

MEDI-PUMP®
30" FLEXIBLE DIGITAL THERMOEMTER
MODEL: MPT2002



CAUTION: Rx ONLY

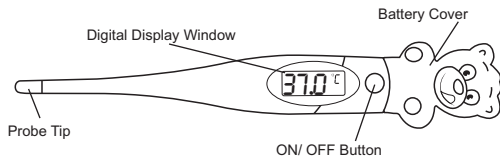
Thank you for purchasing a Digital Thermometer. Please read the following instructions to achieve the most accurate temperatures and safe operation. With proper care and use, your thermometer will provide you with years of reliable readings.

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Unit Specifications

DISPLAY:	Liquid Crystal Display
DISPLAY RESOLUTION:	4 Digits (1/10 TH of a degree increments)
MEASUREMENT RANGE:	32°C - 42.9°C (89.6°F - 109.2°F)
MAXIMUM PERMISSIBLE ERROR:	±0.1°C (±0.2°F)
ALERT:	Thermometer beeps when activated and deactivated. A series of beeps signal when peak temperature is reached.
MEMORY:	Displays last measured temperature.
BATTERY:	One LR41 1.5V DC
BATTERY LIFE:	Approximately 1500 measurements.
AUTOMATIC SHUT-OFF:	After approximately 10 minutes.
AMBIENT OPERATING TEMPERATURE:	10°C - 40°C (50°F to 104°F)
HUMIDITY:	15% to 95% RH
STORAGE TEMPERATURE:	-10°C to 60°C (14°F to 140°F)
HUMIDITY:	15% to 95% RH

Features



Symbols

	Caution To signify caution. Please read the instructions carefully before operating the product.
	Type B applied part Note: B = Body
	The equipment bears CE mark CE0123 indicating its conformity with the provision of Council Directive 93/42/EEC concerning medical devices, and fulfills the essential requirements of Annex I of this directive.

Cleaning procedures

It is important to clean your Thermometer before the first time of use and after each application. Clean your Digital Thermometer by wiping it with soap and water or 70% isopropyl Alcohol.

Caution: THE UNIT MUST NEVER BE SUBMERSED IN ANY LIQUID OR STERILIZED IN ANY WAY (GAS OR STEAM AUTOCLAVES). FAILURE TO FOLLOW THESE INSTRUCTIONS WILL CAUSE SEVERE DAMAGE TO YOUR UNIT AND VOID YOUR WARRANTY.

Warning Read the Following before Using

- This product is not a toy.
- The thermometer should only be used under the supervision of an adult.
- Do not walk, run or talk during temperature taking.
- Clean the thermometer before and after each use.
- Store the unit in the protective case and keep away from children when not in use.
- Do not bite the probe and battery cover.
- Do not store the unit where it will be exposed to direct sunlight, dust or humidity. Avoid extreme temperatures.
- Dropping or subjecting your thermometer to strong shocks should be avoided.
- Do not attempt to disassemble the unit, except to replace the battery.
- The body of the thermometer should be free of crack before use.
- Do not plug in AC power outlet.
- Do not use if battery cover is detached.
- If measurement is not attainable, the unit must be replaced.
- There might be potential electromagnetic or other interference influencing proper operation of the equipment, in such case, please stop using and re-use it after the interference disappeared.
- Please arrange a calibration for the device at authorized unit or arrange a contrast with reference mercury thermometer at least once every year.
- Do not disassemble the device. If the functional failure occurred during the operation process, please return it to the retailer.
- Do not discard the device randomly. When end of using, please handle the device according to local law and regulations.

NOTE:

- Performance of the device may be degraded if:
- operated outside of stated temperature and humidity range
 - stored outside of stated temperature and humidity range
 - thermometer undergoes mechanical shock (drop)
 - patient temperature is below ambient temperature

This thermometer conforms to all of the requirements established in ASTM Standard E 1112:2000 (Standard Specification for Electronic Thermometer for Intermittent Determination of Patient Temperature) and EN 12470-3:2000 (Clinical thermometers-Part 3: Performance of compact electrical thermometers (non-predictive and predictive) with maximum device). Full responsibility for conformance of this product to the specification is assumed by Gardner Denver Thomas Inc. (Address: 1419 Illinois Avenue Sheboygan, WI USA)

Introduction

Thank you for purchasing a Digital Thermometer. Please read the following instructions to achieve the most accurate temperatures and safe operation. With proper care and use, your thermometer will provide you with years of reliable readings.

