

DMT-489

Dual Mode

Infrared Thermometer

Instruction manual



CE 0482



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Thank you for choosing the iProvèn Dual Mode Digital Infrared Thermometer. The DMT-489 can be used to measure body temperature by sensing heat radiated from the eardrum or from the forehead. It can also be used to measure the room temperature. The Ear function of this thermometer is appropriate for use on adults and for children older than six months. The head function is also appropriate for children younger than six months.

Please read the instructions carefully in order to accurately utilize this equipment. Temperature measurements may not be valid or accurate if they are not performed in accordance with the instructions provided in this manual. Please keep these instructions handy for future reference. You can also find the latest digital version of this manual at www.iproven.com

It is our passion to develop high quality products for home use. Our products are manufactured at the highest technical standards of professional quality, durability, and consistency. They are also designed with elegant simplicity in mind, making them easy to use at home.

To help you get the most from our products, we provide clear instructions with each device. The manual also includes helpful information that contributes to your overall health awareness.

In order to make sure that our products are tailored to your needs, we welcome your feedback. If you have any issues, questions or recommendations, please share your thoughts with us at www.iproven.com

iProvèn - Professional Care Brought Home

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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.



Important: incorrect usage or damage of the product may lead to inaccurate readings.

1. Safety Instructions and Precautions


- The ear measuring function of this thermometer is not suitable for children under 6 months of age. For children younger than 6 months we recommend using the Forehead mode or a rectal digital thermometer such as the iProven DT-R1221B.
- This 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. Carefully follow the instructions in the cleaning section when you need to cleanse and disinfect your device.
- 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. Instead, please contact our customer support at www.iproven.com.
- The use of this thermometer is not intended to take the place of appropriate medical supervision.
- This thermometer consists of high quality, precision-made parts. It 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 more than three months.

Warning!

This item is not intended to replace insight from a doctor, pharmacist, or other licensed health-care professional. You should not utilize this item for self-diagnosis or for independent treatment of an illness. Immediately contact your health-care professional if you suspect that you have a clinical issue.

Attention:

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

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

2. Purpose of the Device

This thermometer is intended to be used to measure the body temperature of humans who are a minimum of six months old when using the ear measuring function and suitable for all ages when using the head function. It measures the body temperature based on heat radiating from the eardrum or from the forehead. Although this thermometer has undergone extensive clinical tests and is considered safe and highly accurate, it is intended for non- professional home use only.

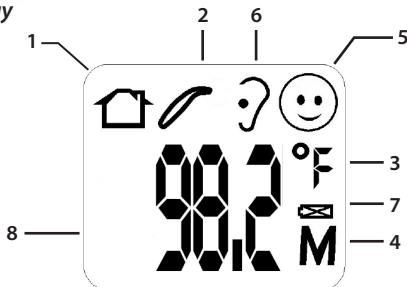
2.1 Description of the Device

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



2.2 Description of the Display

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

Before 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 the Batteries

1. Release the battery cover by gently sliding it down.
2. Remove the battery cover.
3. Replace both AAA- batteries according to the polarity marked on the battery chamber.
4. Replace the battery cover and make sure all of the pins of the cover are aligned with the gaps.
5. Close the battery cover by sliding it up until you hear a click.

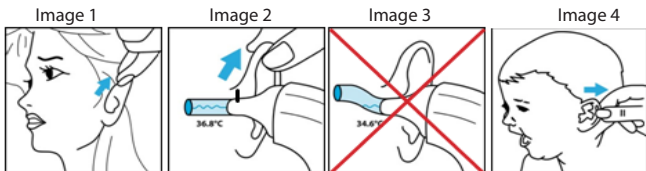
4. Operating instructions

4.1 Precautions for Accurate Measurements

⚠ Carefully follow these instructions to ensure accurate temperature readings:

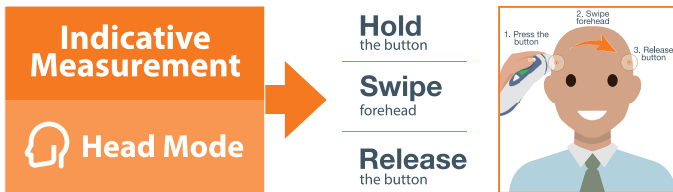
- Ensure that the thermometer lens is clean.
- If the thermometer is transferred to a new location with a different room temperature, wait at least 30 minutes before using it.
This will allow the thermometer to adjust to the new conditions and prepare it to give the most accurate readings.
- Ensure that the ears are clean. Earwax influences the accuracy of the measurement.
- Utilize the thermometer in a closed room where there is no strong breeze or draft.
- Ear or head coverage by hair or a hat will make the ear warmer; ensure that the ear or the head has not been covered for 5 minutes prior to the measurement.
- Please be aware that intense emotions and strenuous physical exertion before taking a measurement can affect the accuracy of the reading.
- Avoid holding the thermometer in your hands any longer than necessary, since it is highly sensitive to heat. Holding the unit for more than three minutes can result in inaccurate measurements.

4.2 How to Correctly Perform an Ear Measurement



1. Remove the sensor cap to expose the sensor probe.
2. For adults, pull the ear backward and upward with your free hand to straighten the ear canal (image 1).
3. Gently insert the sensor into the ear canal.
4. Ensure that the sensor is aimed directly toward the eardrum (image 2).
5. If the ear canal is not straightened, inaccurate readings may result (image 3).
6. For children between 6 and 12 months old, pull the outer ear straightbackward (image 4).
7. Press the button once to take the measurement.
8. A beep indicates that the measurement has been taken and the thermometer may be removed from the ear.
9. Look at the display to read the temperature.
10. Clean the sensor and cover it again with the sensor cap.

