

OMRON

INSTRUCTION MANUAL 使用說明書

Gentle Temp

INSTANT EAR THERMOMETER
耳溫計

型號
Model

MC-510

New
新

Thank you very much for purchasing the Instant Ear Thermometer. Be sure to read this Instruction Manual thoroughly before use. Keep this Instruction Manual at hand for your future reference.

非常感謝您購買本耳溫計。在使用前請詳細閱讀本說明書。請保存本說明書以備後用之需。



A Good Sense of Health

INTRODUCTION

Thank you for purchasing the Gentle Temp® Instant Ear Thermometer. This remarkable instrument offers safe, accurate, and quick temperature measurement from the ear canal, specifically the tympanic membrane (eardrum).

How Does It Work?

The Gentle Temp® Instant Ear Thermometer detects the infrared heat given off by the eardrum and surrounding tissues, in one second.

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

Temperature From The Ear?

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 body (core) temperature. An ear temperature, unlike an oral temperature, is unaffected by factors such as talking, drinking, and smoking.

Practice Makes Perfect

We recommend that you practice using the Gentle Temp® on yourself and family members when you are healthy. This way you can improve your technique and feel more confident of the measurements you take when a family member is ill.

Please read this instruction manual thoroughly before using your Gentle Temp® Instant Ear Thermometer. If you have questions about the meaning of a specific temperature, please consult your doctor.

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NOTES ON SAFETY

Warning

Conducting self-diagnosis and/or treatment based on the measurement results can be dangerous. Be sure to follow the instruction of your doctor.

- Self-diagnosis may worsen the symptoms.

Be sure to attach the probe cover exclusive for this unit before taking measurement.

- The infrared sensor may become dirty and correct measurement result may not be possible.

Do not use the probe cover that was used by someone else.

- You may be exposed to infectious diseases 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 possible.

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

- The infrared sensor may become dirty and correct measurement result may not be possible.

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.

Store the unit out of children's reach.

- Children may try to measure by themselves and cause damage to the ear. If a child accidentally swallows a battery or a probe cover, immediately consult with the doctor.

If the ear is cooled such as being exposed to the cold for a long period, wait until the ear is warmed up, then measure.

- The measured result may be indicated low when you use an ice bag or immediately after coming home from outside in winter.

If there is a difference in temperature between the place where the unit is stored and the place where you are going to measure, leave the unit in the room where you are going to use for more than thirty minutes, then measure.

- Correct measurement result may not be possible.

NOTES ON SAFETY

Caution

Do not forcibly insert the probe in the ear. If you feel abnormal such as pain during measurement, stop using the unit.

- It may injure the external auditory canal.

Those suffering from ear disease such as otitis externa or otitis media must not use the Instant Ear Thermometer.

- It may worsen the lesion.

Do not use the unit when the external auditory canal is wet such as after swimming or a bath.

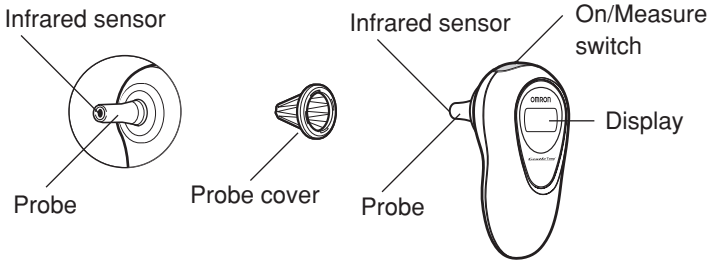
- It may injure the external auditory canal.

Do not discard battery into the fire.

- The battery may explode.

- When you inform the doctor of your temperature, make sure to tell him/her 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 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 sure that no liquids (alcohol, water, or hot water) get into the main unit.

