Dual Mode **DMT-489**

Infrared Thermometer

Instruction manual

Provèn

0482

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Provèn

Thank you for choosing the iProvèn Dual Mode Digital Infrared Thermometer. With its unique technology, the Dual Mode Infrared Thermometer DMT-489 can be used for measuring the body temperature in two different ways. You can either measure the body temperature from the forehead by using the Head-mode or from the eardrum by using the Ear-mode. The Ear-mode can also be used to measure the ambient temperature. The Ear mode is suitable for children older than six months and adults. The Head mode is suitable for people of all ages.

To ensure accurate and stable measurements the thermometer performs a self-test every time it starts up.

The eardrum and the forehead radiate infrared heat. This thermometer accurately measures the body temperature as it scans the infrared heat radiated from the forehead and the ears.

Please read the instructions carefully in order to perform measurements in the most accurate way. Body temperature measurements will NOT be valid or accurate if they are not performed in accordance with the instructions given in this manual.
Please keep these instructions handy for later reference.

It is our passion

to develop high quality products that can easily be operated by every home user and provide the best tailored education accompanying the products. We love to help you get the most out of the product and be more vvhealth aware.

Our products are selected, developed and continually improved to meet our clinical standards of quality, durability and consistency, without compromising simplicity for any home user.

In order to make sure that what we deliver is exactly what you need, we welcome your feedback. So if you have any issues, questions or recommendations, you would greatly help us when you share your thoughts with us. Visit www.iproven.com

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Contents

Symbol	Description
	Electrical waste materials should be sent to dedicated collection points for recycling.
 Warning	Device damage or injuries may be the result of incorrect usage of this product. Please follow the instructions of this manual carefully.
 Notice	Incorrect usage or damage of the product may lead to inaccurate readings.

1. Safety instructions and precautions

- The ear measuring function is not suitable for children under 6 months. In this case we recommend using the Forehead-mode or a rectal digital thermometer with a flexible tip such as the iProven DTK-117A.
- The device is not intended to serve as a continuous monitoring device.
- This device is not waterproof. Please keep it away from water or other liquids. Cleaning and disinfection procedures should follow the instructions specified in the cleaning section.
- Please do not use the product if the temperature sensor of the thermometer shows any sign of damage. Do not try to repair the product if it is damaged. Please contact your supplier.
- The use of this thermometer is not intended to replace appropriate medical supervision.
- This thermometer consists of high quality, precise parts. The product is not designed to be impact or shock resistant. Avoid dropping the product or subjecting it to intense shock or vibration.
- Do not twist the thermometer or the temperature sensor.
- Remove the batteries if the thermometer will not be used for longer than three months.

Warning!

This item is not intended to replace insight from a doctor, pharmacist, or other licensed health-care expert. You ought not to utilize this item for self-diagnosis or for dealing with an illness. Get in touch with your health-care supplier quickly if you think that you have a clinical issue.

Attention:

Electromagnetic interference: this thermomometer contains sensitive electronic components and should not be used under conditions with electromagnetic interference (such as in the immediate vicinity of mobile phones or microwaves).

Please dispose of the used products and batteries in accordance with local regulations and requirements.

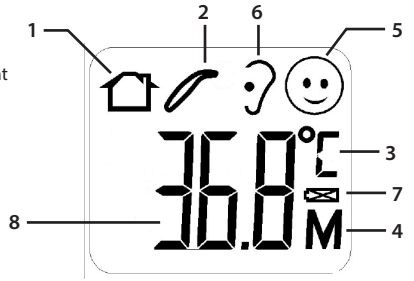
2. Purpose

This thermometer is intended for measuring your own or somebody else's body temperature. It can measure the body temperature from the forehead and from the eardrum. Although the thermometer has undergone clinical tests and is considered safe and highly accurate, it is intended for non-professional home use only.

