

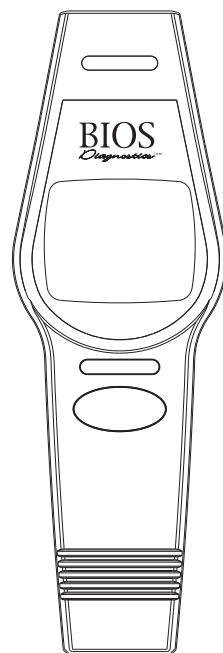
# BIOS

Diagnostica™

## Non-Contact Forehead Thermometer 275DI

### Instruction Manual

04.20.20



### Introduction








- Your new infrared forehead thermometer uses advanced infrared (IR) technology to measure temperature instantly and accurately on the forehead or an object/surface.
- Easy to use and less measurement time**  
To ensure safety and hygiene, this thermometer does not need to make contact with the body or an object. Its ergonomic design makes this thermometer simple and very easy to use. It only takes 1 second to take a forehead measurement.
- Body and object modes**  
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 thermometer to measure body temperature or it can be used to measure object/surface temperature of the following:
  - Milk surface temperature in a baby's bottle
  - Surface temperature of a baby's bath
  - Ambient temperature
- Colour visible indication of alarm and alarm sounds**  
When body temperature is 37.5°C (99.5°F) or higher, LED light indicator will light up red and an alarm sounds 10 times.
- Memory function**  
Thermometer stores 20 measurements.
- Auto power off**  
Automatically power off if left idle for approximately 60 seconds.
- Measurement**  
Measurement time interval in 1 second and the measurement distance is within 1-3 cm.
- Please read the manual carefully before you use the unit and keep for future reference.
- Intended Use:**  
The Non-Contact Forehead Thermometer is intended for the intermittent measurement and monitoring of human body temperature from the forehead or an object.


### Safety Information

To assure the correct use of the product, basic safety measures should always be followed including the warning and the caution listed in the instruction manual:

#### Symbol Descriptions:

The following symbols may appear in this manual, on the label, on the device or on its accessories. Some of the symbols represent standards and compliances associated with the device and its use.

	<b>WARNING:</b> This alert identifies hazards that may cause serious personal injury or death.
	<b>CAUTION:</b> This alert identifies hazards that may cause minor personal injury, product damage, or property damage.
	Type BF applied part
	Manufacturer
	<b>Disposal:</b> Do not dispose this product as unsorted municipal waste. Collection of such waste separately for special treatment is necessary.
	Direct current
	Follow instructions for use

- Use of this thermometer is not intended as a substitute for consultation with your physician. 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.
- Basic safety precautions should always be observed, especially when the thermometer is used on or near children and disabled persons.
- Ensure that children do not use the instrument unsupervised; some parts are small enough to be swallowed.
- Avoid direct sunlight
- Do not** touch the lens
- No modifications of this device is allowed
- Do not** use a dilution agent, alcohol or petrol to clean the unit
- Treat the thermometer gently and do not allow the thermometer to fall from high places, this may damage the internal components of the thermometer
- Do not** immerse the thermometer in liquid
- Never leave the battery in the battery compartment for a long time without use, as the batteries may leak and cause damage to the unit
- Remove the battery if you **do not** intend to use it within 3 months. Replace with new batteries if the unit displays a low battery symbol
- Do not** mix old and new batteries together
- WARNING**  
 **Do not** dispose of electrical appliances as unsorted municipal waste, use separate collection facilities. Contact your local government for information regarding the collection systems available. If electrical appliances are disposed of in landfills or dumps, hazardous substances can leak into the groundwater and get into the food chain, damaging your health and well-being.

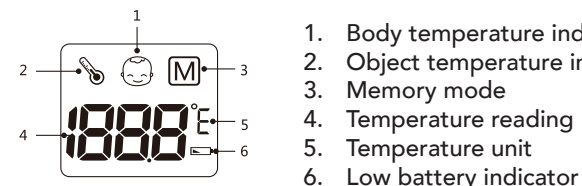
#### Classification

- Internally powered equipment
- Type BF applied part
- IP21: Protected against vertically falling drops of water or condensation
- Not category AP/APG equipment
- Mode of operation: Continuous operation

- The user must check that the thermometer functions safely and see that it is in proper working condition before being used.