NAMES OF THE PARTS



BATTERY REPLACEMENT

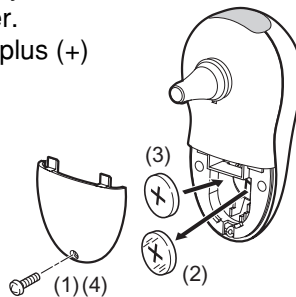
* The unit you purchased already has a battery installed. To replace with new battery, follow the procedure as shown below.

- (1) Release the screw, and remove the battery cover.
- (2) Remove the battery.

Use an object with a small sharp tip such as the toothpick to remove the battery. Do not use metal tweezers or screwdriver.

- (3) Put in a new battery with the plus (+) side on the top.
- (4) Close the battery cover and tighten the screw.

Discard the used batteries in accordance with local regulations regarding waste disposal procedure.



PREPARATION BEFORE MEASUREMENT

TAKE NOTE !

If the unit has been stored in the cold, leave it in the room where you are going to use for 30 minutes or more. Do not warm the unit by holding it in your hands or near the stove. Instead, place it in the room where you are going to use to restore to the room temperature.

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

The temperature indicated may be higher than the actual, if the unit has been kept in a lower temperature than the room temperature where you are going to use it.

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

The measurement results indicated may be lower than the actual temperature in the following cases.

- Immediately after returning to your home (especially in winter)
- Measurement taken in a cold room
- When the head (ear) is cooled by the ice bag

Confirm the measuring method by understanding the best way to insert the unit in the ear during normal temperature condition.

- Check the angle when the highest measurement value is indicated in stable condition.
- The measurement value may differ for each ear. Try to measure the temperature from the ear that shows the highest temperature in stable condition.

PREPARATION BEFORE MEASUREMENT

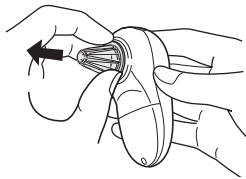
1 Attach a clean probe cover

Replacement of probe cover

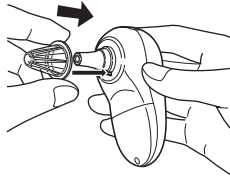
Replace the probe cover in the following cases.

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

1) Remove the used probe cover.



2) Attach a new probe cover.



Insert the probe cover until it clicks.

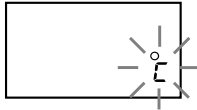
PREPARATION BEFORE MEASUREMENT

2 Press the Switch.

The power is turned on. After the display check is completed, "°C" flashes.



The "M E" mark displayed at this time is for display check only.



The backlit screen will be illuminated for 2 seconds when the switch is pressed.

TO CHANGE °C/°F MEASUREMENT MODE

The thermometer default is set to Centigrade °C.

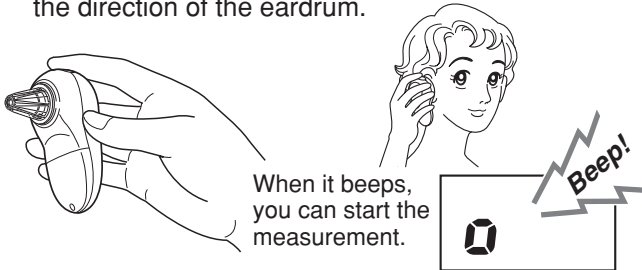
To change the unit of temperature from °C (Centigrade) to °F (Fahrenheit) to follow the procedure shown below. From the off position (blank display):

- 1) Press and hold the Switch for "approx. 3 seconds." °C flashes on the LCD.
- 2) Remove your finger from the Switch.
- 3) Each time the Switch is pressed, °F and °C are displayed alternatively. (5 seconds after pressing, the thermometer turns off automatically)
- 4) From the off position (Blank display) hold the thermometer switch for 5 seconds while °F is displayed.
- 5) The thermometer is set for °F mode. To select °C mode, start from Step 1.

