



## Digital Ear Thermometer

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Congratulations with purchasing the GentleTemp 510® Instant Ear Thermometer, an excellent choice. This remarkable instrument offers comfortable, safe, accurate and quick temperature measurement from the eardrum (this corresponds to the core body temperature).

Please read this instruction manual first so that you can use this thermometer safely and correctly. Please retain this instruction manual for future reference. If you have questions about the meaning of a specific temperature, please consult your doctor.

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## 1 GENERAL

### 1.1 Safety precautions

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#### Warning

Conducting self-diagnosis based on the measurement results and/or treatment can be dangerous. Please follow the instructions of your doctor. Self-diagnosis may worsen the symptoms.

**Do not touch the infrared sensor with a finger or breathe on it.**

- The infrared sensor may become dirty and the correct measurement result may not be obtained.
- If the infrared sensor becomes dirty, lightly wipe it with a soft dry cloth.
- If you wipe it with a tissue paper or a paper towel, the infrared sensor will be damaged and may not be able to measure correctly.

**Only use probe covers that are especially designed for this unit.**

- Do not use a probe cover after someone else has used it. This can lead to cross infections such as otitis externa.
- If the probe cover becomes dirty with earwax or other substances, replace it with a new one.
- Correct measurement result may not be obtained if dirty probe covers are used.

**Store the unit out of children's reach.**

result may not be obtained if dirty probe covers are used. Store the unit out of children's reach. Children may try to measure by themselves and may damage the ear. In an emergency case if a child swallows a battery or a probe cover, immediately consult with a doctor.

**Correct measurement results may not be obtained:**

- If dirty probe covers are used.
- If the ear is cold wait until the ear is warmed up before taking a temperature measurement.
- The measured result may indicate low when you use an ice bag or an ice pack or immediately after coming in from the outside in winter.
- If there is any temperature difference between the places where the unit is stored and where you are going to measure, leave the unit in the room where you are going to use it for more than thirty minutes to allow it to reach room temperature first, then measure.

**Do not forcibly insert the probe in the ear.**

- If you feel discomfort such as a pain during the measurement, stop using the unit immediately. It may injure the external auditory canal.
- Do not use the GentleTemp 510 ® if suffering from ear disease such as otitis externa or otitis media. It may worsen the condition.
- Do not use the unit when the external auditory canal is wet such as after swimming or taking a bath. It may injure the external auditory canal.
- Do not throw batteries into a fire. The battery may explode.

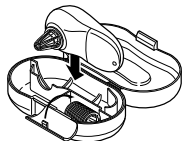
## General Advice

- When you inform your doctor of your temperature, make sure you state that you measured the temperature in the ear.
- Do not use this unit other than for measuring the temperature in the human ear.
- Do not apply a strong shock to, drop, step on, or vibrate the main unit.
- Do not use a portable phone near the unit.
- Do not disassemble, repair, or modify the unit.
- The main unit is not waterproof. Be careful when handling this unit so that no liquid (alcohol, water, or hot water) will get into the main unit.

## 1.2 Care and storage

When the measurement is finished, clean and store the unit. Lightly wipe off any dirt from the main unit with a soft dry cloth. Never wash the unit or clean the unit with a cleaner containing an abrasive thinner or benzene.

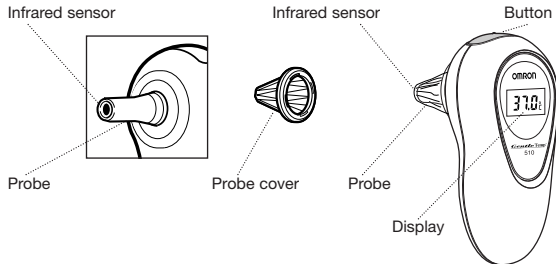
When the infrared sensor becomes dirty, wipe it lightly with a soft dry cloth or a cotton swab. Do not wipe the infrared sensor with tissue paper or a paper towel.