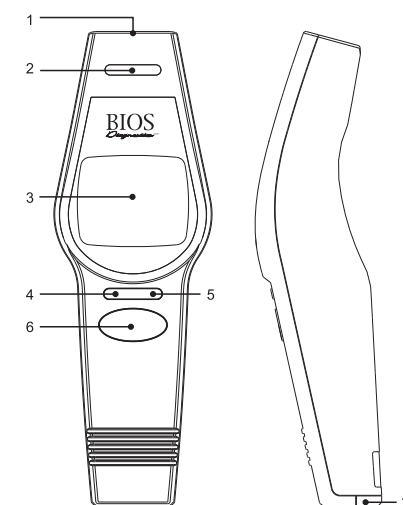
### Product Diagram

#### Display:



- Body temperature indicator
- Object temperature indicator
- Memory mode
- Temperature reading
- Temperature unit
- Low battery indicator

#### Product:

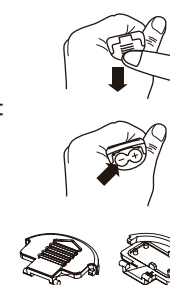


- Auto-sense probe
- LED light indicator
- Display screen
- SET button
- MEM button
- START/STOP button
- Battery cover


### Battery Installation

Remove the battery cover from the battery compartment, insert the battery.

- Remove the battery cover from the battery compartment as the arrow direction indicates in the image.
- Insert 2 x AAA batteries into the compartment and ensure each battery is in the proper direction, Positive (+) and Negative (-) are displayed on the back of the battery cover.
- Close the battery cover.



#### Low battery and replacement

When the thermometer is powered on, the low battery symbol  will display once the unit starts to work. You must replace with new batteries, otherwise the thermometer won't work properly.

#### Battery type and replacement

Use 2 x AAA identical 1.5V alkaline batteries. Do not use the batteries beyond their expiry date. Remove the batteries if you do not need to use the thermometer for a long time.

#### WARNING

Dispose of the battery in accordance with all federal, state and local laws. To avoid fire and explosion hazard, do not burn or incinerate the battery.

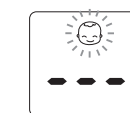
### Getting Started

#### How to Set:

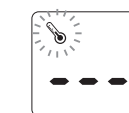
##### 1. Body/Object Mode Setting:

Turn the thermometer ON by pressing the **START/STOP** button. After you hear 1 beep press the **SET** button, the screen will display ☺ or ☹. To switch between body mode ☺ and object mode ☹ press the **SET** button. The thermometer will confirm the mode automatically once its chosen. Setting the mode is finished.

**Note:** The body mode is used to measure the forehead temperature and the object mode is used to measure the object temperature.



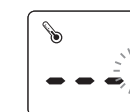
Body Mode



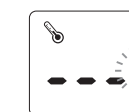
Object Mode

#### 2. Unit Setting:

When the thermometer is turned on and you hear 1 beep, press and hold the **SET** button. The screen will display °C or °F. Press the **SET** button to switch between °C and °F. Press the **START/STOP** button to confirm. The thermometer will now automatically enter the sound switch setting mode.



Celsius (°C)



Fahrenheit (°F)

#### 3. Sound Switching Setting:

Enter the sound switch setting mode, On or Off is displayed on the screen and will flash, press the **SET** button to select and press **START/STOP** button to confirm selection.



### Proper Use of the Unit

#### Pre-Measurement

##### About Normal Body Temperature & Fever

The temperature in the forehead and temple area differs from the internal temperature, which is taken orally or rectally. Vasoconstriction, an effect which constricts the blood vessels and cools the skin can occur during the early stages of a fever. In this case, the temperature measured by the infrared thermometer may be unusually low. If the measurement does not match the patient's own perception or is unusually low, repeat the measurement every 15 minutes. As a reference, you can also measure the internal body temperature using a conventional oral or rectal thermometer. Body temperature can vary from one individual/person to next. It also varies by location on the body and time of day. Below shows the statistical normal ranges from different body sites. Please keep in mind that temperatures measured from different sites, even at the same time, should not be directly compared. Fever indicates that the body temperature is higher than normal. This symptom may be caused by infection, overdressing or immunization. Some people may not experience fever even when they are ill. These include, but are not limited to, infants younger than 3 months old, persons with compromised immune systems, persons taking antibiotics, steroids or antipyretics (aspirin, ibuprofen, acetaminophen), or persons with certain chronic illnesses. Please consult your physician when you feel ill even if you do not have fever.

