



Ear Thermometer

Model UT-601

Instruction Manual
Original

ENGLISH

Manuel d'instructions

FRANÇAIS

Manual de Instrucciones

ESPAÑOL

Manuale di Istruzioni

ITALIANO

使用手冊

中文

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Dear Customers

Congratulations on purchasing a state-of-the-art A&D ear thermometer, one of the most advanced thermometers available today.

We recommend that you read through this manual carefully before using the device for the first time.

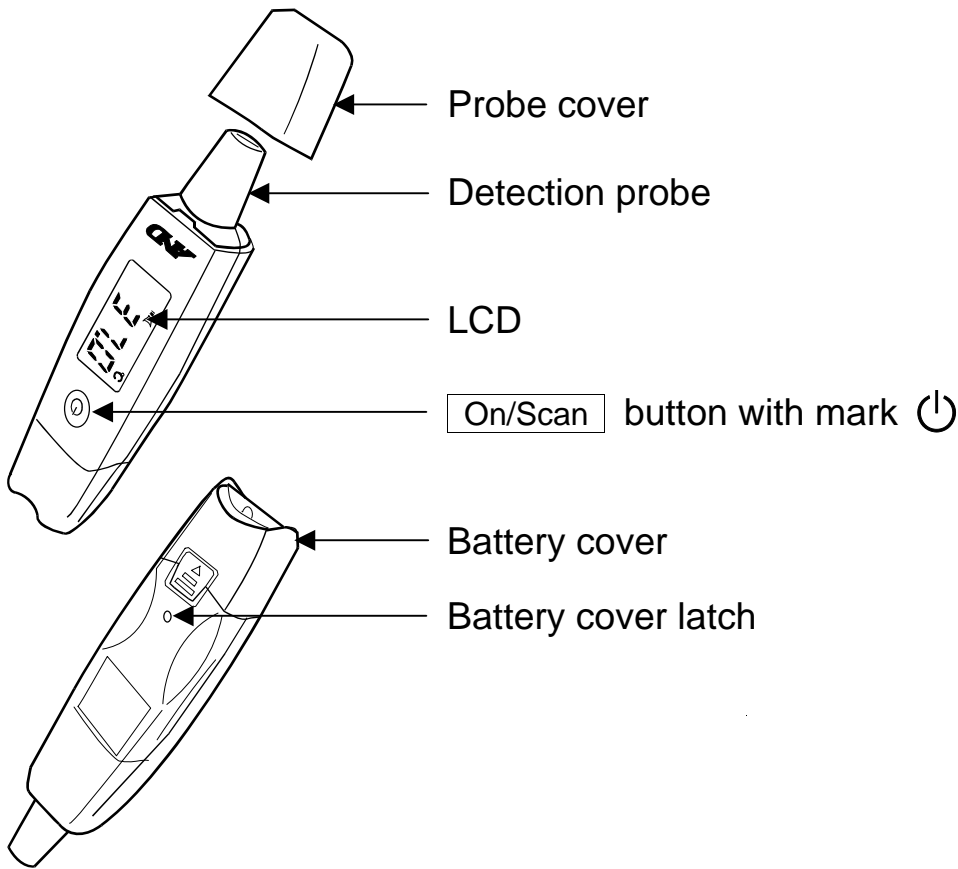
Preliminary Remarks

- ❑ This device conforms to the European Directive 93/42 EEC for Medical Products. This is made evident by the **CE**₀₃₆₆ mark of conformity. (0366: The reference number to the involved notified body)
- ❑ Environment for use
The device is for use indoors.

