temperature too low: Displays "L" when ambient temperature is lower than 10.0°C / 50.0°F.
	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: Check if the battery has been loaded correctly. Also check polarity of the battery.
	Flat battery indication: If only the "▼" icon is shown on the display, the battery should be replaced immediately.

16. Technical Specifications

Type	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	Liquid Crystal Display, 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

The 1 Second Ear Thermometer with Bluetooth 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 tested 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 correction 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.

Returns 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 test 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 return shipping.

BIOS | Medical

 MANUFACTURED BY/FABRIQUÉ PAR :

THERMOR LTD.

16975 LESLIE STREET

NEWMARKET, ON L3Y 9A1

MADE IN CHINA/FABRIQUÉ EN CHINE

WWW.BIOSMEDICAL.COM