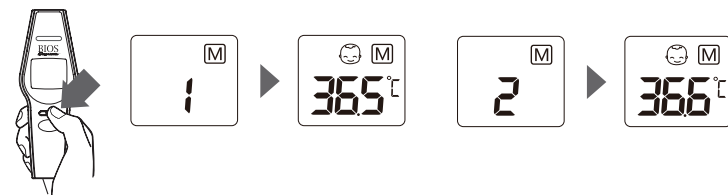
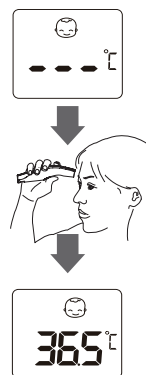
Table 1 – Body Site Normal Temperature Range

Body Site	Normal Temperature Range
Oral	0.6°C (1°F) or more Above or below 37°C (98.6°F)
Rectal/Ear	0.3°C to 0.6°C (0.5°F to 1°F) Higher than oral temperature
Axillary (armpit)	0.3°C to 0.6°C (0.5°F to 1°F) Lower than oral temperature

Note: Body temperature at webMD  
Website: <http://firstaid.webmd.com/body-temperature;>  
retrieved at 2010 Jan 7.

### Using As a Body Thermometer

1. Press the **START/STOP** button, all symbols appear on the display, you will hear 1 short beep, then unit °C/°F on the display will start to flash.
2. Press the **SET** button to select Body Mode, the temperature unit flashes.
3. Move the probe close to the forehead make sure the probe is flat and take measurement with a distance between 1-3 cm. Press the **START/STOP** button, the thermometer will take the measurement.
4. Once the measurement is complete, you will hear 1 short beep and the measurement will be displayed on the screen and the LED light indicator will blink.



### Clearing the Memory

If you are certain you want to delete all stored measurements permanently, press and hold the **MEM** button for 8 seconds until "CLr" appears when the power is off. "CLr" will flash 3 times and 3 short beeps will sound to indicate all stored measurements have been deleted.

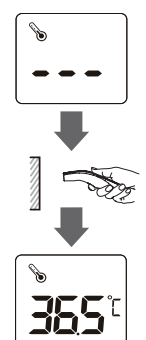


### Note:

- If the reading is <37.5°C (99.5°F), the display and the LED light indicator will be green and 1 short beep will sound.
- If the reading is ≥ 37.5°C (99.5°F) and <43°C (109.4°F), the LED light indicator will be red and 10 short beeps will sound to indicate a fever.
- Only after the °C/°F starts to flash again, the thermometer can take another measurement.
- As the forehead measurement temperature is likely to be affected by sweat, oil and the surroundings, the reading shall be taken as a reference only.
- If the probe is placed at an angle close to the forehead measurement, the reading will be affected by surrounding temperature.
- Babies skin reacts very quickly in the ambient temperature. Therefore, do not take their temperature with the non-contact thermometer during/after breastfeeding, because the skin temperature maybe lower than the internal body temperature.

### Using As an Object Thermometer

1. Press the **START/STOP** button, all symbols appear on the display, you will hear 1 short beep, then °C/°F will start to flash.
2. Press the **SET** button to select Object Mode, the temperature unit flashes.
3. Move the probe close to the object, make sure the probe is flat and take measurement with a distance between 1-3 cm. Press the **START/STOP** button, the thermometer will take a measurement.
4. Once the measurement is complete, you will hear 1 short beep and the measurement will be displayed on the screen and the LED light indicator will blink.



### Note:

- As the object scan temperature is likely to be affected by the surroundings, the reading shall be taken as a reference only
- If the probe is placed at an angle close to the object being scanned, the reading will be affected by surrounding temperature

### Memory-Recall of Measurements

The Non-contact Forehead Thermometer automatically stores 20 measurements. The oldest measurement will be replaced by the newest measurement when the memory is full.