MEASUREMENT IN "ONE-SECOND MODE"

3 Insert the probe into the ear.

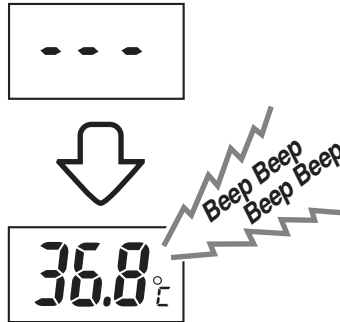
Hold the main unit with your fingers as shown below. Insert the probe in the ear as far as it goes in the direction of the eardrum.



4 Press the Switch while the unit is in the ear.

When the unit beeps repeatedly, the measurement is finished.

Measurement finishes in approximately 1 second. Press the switch to illuminate the backlit screen for 2 seconds. You can quickly read the results.



AFTER THE MEASUREMENT IS FINISHED

If you want to measure continuously:

- About 10 seconds after you remove the unit from the ear, a "°C" mark flashes.
- Return to *Step 3: Insert the probe into the ear.*



After
approximately
10 seconds

To end the measurement:

- *In approximately 1 minute, the unit will be turned off automatically. It cannot be turned off manually.*



Memory Feature:

- The last measurement value is stored automatically. It can be recalled when the unit is turned on. The value will be displayed with 'M' symbol.



Caution:

If main unit warms up after continuous measurement, allow the unit to turn off automatically to avoid incorrect reading. Then switch on again to continue measurement.

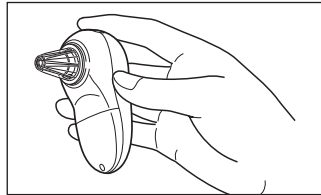
MEASUREMENT IN "DIRECT MODE"

This is the measurement mode recommended when the direction of the eardrum is difficult to find such as when measuring the temperature of an infant.

Prepare for measurement in accordance with Sections 1 and 2 in pages 6-7.

3 Insert the probe into the ear.

Hold the main unit with your fingers as shown below. Insert the probe in the ear as far as it goes in the direction of the eardrum.



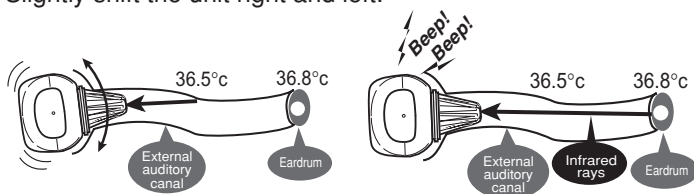
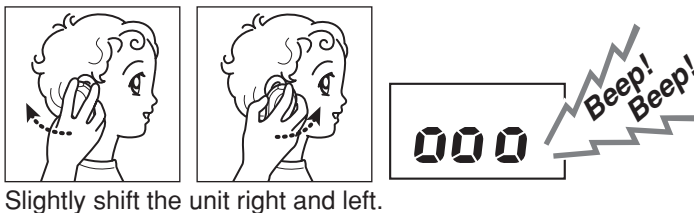
When it beeps,
you can start the
measurement.



4 Shift the probe right and left.

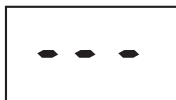
The unit automatically detects the temperature of the eardrum in 10 seconds maximum.

MEASUREMENT IN "DIRECT MODE"



The unit tries to detect the temperature as shown above.

5 When the unit beeps, press the switch while the unit is in the ear.



When the unit beeps repeatedly, the measurement is finished.



The unit displays the highest temperature it detects during the measurement.



ADVICE FOR MEASURING THE TEMPERATURE OF INFANT AND YOUNG CHILDREN



When infant is lying down



When infant sits up



Measuring for a child



If the ear is too small to insert the probe:

While slightly pulling the ear towards the back, insert probe without force so that it just cover the external auditory canal.

CLEANING AND STORING

When measurement is finished, clean and store the unit.

How to clean the unit

Main unit

Wipe off dirt on the main unit with a soft dry cloth.

Never wash the unit or clean with a cleaner containing abrasive, thinner, or benzine.

Infrared sensor

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 a tissue paper or a paper towel.