2.1 Description

1. Infrared sensor: (Take off the cover before detecting the eardrum temperature.)
2. Head-button: starts measurement of forehead temperature.
3. Ear-button: starts measurement of eardrum temperature.
4. LCD display
5. Battery cover

1. Ambient temperature
2. Ready for measurement
3. ˚C / ˚F
4. Memory
5. Head-function
6. Ear-function
7. Battery
8. Digits



3. Setup instructions

3.1 First use

When using this product for the first time, the battery protection tab must be removed. Remove this plastic tab by gently pulling it out of the battery compartment.

3.2 Replacing Batteries

To replace the batteries, follow these instructions:

9. Release the battery cover by gently sliding it down.
10. Take off the battery cover.
11. Replace the AAA-type batteries in accordance to the depicted polarity.
12. Replace the battery cover and make sure the four pins of the cover are in the gaps.
13. Close the battery cover by sliding it upward until you hear a click.

4. Operating instructions

4.1 How to get accurate measurements

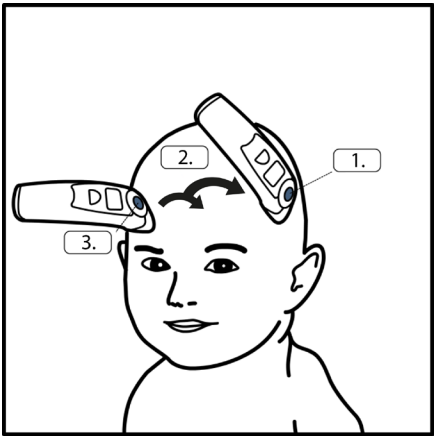
To ensure accurate measurements, follow these instructions:

1. Please make sure that the temperature sensor is absolutely clean.
2. Please make sure that the device is used in a closed room where there is no strong breeze or draft.
3. Coverage of the forehead and the ears by hair or a hat will make the forehead and the ear warmer; therefore make sure that the forehead or the ear has not been covered during 5 minutes prior to the measurement.
4. Please make sure the forehead is dry and clean before measurement to prevent the sensor from getting stained.
5. Before measuring the ear temperature, please clean the ear canal.
6. Please be aware that intense emotions and exertion before taking a measurement can affect the accuracy of the reading.
7. If the thermometer is transferred from one environmental condition to another that has a different ambient temperature, it is suggested to wait at least 30 minutes to get the thermometer adjust itself to the new conditions in order to get the most accurate reading.
8. Do not hold the thermometer in your hands unnecessarily as it is highly sensitive to heat. Holding the unit for more than 3 minutes can result in inaccurate measurements.

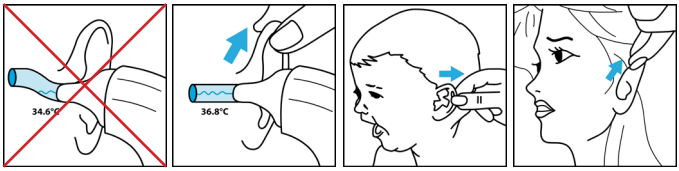
4.2 How to use the Head-mode

To measure the body temperature from the forehead, follow these instructions:

1. Point the thermometer sensor toward the temple.
2. Keep some space between the sensor and the skin (approx. 1/4 inch, 0,5 cm).
3. First measure your temple, then the spot between your eyebrows and then the other temple while holding the head button.
4. Release the head button and take the thermometer off the forehead.
5. Read the temperature from the screen.



4.3 How to use the Ear-mode



To measure the body temperature from the eardrum, follow these instructions:

1. Take off the sensor cover to expose the sensor probe.
2. Pull the ear backward and upward.
3. Gently insert the sensor into the ear canal.
4. Make sure the sensor points in the direction of the eardrum itself.
5. Press the Ear button once.
6. A beep indicates the measurement is successful.
7. Read the temperature from the display.

The most accurate measurement will be obtained when the sensor probe has a direct view of the eardrum (image 2).

