

# No Touch Thermometer®

## Infrared Forehead Thermometer

### INSTRUCTION MANUAL



**Model NT990**



Up to



Fast



Clinically tested



High precision

# No Touch Thermometer<sup>®</sup>

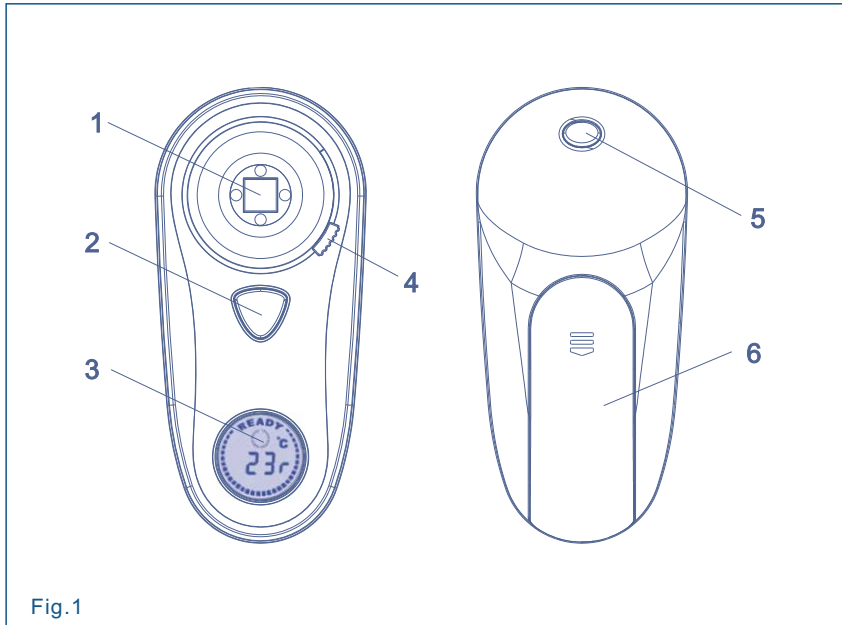


Fig.1

Dear user,

Thank you for purchasing the No Touch Thermometer<sup>®</sup>. This thermometer was designed by an experienced group of engineers and was produced in conformance to all the requirements of international standard of ISO 13485:2003 (Medical devices - Quality management systems) and FDA ASTM standards. The thermometer measures the infrared heat emitted from the forehead surface and converts these measurements into an oral equivalent temperature and shows a very stable and reliable reading.

## Characteristics

1. Probe
2. Memory Button
3. Display
4. Protective Cover Switch
5. Measurement Button
6. Battery Cover

## Body Temperature

Like blood pressure, body temperature is a fluctuating range, not a stable value. Every person has their own individual body temperature range, which can fluctuate during the course of the day from 35.5°C to 37.8°C. Body temperature can vary according to age, gender, time of day, activity and emotion. For example, a child's body temperature is usually 0.5°C higher than an adult's body temperature. In order to understand you and your family's normal body temperature range, measure the temperature at different times of day over 3 to 4 days when your general health is stable and there is no fever. Record the results for future comparisons in case of fever.

# How to Obtain Maximum Accuracy

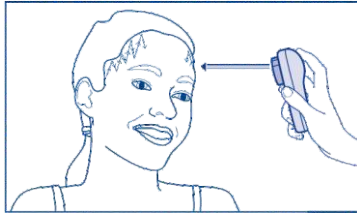
- Use the thermometer indoors only.
- Prior to use, the thermometer must be in the room (measurement site), not in a drawer or cupboard, for 20 - 25 minutes to become conditioned to the room temperature. Failure to do so may cause inaccuracy.
- The person whose temperature is being taken should be in the same indoor environment (room temperature) as the thermometer for at least 5 minutes prior to measurement being taken.
- Temples and forehead must be cleaned from make-up and sweat a few minutes prior to measurement.
- Avoid taking measurement for 30 minutes after physical exercise, bathing or eating.
- For repeated measurements on the same person, allow the thermometer to switch off and wait 2 minutes before scanning again.
- Always scan the same temple when repeating and comparing measurements on the same person.
- Never compare measurements using the No Touch Thermometer® and other methods of thermometry, such as Axillary (underarm), Oral, Rectal or Tympanic (Ear). Temperature ranges vary between each method of thermometry. Therefore, it is incorrect to compare temperature readings, of the same person, using different methods of thermometry.

# How to take a Measurement

- 1) The thermometer must be set in an environment where the reading is to be taken 20-25 minutes before taking the reading. The person who will be taking the reading must also be in the room for at least 5 minutes.
- 2) Clean all sweat, make-up etc from the forehead and wait a few minutes before taking the reading
- 3) Open the thermometer by turning the Protective Cover Switch (fig.1-no.4). The thermometer turns on automatically. A blue ray appears which helps ensure correct positioning of the probe when taking the measurement. In fact, this ray indicates the exact point where the reading will be taken. Wait until the “READY” message appears before taking the reading.