After cleaning the unit, attach the probe cover and store the unit in the storage case. It is convenient to store the unit in the place where you are going to use it so that you can

use it promptly. Do not store the unit in direct sunshine, where the temperature and humidity are high, in dusty environments, near a fire, or where vibration and/or shock can be applied easily.

## 1.3 The components of the thermometer



Probe covers are consumables. If the supplied probe covers are used up, please purchase new ones.

## 2 PREPARATION BEFORE MEASUREMENT

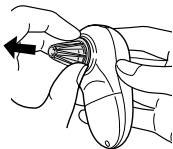
### 2.1 A clean probe cover

Confirm that a clean probe cover is attached to the main unit.

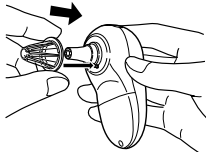
Replace the probe cover in the following cases:

- When it is dirty, broken, or damaged.
- After somebody else has used it.

#### 1 Remove the probe cover.



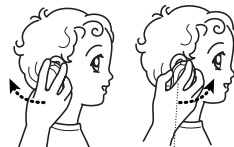
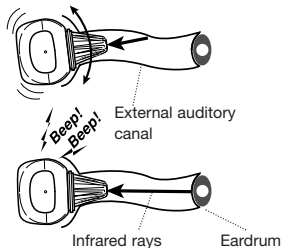
#### 2 Attach a new probe cover.



Insert the probe cover until it clicks.

### 2.2 Move the unit in the ear

To obtain a correct measurement it is important to move the unit inside the ear.



Slightly move the unit inside the ear

### 2.3 Measuring the temperature of an infant



Measuring on a lying baby.

*Lightly support the child's body.*



Measuring on a sitting baby.

*Lightly support the child's body and slightly pull the ear towards the back.*



When the ear is too small to insert the probe:  
While slightly pulling the ear towards the back, cover the external auditory canal with the probe without forcibly trying to insert the probe.

## 2.4 To change the temperature from °C to °F

The thermometer default is set to Celsius °C. It is possible to measure the temperature in °C or °F. To change the unit of temperature from °C (Centigrade) to °F (Fahrenheit) follow the procedure shown below.

**1** The GentleTemp 510, is off and the display is blank.



**2** Press and hold the blue button for approx. 4 seconds. During this period all the symbols on the display illuminate. Next a large C flashes on the LCD.



**3** Remove your finger from the blue button.

**4** Each time the button is pressed a large C or a large F is displayed alternatively.



**5** Remove your finger from the blue button.

**6** Five (5) seconds after pressing, the thermometer turns off automatically. The display is blank.



**7** The thermometer is now set for the Fahrenheit (°F) mode.



To select Celsius (°C) mode, start from Step 1.

## 2.5 Recommendations

Store the unit in the room where you are going to use it.

If the unit has been stored in a cool (cold) room, allow it to reach ambient temperature before using (temperature of the environment needs to be above 10 °C or keep the thermometer at least 30 minutes in the place where you are going to use it). Do not warm the unit by placing it near a fire. Instead, place it in the room where you are going to use it to allow it to reach the room temperature.

Start measurement after the body (ear) is warmed up.

The measurement may indicate a lower temperature than the actual temperature in the following cases:

- Immediately after returning to your home (especially in winter).
- In a cool or cold room.
- When the head (ear) is cooled by an ice bag.

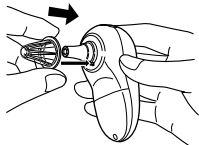
Confirm the measuring method by familiarizing yourself with the best way to insert the unit in the ear. Do this during normal body temperature periods.

- Note the angle you are holding the thermometer at when the highest measurement value is indicated.
- the measurement value may differ for each ear. Try to measure the temperature using the ear that shows the highest temperature in stable conditions.