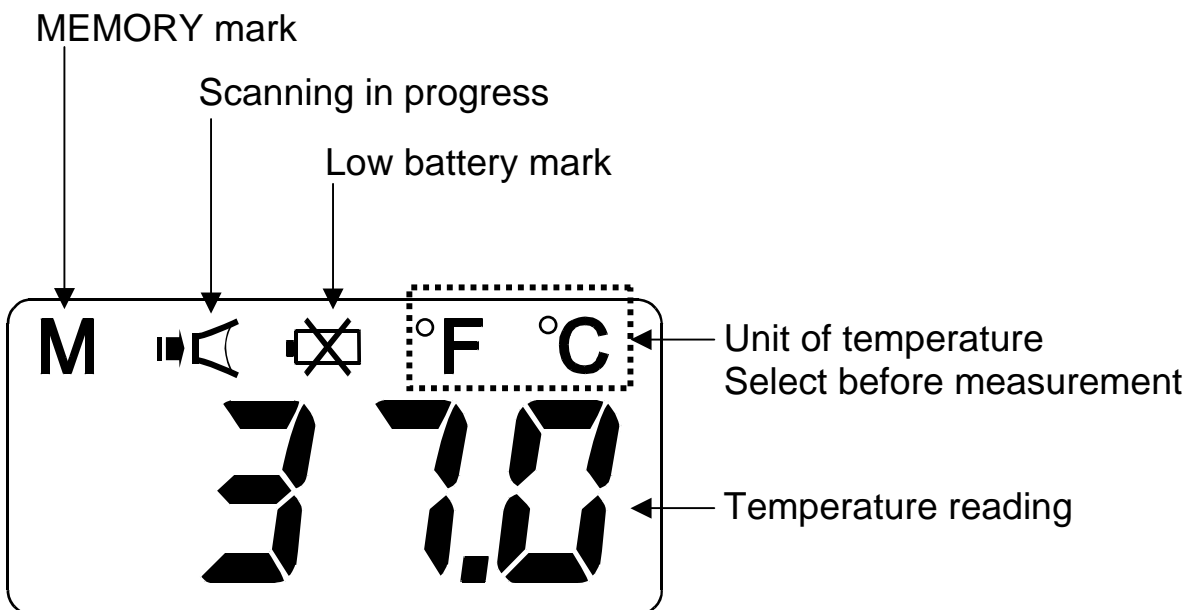
Precautions

- ❑ Precision components are used in the construction of the thermometer. Extremes in temperature, humidity, direct sunlight, shock or dust should be avoided.
- ❑ The thermometer is not water resistant. Prevent rain, sweat and water from soiling the thermometer.
- ❑ Measurements may be distorted if the thermometer is used close to televisions, microwave ovens, cellular telephones, X-ray or other devices with strong electrical fields.
- ❑ Keep the thermometer out of reach of children.
- ❑ To ensure accuracy, keep the lens of the probe clean.
- ❑ No probe cover is required when using the thermometer. For sanitary purposes, clean the probe each time after use. Use a cotton swab or a soft cloth moistened with alcohol. Do not allow the alcohol to get into the thermometer. Allow several minutes of drying time before reuse.
- ❑ Clean the exterior of the thermometer with a soft, clean cloth. Do not use abrasive cleansers or submerge in water or other liquids.
- ❑ Used equipment, parts and batteries are not to be treated as ordinary household waste, and must be disposed of according to the applicable local regulations.










Parts Identification



Part of Display



Symbols

Symbols	Function / Meaning	Recommended Action
	Standby and Power on.	_____
	Direct current	_____
SN	Serial number	_____
2009 	Date of manufacture	_____
	Type B: The device is designed to provide special protection against electrical shocks.	_____
M	Last reading stored in MEMORY.	_____
OFF	The thermometer will automatically turn off after 30 seconds of no operation	_____
	When appears: The battery is low. Still able to measure.	Replace both batteries with new ones when possible.
	When flashes: The battery is low. Unable to measure.	Replace both batteries with new ones.
ErH	The ambient temperature is over 40 °C.	Use the thermometer in a 5 to 40 °C environment.
ErL	The ambient temperature is below 5 °C.	
22.7*	Decimal point flashes: The reading is beyond a body temperature range of 34 °C to 42.2 °C.	Try the measurement again.
HI	The reading is over 100 °C.	Do not use the thermometer to measure the temperature of the object.
Lo	The reading is below 0 °C.	
 0366	EC directive medical device label	_____
	WEEE label	_____
	Manufacturer	_____
	EU-representative	_____

Features

The UT-601 Ear Thermometer is a multi-use thermometer. It detects body temperature from the ear canal. It can also detect the temperature of solids, liquids or air in a fast and non-contact manner.

The thermometer measures the infrared heat generated by the eardrum or other objects. Ear temperature accurately reflects core body temperature since the eardrum shares blood supply with the temperature control center in the brain (the hypothalamus).

To ensure accuracy, the thermometer scans continuously while the button is being pressed and displays the highest temperature.

- 0 °C to 100 °C (32 °F to 212 °F) detection

The display temperature range is from 0 °C to 100 °C.

So, besides measuring body temperature from the ear canal, the thermometer can be used in various ways. Examples of use are:

To measure the temperature of milk or baby bath water.

To measure the temperature of food or soup.