What is a "Normal" Temperature?

Although the generally accepted "normal" temperature reading is 37.0°C (98.6°F), temperature reading can vary from 36°C (96.8°F) to 37.3°C (99.1°F) and still may be considered "normal". Variations in temperature can be attributed to activities such as exercise, smoking, eating and drinking. Even time of day may influence your temperature. For example, your temperature is lower in the morning than in the afternoon. Other variations may be due to the location of the temperature reading. While the oral temperature follows the guidelines previously described, a rectal temperature is generally 0.5°C (0.9°F) higher. Conversely, an auxiliary (under the arm) temperature will be 0.5°C (0.9°F) lower.

We encourage you to thoroughly read this guidebook to learn about the features of your thermometer.

Operating your Thermometer

Follow the previous cleaning instructions prior to using your Thermometer for the first time of use or after it has been stored for a period.

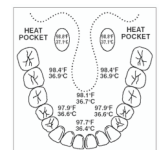
How To Take Your Temperature

1. Determine whether the measurement will be oral, rectal or underarm.
- NOTE: Measurement time may vary based on the selected position.
2. Press the ON/OFF button (the unit will beep) to activate the thermometer.

	This is the LCD display test, which ensures all parts of the display are functioning properly. It will appear on the screen for approximately 3 seconds.
	This display shows the last temperature reading or Lo if no reading is stored in memory. It will appear on the screen for approximately 2 seconds.
	The display will then briefly display 37.0°C. The Lo with the flashing temperature symbol indicates the thermometer is ready to take a temperature reading.

Taking an Oral Temperature

Using the diagram on the right, place the probe tip under the tongue as near as possible to the heat pocket. The diagram also shows the temperature variables by not placing the tip in the heat pocket area.



CAUTION: Drinking hot or cold fluids, exercising, smoking or performing other activities may raise or lower your temperature. Therefore, it is important to relax for approximately 5 minutes with your mouth closed prior to taking a reading.

1. The current temperature is shown and the temperature symbol will continue to flash during the reading.
2. When the peak temperature is reached, the temperature symbol will stop flashing and the thermometer will sound a series of beeps ten times. If the temperature is above 37.8°C (100°F), the unit will sound ten sets of two short beeps each.
3. To turn the unit off, press the ON/OFF button. Or the unit will automatically shut off after approximately ten minutes.

NOTE: The mouth must remain closed during the measurement for the most accurate reading. Opening the mouth could result in an extended measurement time and may affect the reading.

Taking an Auxiliary Temperature (under the arm)

1. Wipe the underarm with a dry towel.
 2. Place the probe tip under the arm so the tip is touching the skin with the thermometer perpendicular to the body.
 3. Position the arm across the chest so the probe tip is well covered by the arm. This also insures the probe is not affected by the room's air.
 4. When the peak temperature is reached, the temperature symbol will stop flashing and the thermometer will sound a series of beeps ten times. If the temperature is above 37.8°C (100°F), the unit will sound ten sets of two short beeps each.
 5. To turn the unit off, press the ON/OFF button. Or the unit will automatically shut off after approximately ten minutes.
- NOTE:** Auxiliary temperatures are generally 0.5°C (0.9°F) lower than oral reading.

Taking a Rectal Temperature

CAUTION: Rectal temperatures are an appropriate and reliable method for infants and small children. Otherwise, this method should only be used when it is impossible or impractical to take an oral or auxiliary temperature.

1. After applying the disposable probe cover, apply a water-soluble lubricant to the tip.
 2. Gently insert the probe a MAXIMUM of 1/2" into the rectum.
 3. When the peak temperature has been reached, the temperature symbol will stop flashing and the thermometer will sound a series of beeps ten times. If the temperature is above 37.8°C (100°F), the unit will sound ten sets of two short beeps each.
 4. To turn the unit off, press the ON/OFF button. Or the unit will automatically shut off after approximately ten minutes.
- NOTE:** Rectal temperatures are generally 0.5°C (0.9°F) higher than oral readings.