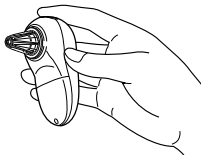
## 3 USAGE OF THE THERMOMETER

### 3.1 Mode 1: the fast measurement (1- 3 seconds) in 7 steps.

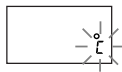
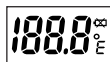
- 1** Insert the probe cover until it clicks.



- 2** Push the blue button.  
The thermometer is turned on.



- 3** After all the symbols on the display illuminate, "∞C" flashes.



- 5** When it beeps once, you can start the measurement.



- 6** Push the blue button leaving the unit in the ear.



- 4** Insert the probe in the ear as far as it comfortably goes in the direction of the eardrum and slightly move the unit.



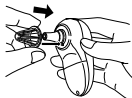
- 7** When the unit beeps four times, the measurement is finished.  
The measured temperature is shown on the display.



## 3.2 Mode 2: the 10 seconds measurement in 9 steps.

This function is recommended when the direction of the eardrum may be difficult to find such as measuring the temperature of an infant.

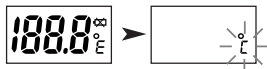
- 1** Insert the probe cover until it clicks.



- 2** Push the blue button.  
The thermometer is turned on.



- 3** After all the symbols on the display illuminate, "°C" flashes.



- 4** Insert the probe in the ear as far as it comfortably goes in the direction of the eardrum and slightly move the unit.



- 5** Do not press the blue button if the beep sounds only one time.  
The measurement will start automatically.



- 6** Slightly move the GentleTemp 510°, while the unit tries to detect the temperature of the eardrum for a maximum of 10 seconds.



- 7** Wait for two beeps.



- 8** When the unit has beeped twice, push the blue button leaving the unit in the ear.

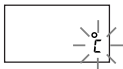


- 9** When the unit beeps four times, the measurement is finished.  
The highest measured temperature is shown on the display.



## 3.3 To measure repeatedly

- 1 Wait until "°C" flashes again after approximately 10 seconds.
- 2 Continue with step 4 for the fast measurement mode (paragraph 3.1) and for the 10 seconds measurement mode (paragraph 3.2).



You can measure your temperature repeatedly up to three times. Further repeated measurements may not be possible due to the main unit being warmed up.

If you want to measure more than four times, wait for 10 minutes or longer, then start the measurement again. If the probe cover becomes dirty or someone else uses the unit, replace the probe cover with a new one.

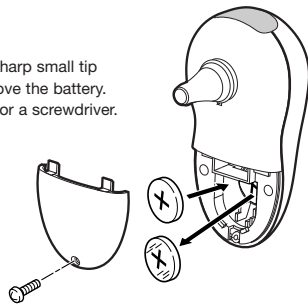
## 3.4 To finish the measurement

After approximately 1 minute, the unit will be turned off automatically. The unit cannot be turned off manually even if you push the button.

The GentleTemp 510® Instant Ear Thermometer detects the infra-red heat given off by the eardrum and surrounding tissues, and it converts this heat into an equivalent oral temperature in one second.

## 3.5 Battery replacement

- 1 Move the screw, and then remove the battery cover.
- 2 Remove the battery. Use something that has a sharp small tip such as a toothpick to remove the battery. Do not use metal tweezers or a screwdriver.
- 3 Replace the new battery with the plus (+) side on the top.
- 4 Close the batteries cover and tighten the screw.



To protect the environment, discard the used batteries in accordance with the local regulations regarding waste disposal procedure. Disposal can be done at your retail store or at appropriate collection sites.

## 4 TO INTERPRET MEASURED RESULTS

### 4.1 Temperature measurements taken within the ear

The GentleTemp 510® instant ear thermometer detects the infrared heat given off by the eardrum and surrounding tissues, and it converts this heat into an equivalent ear temperature.