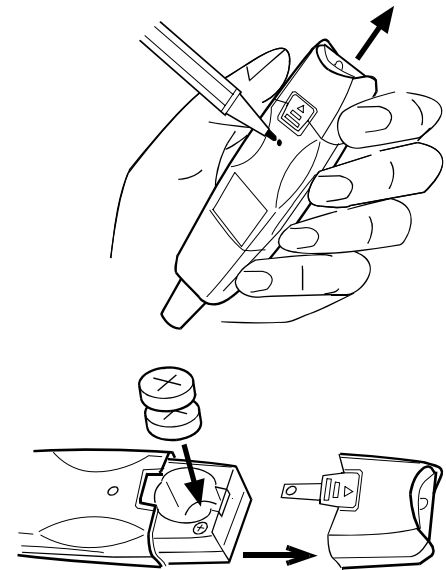
To measure the temperature of solids, liquids or air.

- °C or °F can be selected.
- Easy one button operation
- No probe cover is required during measurement. Wipe the probe clean with a soft cloth moistened with alcohol after use.
- The last reading is displayed after power on.
- Continuous scanning to ensure accuracy
The thermometer scans continuously while the button is being pressed and displays the highest temperature.
- Automatic power-shut off function
The thermometer will turn off automatically after 30 seconds of no operation or after continuously pressing the button for 30 seconds.



Using the Thermometer

Installing / Changing the Batteries

1. Use a small pointed object such as a ballpoint pen to press the battery cover latch and release the latch.
2. Remove the battery cover by pushing the sides of the cover upward while pressing the battery cover latch.
3. Insert two LR44 button batteries. Ensure that the plus poles are positioned upward as indicated by the marking on the battery compartment.
4. Replace the battery cover.
After installing the batteries, press the **On/Scan** button to check if all the display segments appear correctly.
If not, check the batteries and the poles.



CAUTION

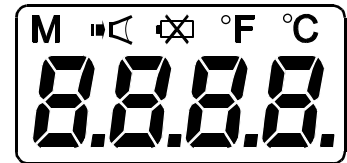
- Insert the batteries as indicated into the battery compartment. If not, the device will not work.
- When  (Low battery mark) appears on the display, it indicates that the battery is low. At this stage, measurement is still possible.
- When  (Low battery mark) flashes on the display, replace both batteries with new ones. Do not mix old and new batteries. It may shorten the battery life, or cause the device to malfunction.
- Battery life varies with the ambient temperature and may be shorter at low temperatures.
- Use the specified batteries only. The batteries provided with the device are for testing monitor performance and may have a limited life.
- Remove the batteries if the device is not to be used for a long time. The batteries may leak and cause a malfunction.

Using the Thermometer

Measuring Ear Temperature

1. Press the **On/Scan** button to turn the thermometer on. All the display segments appear.

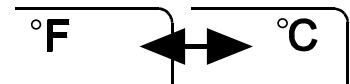
Note: The thermometer will turn off automatically after 30 seconds of no operation.



When turned on

2. Select the unit of measure as necessary. While all the display segments appear, press and hold the **On/Scan** button to toggle between °C and °F. Release the button when the unit to be used appears.

Note: The thermometer will turn off automatically after 30 seconds of no operation.



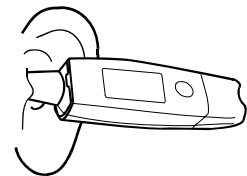
Select the unit to be used

3. The last reading stored in MEMORY appears and a short beep sounds to indicate that the thermometer is ready to scan.



Last reading in memory

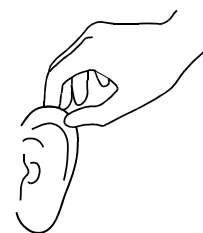
4. Insert the probe into the ear canal. For babies, gently pull the ear back to straighten the ear canal for easier insertion.



Insert the thermometer

5. Press and hold the **On/Scan** button until a beep sounds.

6. Release the **On/Scan** button. A long beep sounds to indicate completion of the temperature measurement. Take the thermometer out of the ear canal and read the value.



Straighten the ear canal for easier insertion

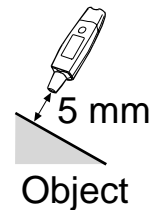
For further measurements, repeat steps 4 to 6.

Using the Thermometer

Measuring the Temperature of Liquid or Solid Objects

Note: The display temperature range is 0 °C to 100 °C. If the temperature of the object is out of the range, an error, HI or Lo, appears.

1. Press the **On/Scan** button to turn the thermometer on. All the display segments appear.
2. The last reading stored in MEMORY appears and a short beep sounds to indicate that the thermometer is ready to scan.
3. Hold the thermometer with the probe tip about 5 mm above the surface of the liquid or solid object.
4. Press the **On/Scan** button for one measurement. Hold the button for a continuous scan to get the highest temperature
5. Release the **On/Scan** button. A long beep sounds to indicate completion of the temperature measurement. Read the value.



Measuring Air Temperature

Note: The operating ambient temperature is 5 °C to 40 °C.