- 4) Position the thermometer's detector (fig. 1-no. 1) at a distance of not more than 10 cm (4 inch) and not less than 0.5 cm (0.2 inch) from the forehead. Press the "Measurement" button (fig. 1-no.5) and explore the entire temple area. The best position is above the left side of the left eyebrow or above the right side of the right eyebrow, just under the hairline.



While scanning, the thermometer emits short beeps to indicate the temperature measurement is in progress.

- 5) 4 sharp beeps indicate that measurement is completed. At this point you can read the temperature on the display.
- 6) The thermometer turns off automatically 1 minute after the measurement has been completed. To turn off the blue positioning ray, turn the Protective Cover Switch (fig.1-no.4). Ensure this step is carried out to avoid draining the battery and damage to the sensor when thermometer is not in use.

**Note:** Correct measurement can be taken at any distance up to 10 cm.

**Important:** For repeated measurements, always position the thermometer at the same point on the forehead.

# Important Notes

- It is dangerous for patients to perform self-evaluation and self-treatment based on measuring results. Be sure to consult with and follow doctor's instructions. A self-evaluation may cause deterioration of illness.
- After physical exercise, bathing or eating, wait 30 minutes before taking a temperature reading.
- For greater accuracy wait at least 2 minutes between readings.
- When pointed toward a hot object, the thermometer detects the temperature remotely. To prevent incorrect readings, position the thermometer as soon as the "READY" message appears.
- Avoid direct sunlight, other sources of heat and direct air conditioning as they can affect the forehead during the temperature reading, modifying the result.
- If the light ray is no longer visible, replace the 2 x AAA batteries.
- Never expose the thermometer to extreme temperatures, dust or abrupt movements.
- Never let the thermometer get wet.
- Never use the thermometer on irritated skin or when the forehead presents other problems.
- Never use the thermometer when the forehead is particularly sweaty, the reading will not be reliable.

# Memory Function


The memory function records 8 readings and remembers them for 64 hours. The last reading performed before the thermometer is turned off is recorded to memory. To use the memory function, turn the Protective Cover Switch (fig.1 - no. 4), press the "Memory" button (located under the probe, fig.1- no. 2) and release it. The display alternates the following information four times:

- previous measurement
- how many hours ago the measurement was taken

Pressing and releasing the "Memory" button again will call up the second to last measurement taken. You can read all the values saved by continuing to press the memory button.

To delete the memory, press the buttons "Memory" and "Measurement" simultaneously. This will turn off the thermometer and reset the memories.

# Replacing the Battery

The No Touch Thermometer® is powered by a 3V lithium battery (it also has two 1.5V AAA batteries to power the light ray). The lithium battery can handle approximately 12,000 measurements. If the  symbol appears on the display or if the thermometer does not completely function, remove the battery as indicated below:

- remove the lid from the battery compartment;
- remove the old battery by gently pressing back the battery holder clip;
- insert the new battery with the positive side (+) facing up and the negative side (-) facing down;
- replace the battery compartment lid.



**Warning:** Replace only with CR 2032 batteries (e.g. Energizer, Varta, Panasonic). If there is no blue ray, replace the two AAA batteries, as indicated below:

- remove the lid from the battery compartment;
- remove the old batteries;
- insert the new batteries with the positive (+) and negative (-) sides positioned as indicated by the symbols on the housing;
- replace the battery compartment lid.

**Warning:** Replace only with 1.5V AAA batteries (e.g. Duracell, Energizer). Using other types of batteries can cause explosions or fires.

**Warning:** The battery can explode if handled carelessly. Never recharge, remove or position the batteries near sources of heat higher than 100°C (212°F). Do not incinerate. Dispose of spent batteries at an appropriate differentiated collection point.

**Warning:** Unauthorized product modification may result in unacceptable risk.

## Maintenance

The No Touch Thermometer® has an infrared sensor located inside the probe. To prevent damage to the sensor, close the thermometer by turning the Protective Cover Switch. If there is dust or water inside the probe, clean it delicately with a soft cloth and let it dry before closing.


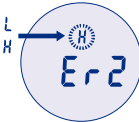


It is best to occasionally clean the outside of the probe (without touching the sensor) using a 70% alcohol solution.

## Switching Between °F/°C



Open the thermometer by twisting the Protective Cover Switch; turns off automatically after 1 minute; press the “Memory” button (fig.1-no.2) to change from °C to °F readings and vice versa.