The GentleTemp 510® is less threatening to a child than a rectal thermometer. It's faster, safer and easier to use than an oral thermometer. Being digital, there's no worry about the hazard of broken glass or mercury ingestion. Measurements can even be taken while a child is sleeping. For adults, the GentleTemp 510® Instant Ear Thermometer offers fast, convenient and accurate readings without the delay of a conventional thermometer.

Clinical research has shown that the ear is an ideal site for taking body temperature. The eardrum shares blood vessels with the hypothalamus, the part of the brain that controls body temperature. Therefore, the ear is an accurate indicator of internal (core) body temperature. An ear temperature, unlike an oral temperature, is unaffected by factors such as talking, drinking, and smoking.

### 4.2 Normal and raised temperature

We recommend that you practice with the GentleTemp 510® on yourself and family members.

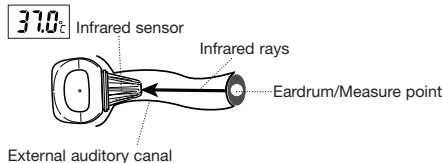
This way you can improve your technique and feel more confident of the measurements you take when a family member is ill. You will also be able to tell when a reading is higher than normal.

As ambient temperature, sweat, or saliva easily affects body temperature measured under the arm or the tongue, readings may be lower than the core temperature.

Tympanic temperature measurement accurately reflects the brain temperature and can lead to a quicker detection of fever.



Eardrum



In order to make a correct judgement of suspected fever conditions, it is important to learn the normal temperatures of family members by measuring their temperatures when they are in good physical condition.

The temperature measured in the ear is different to that measured rectally. Please use the normal as the standard for understanding the temperature difference during fever.

One speaks of normal body temperature if the measurement value lies within a certain range. Body temperature varies however according to age.





Age	Normal ear temperature in °C and °F	
Babies	36.4°C – 37.5°C	97.5°F – 99.5°F
Children	36.1°C – 37.5°C	97°F – 99.5°F
Teens/Adults	35.9°C – 37.5°C	96.6°F – 99.5°F
Elderly	35.8°C – 37.5°C	96.4°F – 99.5°F






### 4.3 Ear temperature compared to other types of body temperature.



The normal temperature is not the same everywhere.

## 5 SOLVING PROBLEMS

### 5.1 Troubleshooting

Display	What to check?	How to correct?
Nothing is displayed even after I pushed the blue button. 	Is the battery flat?	Replace the battery with a new one.
	Are the polarities of battery (+ and -) placed incorrectly?	Replace the battery with correct polarities.
	The battery is (almost) flat.	Replace the battery with a new one.
 Even after I insert unit in the ear, the "0" mark is not displayed.	Is the probe cover dirty?	Replace the probe cover with a new one.
	Is the infrared sensor dirty?	Clean the infrared sensor with a cotton swab.
	Is your ear filled with earwax?	Remove the earwax with a cotton swab.
	The temperature of the main unit is 34°C (93.2°) For above.	If you insert the unit in the ear and push the blue button, you can measure in 1 second. At this time, you cannot use the "Information Mode".

	<p>Did you forget to attach the probe cover?</p>	<p>Attach the probe cover, then measure.</p>
<p>The measured result is below 34°C (93.2°F).</p> 	<p>Did you remove the thermometer before the measurement was finished?</p>	<p>Remove the thermometer from the ear after the measurement is finished.</p>
<p>The measured result exceeds 42.2°C (108.0°F).</p> 	<p>Is the infrared sensor broken?</p>	<p>Return to the selling point.</p>
<p>The temperature of the main unit may be below 10°C (50°F).</p> 	<p>Is the probe cover broken?</p>	<p>Replace the probe cover with a new one.</p>
<p>The temperature of the main unit may be above 40°C (104°F).</p> 	<p>You cannot measure correctly when the temperature of the main unit is in these ranges.</p>	<p>Measure the temperature after leaving the unit in the room where you are going to measure so that the unit is accustomed to the temperature of that room (between 10°C - 40°C (50°F - 104°F)). If you store the unit in the room where you are actually going to measure, you can measure quickly.</p>