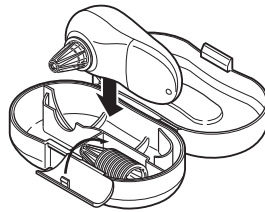
How to store the unit

After cleaning the unit, attach probe cover and store the unit in the storage case.

It is recommended to store the unit in the place where you usually use so that it can be used immediately when needed.

Probe covers are consumables. Additional probe covers can be purchased at OMRON's representative stores.

Do not store the unit under direct sunshine, where the temperature and humidity are high, in dusty places, near the fire, or where vibration and/or shock can be applied easily.

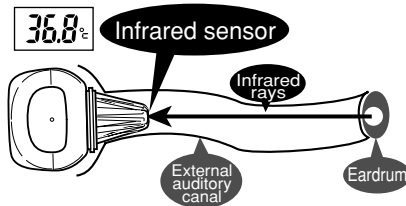
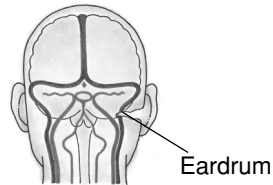


ABOUT THE INSTANT EAR THERMOMETER

The Instant Ear Thermometer model MC-510 measures the temperature of the eardrum by infrared sensor.

As ambient temperature, sweat, or saliva easily affects the body temperature measured under the arm or the tongue, the measurement value indicated is lower than the inner body temperature.

On the other hand, the tympanic temperature reflects the brain temperature, and can help in the quick detection of fever.



Advice:

Take note of the "normal temperatures" in the ear of all family members as a reference for future use.

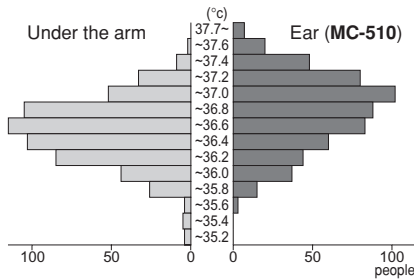
- What is ear temperature -

Body temperature differs by the place it is measured (in the ear, in the mouth, or under the arm).

A study conducted by OMRON indicates that many people show higher temperature in the ear.

Exceptions: some people show lower temperature when measured in the ear, and for some the temperature difference between the ear and the arm is more than 1°C (1.8°F).





Distribution of temperatures measured
in the ear and those measured under the arm









Please understand the normal temperature differences between the one measured in the ear and the one under the arm and use as a guide for temperature reading of a suspected fever.

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

TROUBLESHOOTING

Trouble	What to check	How to correct
Nothing is displayed even after I pressed the switch.	Is the battery flat?	Replace the battery with a new one.
	Are the polarities of battery (+ and -) wrong?	Place the battery in the correct position.
 After all the symbols on display illuminate, a "⌘" mark is displayed.	The battery is flat.	Replace the battery with a new one.
Backlighting of display is not turned on.	Low battery.	Replace battery.
 Even after I insert the 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 stuffed with earwax?	Remove the earwax with a cotton swab.
 A "0 0" mark is displayed.	The temperature of the main unit is 34°C (93.2°F) or above.	If you insert the unit in the ear and press the switch, you can measure in 1-second mode. However, you cannot use the "Directional Mode" in this condition.
 A "PC" mark is displayed.	Did you forget to attach the probe cover?	Attach the probe cover, then measure.