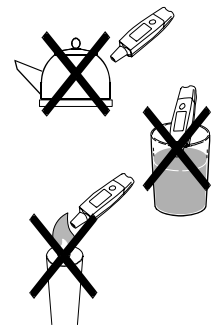
1. Press the **On/Scan** button to turn the thermometer on. All the display segments appear.
2. The last reading stored in MEMORY appears and a short beep sounds to indicate that the thermometer is ready to scan.
3. Aim the probe toward any surrounding space with no objects nearby and press the **On/Scan** button.
4. A long beep sounds to indicate completion of the temperature measurement. Read the value.

Note

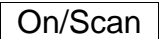
- The thermometer will automatically turn off after 30 seconds.
- When an error is displayed, four short beeps sound.

CAUTION


- Do not measure the temperature of a metal. It will give a low reading.
- Do not immerse the thermometer into fluid. It will damage the lens of the probe.
- Do not expose the thermometer to flame or high temperatures. It will damage the lens of the probe.



Troubleshooting

Problem	Possible Reason	Recommended Action
Nothing appears on the display, even when the  button is pressed.	Batteries are drained.	Replace both batteries with new ones.
	Battery terminals are not in the correct position.	Reinstall the batteries with negative and positive terminals matching those indicated on the battery compartment.

Errors

Display	Meaning	Required Action
<i>OFF</i>	The thermometer will turn off automatically after 30 seconds of no operation.	—————
<i>ErH</i>	The ambient temperature is over 40 °C.	Use the thermometer in a 5 °C to 40 °C environment.
<i>ErL</i>	The ambient temperature is below 5 °C.	
<i>22.7*</i>	Decimal point flashes: The reading is beyond a body temperature range of 34 °C to 42.2 °C.	Try the measurement again.
<i>HI</i>	The reading is over 100 °C.	Do not use the thermometer to measure the temperature of the object.
<i>Lo</i>	The reading is below 0 °C.	
	When appears: The battery is low. Still able to measure.	Replace both batteries with new ones when possible.
	When flashes: The battery is low. Unable to measure.	Replace both batteries with new ones.

Note: If the actions described above do not solve the problem, contact the dealer. Do not attempt to open or repair this product, as any attempt to do so will make your warranty invalid.



Maintenance

Do not open the device. It uses delicate electrical component that could be damaged. If you cannot fix the problem using the troubleshooting instructions, request service from your dealer or from the A&D service group. The A&D service group will provide technical information to authorized dealers.

The device was calibrated at the time of manufacture.

If at any time you question the accuracy of measurement, please contact your dealer or the A&D service group.

Technical Data

Type	UT-601
Display temperature range	0 °C to 100 °C (32 °F to 212 °F)
Display resolution	0.1 °C or 0.1 °F
Measurement accuracy	(In an ambient temperature of 16 °C to 35 °C) 34.0 °C to 35.4 °C: ±0.3 °C 35.5 °C to 42.0 °C: ±0.2 °C 42.1 °C to 42.2 °C: ±0.3 °C Others: ±1.0 °C
Power supply	3VDC Two alkaline button batteries LR44 (AG13)
Classification	Type B 
EMC	EN60601-1-2: 2007
Memory	Last reading
Operating ambient temperature	5 °C to 40 °C (41.0 °F to 104 °F) / 95 %RH or less
Storage condition	-10 °C to 60 °C / 90 %RH or less
Dimensions	Approx. 27 [W] x 18 [H] x 105 [L] mm
Weight	Approx. 32 g, including the batteries
	 0366

Note

Specifications are subject to change without prior notice.

Refer to the following address for the EMC Information.

http://www.aandd.jp/products/manual/medical/emc_en.pdf

Calibration Checks-Testing Instructions

For trained specialist staff only

Calibration checks must be performed by the following institutions or persons:

- Manufacturer
- Trade measurements authorities
- Persons who fulfil the requirements of the legislation governing the operation of medical devices.

(A) Function testing

Function testing of the thermometer can only be carried out on a person or with a suitable simulator.

(B) Testing of temperature circuit integrity and deviation of pressure display

Note

- Perform measurements in a 5 °C to 40 °C environment.
If the ambient temperature is not in the above temperature range, an error, ErH or ErL , appears.
- The display temperature range is 0 °C to 100 °C.
If the temperature of the object is out of the range, an error, Hl or Lo , appears.

Testing Procedure

1. Press the button to turn the thermometer on.
2. Place the thermometer on the standard temperature generator such as a blackbody radiation source.
3. Press and hold the button until a beep sounds.
4. Release the button.
The measured temperature is displayed.
5. The thermometer will turn off automatically after 30 seconds of no operation.

AND

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