	<p>If the "Er.1" is displayed again, the unit may be faulty.</p>	<p>Wait for the unit to turn off, then turn on the unit again.</p>
	<p>This occurs when the device is moved from one space to another and the difference in temperature is more than 10°C. Wait for at least five minutes until "AA" mark is not displayed anymore. Might be caused when the probe is grasped for a long time or the thermometer is used more than three times in a row.</p>	

## 5.2 Question and answer

### How many times can I measure consecutively?

You can measure consecutively up to three times. The main unit will then be warmed up and may not be able to measure correctly. If you are going to measure more than three times, wait for ten minutes, then measure again.

### The temperature indicated is rather high.

- 1 The probe cover may be faulty.
- 2 You may have used the thermometer that has been stored in a cool or cold place. Measure the temperature after leaving the unit in the room where you are going to use for more than thirty minutes. If you store the unit in the room where you are going to measure the temperature, you can use the thermometer promptly.

## Is the temperatures measured in the right ear different from that measured in the left ear?

Among healthy people, there should be no significant difference in the measurement results. Differences may be caused by the following reasons:

- 1) The infrared sensor is not inserted in the same way.
- 2) Measurement is not conducted by inserting the unit in a stable manner in the same angle. Try to measure in either ear that can show the highest measurement value constantly. In accordance with the "10 seconds mode," the unit detects the highest temperature. (Refer to paragraph 3.2).

## The temperature shown is rather low.

- 1 The probe cover is dirty.
- 2 The infrared sensor is dirty.
- 3 You removed the unit from the ear before the measurement is finished.
- 4 The ear is cold. The temperature tends to indicate low when you use an ice bag or an ice pack, or immediately after coming in from the cold in winter.
- 5 The thermometer is not inserted deep enough in the ear.
- 6 The infrared sensor is not directed towards the eardrum.  
Use the 10 seconds measurement mode (Refer to paragraph 3.2).

## 6 SPECIFICATIONS

Name:	GentleTemp 510®
Model:	MC-510-E2
Voltage:	3V DC (lithium battery CR2032)
Power consumption:	0.05 W

Battery life:

Sensor:

Temperature indication:

Precision:

(Celsius)

Precision:

(Fahrenheit)

Measurement range:

Weight:

External dimensions:

Operating environment:

Relative humidity:

Storage environment:

Relative humidity:

Accessories:

Options:

With a new battery approx. 5000 measurements  
Thermopile

In 3 digits of +°C, every 0.1°F or °C

According to NEN-EN 12470- 5 Clinical thermometers – Part 5 Performance of infra-red ear thermometers (with maximum device)

34°C – 42.2°C: ±0.2°C

Based on the measurement of the standard black body at the room temperature of 25°C (RH 50 %)

According to NEN-EN 12470- 5 Clinical thermometers – Part 5 Performance of infra-red ear thermometers (with maximum device)

93.2°F – 108°F: ±0.3°C

Based on the measurement of the standard black body at the room temperature of 77°F (RH 50 %)

34°C - 42.2°C (93.2 - 108°F)

Approx. 50 g (1.8 oz) (including the battery)

Approx. 4.6 cm (B) X 9.3 cm (H) X 5.7 cm (D)

Ambient temperature; 10°C to 40°C (50°F to 104°F)

30 - 85%

Ambient temperature; -20°C-60°C (-4°F- 140°F)

10 - 95%

Storage case, Instruction Manual, probe covers (10 pieces)

A probe cover is already attached to the main unit.

Probe cover exclusively for GentleTemp 510® series, MC-PROBE TYPE J

Subject to technical modification and specifications may be changed without prior notice.

### Special Note

If used privately no calibration is needed. For professional use it is recommended to check once a year.

This OMRON product is produced under the strict quality system of OMRON Healthcare Co. Ltd., Japan.



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Made in China