Straighten the ear canal by tugging the ear upward and backward to get the most accurate measurement (image 2).

To measure your own temperature, wrap your free hand around the back of your head and pull your ear upward and backward (image 4).

Aged between 6 and 12 months
Pull the ear backward (image 3).

Aged 1 year and older
Pull the ear upward and backward (image 4).

4.4 Memory retrieval

Each time successful measurement is performed the measurement data is stored in the thermometer memory. The thermometer memory has a capacity of 20 sets of data.

To retrieve stored data sets follow these instructions:

1. Make sure the thermometer is off. If it shows anything on the display, leave the buttons untouched for 10 seconds.
2. Press and hold the Ear-button for 4 seconds until the display shows "- - -M".
3. Press the Ear-button once to get the last measurement in the display.

4. Press the Ear-button once more to get to data set 2.
5. The data consists of the measured temperature and the saved type of measurement as shown by the accompanying symbols.
6. To shut down the thermometer press the Head-button once.

4.5 ˚C / ˚F switch

To switch between Celsius and Fahrenheit follow these instructions:

1. Make sure the thermometer is off. If it shows anything on the display, leave the buttons untouched for 10 seconds.
2. Press and hold the Ear-button for 10 seconds until the display shows "- - -˚C" or "- - -˚F".
3. Release the Ear-button.
4. Press the Ear-button once to switch from ˚C to ˚F or from ˚F to ˚C.
5. Wait 5 seconds for the thermometer to save the setting and shut off.

4.6 Automatic power off

If the buttons are left untouched for 10 seconds the thermometer will automatically shut down.

5. Measurement results

Body temperatures between 36.0˚C and <37.6˚C or 96.8˚F and <99.7˚F are considered normal body temperatures.
When normal body temperature is measured; one beep will sound and the display will light green. The measured temperature is shown on the display.

Body temperatures between 37.6˚C <42.2˚C or 99.7˚F <108˚F are considered fever.
When the measurement is in this temperature range, the fever alarm will sound; 7 beeps will sound and the display will light red. The measured temperature is shown on the display.

5.1 Ear-mode/ Ambient temperature mode

In Ear-mode/ Ambient temperature mode the temperature measurement range is 0.0˚C - 100.0˚C or 32˚F - 212˚F. After any successful measurement between 0.0˚C < 37.6˚C or 32˚F < 99.7˚F one beep will sound and the display will light green. When the measurement is between 37.6˚C and <100.0˚C or 99,7˚F <212˚F, the fever alarm will sound; 7 beeps will sound and the display will light red. The measured temperature is shown on the display.

5.2 Head-mode

In head-mode the temperature measurement range is 0.0˚C - 100.0˚C or 32˚F - 212˚F. After any measurement between 32˚C and < 37.6˚C or 89.6˚F and < 99.7˚F one beep will sound and the display will light green. When the measurement is between 37.6˚C and < 42.2˚ or 99.7˚F and <108˚F, the fever alarm will sound; 7 beeps will sound and the display will light red. The measured temperature is shown on the display.

5.3 Out-of-range temperatures

Temperature measurements that are outside the measurement ranges will result in error codes L˚ or H˚ on the display, accompanied by three beeps and the display lighting red for three seconds.

" L˚ ": Measurement is below 32.0˚C or 89.6˚F in Head-mode or below 0.0˚C or 32˚F in Ear-mode/ Ambient temperature mode. Please make sure you are following the instructions on how to get accurate measurements.

" H˚ ": Measurement is exceeding 42.2˚C or 108˚F in Head-mode or over 100.0˚C or 212˚F in Ear-mode / Ambient temperature mode. Please make sure you are following the instructions on how to get accurate measurements.

6. Cleaning

- Regularly clean the thermometer with a damp cloth.
- Do not use alcohol or benzine for cleaning.
- Prevent the sensor from getting stained by cleaning the ears before using the Ear-mode.
- Prevent the sensor from getting stained by cleaning and drying before using the Head-mode.
- Caution: This thermometer is not waterproof! Do not expose this thermometer to water or any other liquid.