4.3 How to Correctly Perform a Head Measurement



NOTE: The forehead measurement is an indicative reading. The measured forehead temperature can fluctuate up to 1.0 °F/ 0,5°C from your actual body temperature. Please be aware of the factors that influence the accuracy as described in the section 'Precautions for Accurate Measurements'.

- ⚠ **Always check if the lens is clean.**
- ⚠ **Always make sure the user and the thermometer will have been in the same room for at least 30 minutes prior to the measurement.**

To perform a head measurement:

1. Keep or put the sensor cap in place;
2. Aim the sensor at the temple and start holding the button;
3. Move the sensor across the forehead to the other temple.
4. Release the button as soon as the sensor is at the other temple.

Tip: Touch the skin lightly but do not press the sensor too hard to the skin as this may give inaccurate measurement results. Visit www.iproven.com/489 to watch the instruction video.

4.4 Memory Retrieval

Each time a successful measurement is performed, the measurement data is stored in the thermometer memory. The memory of this thermometer has a capacity of 20 measurements. To retrieve stored measurements follow these instructions:

1. Ensure that the thermometer is turned off. If the display is not dark, leave the buttons untouched for 10 seconds.
2. Hold the Ear button for 4 seconds, and release the button when the display shows "--M"
3. The last measurement will appear and the M sign will blink.
4. Press the ear button again to see the previous measurement; repeat as needed to view earlier measurements.
5. The retrieved information includes the measured temperature and the type of temperature taken (whether an ear, head or room measurement)

4.5 Switch Between Fahrenheit and Celcius

1. Ensure that the thermometer is turned off. If the display is not completely dark, leave the buttons untouched for 10 seconds.
2. Press and hold the ear button for 7 seconds until the display shows "-- °C" or "-- °F".
3. Release the ear button and immediately press it again to switch the temperature scale.
4. Wait 5 seconds for the thermometer to save the settings and shut itself down before you use it again.

4.6 Automatic Power-off

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

5. Measurement Results

5.1 Room Temperature Measurement

This device may be used to measure room temperatures between 32 °F and 89.5 °F, as well as 108 °F to 212 °F. This corresponds to 0.0 °C to 32 °C and 42.2 °C to 99.9 °C.

To measure the room temperature press the ear button once while remaining at least 3 ft / 1 meter space between the sensor and any object.

5.2 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 beeps and the display lighting red for three seconds. "L °" indicates that the measurement is below 32 °F, or 0 °C.

"H °" indicates a measurement exceeding 212 °F, or 100.0 °C.

5.3 Interpreting the Measurement Results

Display Color	°F	°C	Indication	What to do
Green	86-95,7	30-35,4	Hypothermia	Consult doctor immediately.
Green	85,8-96.7	35,3-35,9	Decreased temperature	Lower temperatures in the morning are perfectly normal. If you are feeling cold take a hot shower.
Green	96.8-99.6	36,0-37,5	Good temperature	Your body temperature is fine.
Red	99.7-100.3	37,6-37,9	Increased temperature	If you are not feeling well, get some rest.
Red	100.4-101.3	38-38,5	Light fever	Check your temperature regularly and rest. Consult a doctor if you get worse or if the fever lasts for more than three days ⚠ For babies <6 months consult doctor immediately
Red	101.4-103.9	38,6-39,9	Fever	Call the doctor, especially if the fever lasts for more than one day
Red	104 and higher	40 and higher	High fever	Consult doctor immediately or go to the emergency ward!

6. Cleaning

- Regularly clean the thermometer sensor with a damp cloth, moistened slightly with water.
- If you desire disinfecting the sensor probe you can do so by using a disinfecting wipe or a cotton ball damped with a disinfectant.
- You can prevent the sensor from getting stained by ensuring the ear canals are clean.

⚠ Caution: This thermometer is not waterproof! Do not immerse or expose it to water or any other liquid other than using a slightly damp cloth.

7. Storage

- Store this thermometer at room temperature. The most accurate temperature measurement is obtained when the thermometer and the user have both been exposed to the same ambient temperature for at least 30 minutes.
- Always store this thermometer in the enclosed soft case to prevent it from collecting dust or being exposed to bacteria.
- If your thermometer is likely to remain idle for more than 90 days, we recommend you remove the batteries and store them separately.

8. Troubleshooting

- **Error:** Display shows "ER1" + backlight is red + 3 beeps sound
Meaning: The room temperature has dropped below 10 °C/ 50 °F or exceeded 40 °C/ 104 °F. Desired action: 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: Contact your supplier.
- **Error:** Display shows low-voltage signal (not blinking) Meaning: The battery voltage is below 2.61V±2%. Desired action: Replace the batteries according to the instructions.
- **"L °":** Measurement is below 0.0 °C or 32 ° F. Desired action: Check that you are following the instructions for taking accurate measurements.
- **"H °":** Measurement exceeds 99,9 °C or 212 ° F. Desired action: Make sure you are following the instructions for taking 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: 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
= Error = 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).
- ASTM laboratory accuracy requirements in the display range of 37 to 39°C (98 to 102°F) for IR thermometers is +/- 0.2°C (+/- 0.4°F), whereas for mercury-in-glass and electronic thermometers, the requirement per ASTM Standards E667-86 and E1112-86 is +/- 0.1°C (+/- 0.2°F).

10. Warranty

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

What will we do to correct problems? iProven 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 of this iProven product is 2 years 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, nor any problem that is caused by conditions, malfunctions, or damage not resulting from defects in material or workmanship.

What must be done to obtain Warranty Service? To obtain warranty service, contact our customer support at www.iproven.com to determine the problem and the most appropriate solution for your situation.

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