# Troubleshooting

Display	Meaning	Action
	There is a general thermometer function problem.	Reset the thermometer by pressing the "Measurement" (fig.1-no.5) and "Memory" (fig.1-no.2) buttons simultaneously and keeping them pressed for 3 seconds. If the thermometer still does not function, see page 11, Warranty section for further information.
	The thermometer's temperature is not within the operating range of 16°C to 36°C "L" - Lower than 16°C (60.8°F) "H" - Higher than 36°C (96.8°F) When storing the thermometer in a cupboard or draw, this error occasionally occurs because cold air is trapped inside the cupboard or draw space, regardless of the outside temperature. Always ensure that the thermometer is taken out 20 - 25 minutes prior to use, enabling it to adjust to the room temperature.	Place the thermometer in a room with the temperature range of 16°C (60.8°F) to 36°C (96.8°F). Wait 20 - 25 minutes before taking a new reading.
	The temperature has not been taken correctly. For example, temperature reading has begun but the user may have directed the thermometer out of the recommended area (eg. directing to the hair), or the speed of moving the thermometer exceeds the response speed of the detector therefore resulting in an erroneous reading.	Repeat the measurement moving slowly up and down the temple region up to a maximum distance of 10cm away from the skin.
	The temperature measured is outside the body temperature range 34.4°C - 42.6°C (93.4°F - 108.7°F).	Repeat the measurement and wait for the beep before moving the thermometer.

# Troubleshooting

Display	Meaning	Action
	<p>The battery is low. Only a few more measurements can be taken.</p>	<p>Replace the old battery with a new one.</p>
	<p>The battery is empty. No more measurements can be taken.</p>	<p>Replace the old battery with a new one.</p>
<p>The thermometer does not function or does not respond. The display does not go on or remains on steady.</p>	<p>The thermometer needs to be reset or the battery replaced.</p>	<p>Reset the thermometer by pressing the "Measurement" (fig.1-no.5) and "Memory" (fig.1-no.2) buttons simultaneously and keeping them pressed for 3 seconds or replace the old battery with a new one. If the thermometer still does not function, see page 11, Warranty section for further information.</p>

## Technical Data

Measurement interval: 34.4°C - 42.6°C (93.4°F - 108.7°F)

Operating temperature: 16.0°C - 36.0°C (60.8°F - 96.8°F)

Laboratory precision:  $\pm 0.2^{\circ}\text{C}$  ( $\pm 0.36^{\circ}\text{F}$ )

Batteries: 1. 3V CR2032 lithium battery (for the measurement functions)

2. 1.5V AAA batteries (only for the light ray)

Classification according to EN60601-1 safety standards:

1. Internally powered equipment
2. Type BF
3. Continuous operation

## Warning

Refer to the instructions before use and keep them in a safe place. The thermometer must be kept at room temperature in a dry place, away from any sources of heat and out of direct sunlight. Strong electromagnetic fields could interfere with correct functioning. Keep out of the reach of children. Never leave children alone when taking a temperature reading. If your results show any measured rise in temperature, seek medical advice.

## Limited 12 Month Warranty

This No Touch Thermometer<sup>®</sup> is guaranteed for 12 months from the date of purchase against any defects that are due to faulty material or workmanship under normal use and in accordance with the Instruction Manual. However, always check battery condition first. The warranty does not cover damage to the thermometer due to improper handling. All parts are covered by this warranty, excluding the batteries.

In order for warranty claims to be honoured, the consumer must provide a purchase receipt to prove date and place of purchase.

The Limited Warranty only applies to consumers who purchased the No Touch Thermometer<sup>®</sup> in Australia, New Zealand and the South Pacific region.

For all warranty claims, send the No Touch Thermometer<sup>®</sup> to:

No Touch Thermometers<sup>®</sup> Australia  
4/11 Evans Street, Burwood, VIC, 3125  
Australia

# Electromagnetic Compatibility (EMC)

The device is manufactured according to applicable standards and complies with all requirements on protection relating to electromagnetic compatibility; special precautions should however be taken for EMC and the device should be installed and operated in compliance with the information on EMC in this leaflet. Portable and mobile radio communication equipment may affect the operation of the electromedical device. When electromagnetic disturbance occurs, repeat temperature reading if values are uncertain.

<b>Guide to Manufacturer's Declaration - Electromagnetic Emissions</b>		
The No Touch thermometer® digital electronic thermometer is designed to operate in the electromagnetic environment indicated below. The customer or user of the thermometer should ensure the device is used in this environment.		
Emissions test	Conformity	Electromagnetic environment - guide
RF emissions	Group 1	The No Touch Thermometer® uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions	Class B	The No Touch Thermometer® is suitable for use in all premises, including home use and rooms connected directly to a low voltage mains supply for domestic use.

# No Touch Thermometer<sup>®</sup>

## Infrared Forehead Thermometer

### INSTRUCTION MANUAL

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