7. Storage

- Store this thermometer at room temperature; the most accurate temperature measurement is obtained when the thermometer has been exposed to the same ambient temperature as the user for at least 30 minutes.
- Always store this thermometer in the enclosed soft case to prevent it from collecting dust or getting unhygienic.

8. Troubleshooting

Error: Display shows " ER1 " + backlight is red + 3 beeps sound.
Meaning: Ambient temperature dropped below 10˚C/ 50˚F or exceeded 40˚C/ 104˚F.

Desired action: Please store the thermometer at room temperature.
Error: Display shows " ERC" + backlight is red + 3 beeps sound .
Meaning: EEPROM data reading error or the correcting process is not finished.
Desired action: Please contact your supplier.

Error: Display shows low-voltage signal (not blinking).
Meaning: The battery voltage is below 2.61V±2%.
Desired action: Please replace the batteries according to the instructions.

Other signals:
" L° ": Measurement is below 32.0°C or 89.6°F in Head-mode or below 0.0°C or 32°F in Ear-mode/ Ambient temperature mode. Please make sure you are following the instructions on how to get accurate measurements.

" H° ": Measurement is exceeding 42.2°C or 108°F in Head-mode or over 100.0°C or 212°F in Ear-mode / Ambient temperature mode. Please make sure you are following the instructions on how to get accurate measurements.

9. Technical Information

Model: Dual Mode Infrared Thermometer DMT-489
Applicable regulations and laws: ASTM 1965/EN12470-5/GB/T 19146-2010
Temperature units: °C/°F, adjustable
Measurement range Forehead-mode: 0.0°C-100.0°C / 32.0°F-212.0°F
Measurement range Ear-mode: 0.0°C-100.0°C / 32.0°F-212.0 °F
Precision: ±0.2°C /±0.4°F
Display resolution: 0.1°C/0.1°F
Latency Time: 1 second
Sound: Volume≧50 dB (Distance from dB Volume sensor to thermometer is 10cm)
Automatic shutdown function: ±10s
Low-voltage display function: low-voltage sign shows when the voltage is below 2.51V±0.15V
Memory function: capacity of 20 data sets
Current consumption: I stand-by<2μA; I working<0.5mA; I Buzzer on<2mA; I backlight<15mA
LED backlight specifications: ≧1.2cd/m2
Operational conditions: ASTM 10°C-40°C (50°F-104°F)/15-95%RH
Operational atmospheric pressure range: 860hPa to 1060hPa
Battery: Two 1.5V AAA type batteries
Battery life: ≧3000 measurements
Accuracy (for clinical test): maximum allowable error for clinical test=
Terror = T1-Tref + T2-Tref 2 ≦0.3°C/0.6°F (for 95%) (T1 and T2 represent temperature value for thermometer under test; Tref represents the constant reference temperature).

10. Warranty

What does this limited warranty cover? This Limited Warranty covers any defects in material or workmanship under normal use during the Warranty Period.

What will we do to correct problems? iProvèn will either replace the product or repair the Product at no charge, using new or refurbished replacement parts.

How long does the coverage last? The Warranty Period for this iProvèn product is 730 days from the date of purchase. A replacement product or product part assumes the remaining warranty of the original product purchase.

What does this limited warranty not cover? This Limited Warranty does not cover batteries and packaging neither any problem that is caused by: conditions, malfunctions or damage not resulting from defects in material or workmanship.

What do you have to do? To obtain warranty service, please contact iProvén customer support: www.iproven.com

iProvèn

WAREHOUSE
Beaverton, Oregon
9450 SW Gemini Dr
Beaverton, OR 97008-7105

Phone: 1-503-974-0913

HEADQUARTERS
Ebweg 12D
2991 LT Barendrecht
The Netherlands

Phone: +31(0)84-8838876

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