Press the **MEM** button to enter the memory mode when the thermometer is powered off. Each time you press the **MEM** button, a number (from 1 to 20) will be displayed along with the symbol M, 1 second later, the measurement will be shown. Subsequent measurements can be displayed one after the other by pressing the **MEM** button each time.

**Note:** Reading number "1" is the newest measurement, "20" is the oldest measurement. When the oldest measurement is displayed, pressing the **MEM** button again will take you back to number 1.

### Error Messages

	In Body Mode, measured temperature is above measuring range of 43°C (109°F), it is shown along with the red LED light indicator
	In Body Mode, measured temperature is below measuring range of 32°C (89.6°F), it is shown along with the red LED light indicator
	In Object Mode, measured temperature is above measuring range 100.0°C/212°F or environmental temperature is above system operating range 40°C/104°F, it is shown along with the red LED light indicator
	In Object Mode, measured temperature is below measuring range 0.0°C/32.0°F, or environmental temperature is below system operating range 5°C/41.0°F, it is shown along with the red LED light indicator
	Low battery, replace all the batteries with new AAA batteries
	Thermometer system fails or affected by electric magnetic field

### Care and Maintenance

- Clean the unit with a soft dry cloth. Do not use any abrasive or volatile cleaners.
- Never immerse the unit or any of its' components in liquid

Do not clean the unit with naphtha, thinner or gasoline etc.	Store the unit in a clean and dry location. Do not subject the unit to extreme hot or cold temperature, humidity and direct sunlight.
Remove the batteries if the thermometer will not be used in 3 months or longer	Do not use the unit under the influence of electromagnetic interference (nearby cellphones, microwave etc.)

**Note:** We will not be responsible for any quality problem if you do not care and maintain the product as instructed.

### Specifications:

<b>Description</b>	Non-Contact Forehead Thermometer	
<b>Display</b>	LCD digital display	
<b>Measuring localization</b>	Forehead and object surface	
<b>Measurement range</b>	Body mode: 32.0°C – 43.0°C (89.6°F – 109°F) Object mode: 0.0°C – 100.0°C (32.0°F – 212°F)	
<b>Temperature unit</b>	°C/°F	
<b>Display resolution</b>	0.1°C/°F	
<b>Accuracy</b>	±0.2°C / ±0.4°F (within 36.0°C-39.0°C / 96.8°F – 102.2°F)	
<b>Memory function</b>	20 sets of measurements	
<b>Beep alarm</b>	<b>1 short beep</b> when power on and start measurement; <b>1 long beep</b> when measurement reading is below 37.5°C/99.5°F; <b>10 short beeps</b> when measurement reading is greater than or equal to 37.5°C/99.5°F; <b>3 short beeps</b> when system fails	
<b>LED light indicator</b>	<b>Green:</b> Temperature < 37.5°C/ 99.5°F <b>Red:</b> Temperature ≥ 37.5°C/ 99.5°F <b>Blue:</b> When thermometer is taking a measurement	
<b>Power source</b>	2 x AAA alkaline batteries	
<b>Automatic power off</b>	In 60s	Manual shutdown in 8s
<b>Main unit weight</b>	Approx. 75g (batteries not included)	
<b>Main unit size</b>	L151mm*W53mm*H41mm	
<b>Battery life</b>	Could be used for 300 times in normal conditions	
<b>Operating environment</b>	Body mode: 10.0°C – 40.0°C / 50.0°F-104.0°F Object mode: 5°C – 40.0°C / 41.0°F – 104.0°F	
<b>Storage environment</b>	Temperature: -20°C – 50°C / -4.0°F – 122.0°F Humidity: 15% - 95%RH	

### Clinical Measurement Accuracy and Safety Verification:

The product has passed clinical trials. The measured results of the infrared forehead thermometer was compared with the measured results of mercury thermometers, the deviation average Δ<sub>t</sub> – 0.011°C not exceeding 0.3°C; the clinical standard. Therefore, the deviation average and the clinical repeatability of the infrared forehead thermometer are compiled with the regulatory requirement ISO 80601-2-56. The conclusions are drawn from the clinical trials, the accuracy and safety are compiled with the regulatory requirement.

### 2 Year Warranty

BIOS Diagnostics™ Non-Contact Forehead Thermometer has a 2 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:

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.

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