TROUBLESHOOTING

Trouble	What to check	How to correct
<div></div> <p>The measured result is below 34°C (93.2°F).</p>	Did you remove the thermometer before the measurement is finished?	Remove the thermometer from the ear only after the measurement is finished.
<div></div> <p>The measured result exceeds 42.2°C (108.0°F).</p>	<p>Is the infrared sensor broken?</p> <p>Is the probe cover broken?</p>	<p>Consult at the store where you purchased the unit.</p> <p>Replace the probe cover with a new one.</p>
<div></div> <p>The temperature of the main unit is approximately 10°C (50°F) or below or it fluctuates.</p>	You cannot measure the body temperature when the temperature of the main unit is in this range.	<p>Leave the unit in the room where you are going to measure so that the unit is accustomed to the temperature of that room before measuring again. Note operating room temperature should be 10°C to 40°C.</p> <p>If you store the unit in the room where you are actually going to measure, you can measure immediately.</p>
<div></div> <p>The temperature of the main unit is approximately 40°C (104°F) or above.</p>		
<div></div> <p>The temperature of the main unit change by more than 5°C.</p>		
<div></div> <p>An "Er.1 " mark is displayed.</p>	<p>Leave the unit for 1 minute and it will switch off automatically. Then turn on again.</p> <p>If the "Er.1" is displayed again, the unit may be in trouble. Consult at the store where you purchased the unit.</p>	

QUESTIONS & ANSWERS

How many times can I measure consecutively?

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

The temperature indicated is rather high. What are the causes?

- 1) The probe cover is broken.
- 2) The temperature measured under the arm is relatively lower.
When measuring the temperature under the arm, it is necessary to measure for ten minutes to obtain a correct value. When the measuring time under the arm is short, the measured value tends to be low.
- 3) You used the thermometer that had been stored in the cold. Measure the temperature after leaving the unit for more than thirty minutes in the room where you are going to take temperature. If you store the unit in the room where you are going to measure the temperature, you can use the thermometer immediately.

Is the temperature measured in the right ear different from that measured in the left ear?

For healthy people, there should be almost no difference in the measurement results, the following conditions may cause differences in the readings:-

- 1) The infrared sensor is not inserted in the same way.
- 2) Measurement is not conducted in a stable manner by inserting the unit at the same angle. Try to measure in the ear that can show the highest measurement value constantly.

The temperature indicated is rather low. What are the causes?

- 1) The probe cover is dirty.
- 2) The infrared sensor is dirty.
- 3) The unit is removed from the ear before the measurement is finished.
- 4) The ear is cooled. The temperature indicated tends to be low when you use an ice bag, or immediately after coming home in winter.
- 5) The thermometer is not inserted deep enough in the ear.
- 6) The infrared sensor is not directed towards the eardrum. Alternatively, you can use the "Direct Mode".

SPECIFICATIONS

Name	: Instant Ear Thermometer
Model	: MC-510
Voltage	: 3 VDC (lithium battery CR2032)
Power consumption	: 0.05 W
Battery life	: Measurements of approx. 2000 times *(when used consecutively under the environment of 23°C or 73.4°F) *Indicates that measurement can be carried out up to a certain number of times until the voltage of the battery has dropped to the low battery stage while the backlight keeps illuminating.
Sensor	: Thermopile
Temperature indication	: In 3 digits in +°C in the unit of 0.1°C (or in 4 digits in +°F in the unit of 0.1°F)
Precision	: 34.0 to 35.9°C (93.2 to 96.7°F), 39.1 to 42.2°C (102.3 to 108.0°F) : ±0.3°C (±0.5°F) 36.0 to 39.0°C (96.8 to 102.2°F) : ±0.2°C (±0.4°F) Based on measurement of the standard black body at room temperature of 23°C(73.4°F)
Measurement range	: 34 to 42.2°C (93.2 to 108°F)
Weight	: Approx. 50g (including the battery)
External dimensions	: Approx. 45 (W) x 94 (H) x 58 (D)
Operating environment	: Ambient temperature; 10 to 40°C (50 to 104°F) Relative humidity; 30 to 85%
Storage environment	: Ambient temperature; -20 to 60°C (-4 to 140°F) Relative humidity; 10 to 95%
Accessories	: Storage case, Instruction Manual, *probe covers (10 pieces) A probe cover is already attached to the main unit.
Options	: Probe cover exclusive for Gentle Temp™ series.

Omron reserves the right to change specifications without prior notice.

*Omron is not liable for use of probe cover, unless it is designed and supplied by Omron.