Changing the Battery

The battery in your digital thermometer needs to be replaced when the "▼" symbol appears. Replace the battery with a LR41 1.5V DC.

To Replace the Battery

<ol style="list-style-type: none"> Loosen screw on the battery cap turning counter-clockwise. Remove and slide the battery cap away from the unit. Use a non-metal pointed tool, carefully remove the battery and insert the new battery with the negative (-) side facing the back side of the unit. 	
<ol style="list-style-type: none"> Carefully slide the battery cap back into place, and make sure that the cap fits snugly to protect the battery compartment from moisture. Tighten the screw. 	

NOTE:

- Please properly dispose the battery away from children and heat. Remove the battery when not in use for a long period of time to avoid circuit damage due to leakage from battery.
- Exhausted battery should be handled according to local law or returned to manufacturer.

Recycling and Disposal

The WEEE directive (Waste Electrical and Electronic Equipment: 2002/96/EC) has been put in place to ensure that products are recycled using best available treatment, recovery and recycling techniques to ensure human health and high environment protection. Your product is designed and manufactured with high quality materials and components, which can be recycled and reused.


- Do not dispose of your old product in your general household waste bin.
- Inform yourself about the local separate collection system for electrical and electronic products marked by this symbol:




- Dispose of the complete product (including its accessories) in the designated WEEE collection facilities.
- The machine should be treated on local law or regulation to avoid hurting users and polluting environment.

Classification According to Clause 5 of IEC 60601-1

The equipment is classified as below:

- Internally powered equipment.
- Degree of protection against electric shock: Type B Equipment; 
- Degree of protection against harmful ingress of water: Ordinary equipment (enclosed equipment without protection against ingress of water) IPX0 (Ordinary);
- Methods of sterilization or disinfection recommended by the manufacturer: Disinfection;
- Equipment not suitable for use in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide;
- Mode of operation: continuous operation.

Guidance and manufacture's declaration - electromagnetic immunity - for EQUIPMENT and SYSTEMS that are not LIFE-SUPPORTING

Guidance and manufacture's declaration - electromagnetic immunity			
The MPT2002 Flexible Digital Thermometer is intended for use in the electromagnetic environment specified below. The customer or the user of MPT2002 Flexible Digital Thermometer should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	3 V/m	<p>Portable and mobile RF communications equipment should be used no closer to any part of the MPT2002 Flexible Digital Thermometer, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.</p> <p>Recommended separation distance</p> $d = \left[\frac{3.5}{E_1} \right] \sqrt{P} \quad 80 \text{ MHz to } 800 \text{ MHz}$ $d = \left[\frac{7}{E_1} \right] \sqrt{P} \quad 800 \text{ MHz to } 2.5 \text{ GHz}$ <p>Where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in metres (m).</p> <p>Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey,* should be less than the compliance level in each frequency range. Interference may occur in the vicinity of equipment marked with the following symbol:</p> 
<p>NOTE 1 At 80 MHz and 800 MHz, the higher frequency range applies.</p> <p>NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.</p>			
<p>a Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the MPT2002 Flexible Digital Thermometer is used exceeds the applicable RF compliance level above, the MPT2002 Flexible Digital Thermometer should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the MPT2002 Flexible Digital Thermometer.</p> <p>b Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.</p>			

EMC Declaration

Guidance and manufacture's declaration - electromagnetic emissions- for all EQUIPMENT and SYSTEMS

Guidance and manufacture's declaration - electromagnetic emission		
The MPT2002 Flexible Digital Thermometer is intended for use in the electromagnetic environment specified below. The customer or the user of the MPT2002 Flexible Digital Thermometer should assure that it is used in such an environment.		
Emission test	Compliance	Electromagnetic environment - guidance
RF emissions CISPR 11	Group 1	The MPT2002 Flexible Digital 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 emission CISPR 11	Class B	The MPT2002 Flexible Digital Thermometer is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Not applicable	
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Not applicable	

Guidance and manufacture's declaration - electromagnetic immunity - for all EQUIPMENT and SYSTEMS

Guidance and manufacture's declaration - electromagnetic immunity			
The MPT2002 Flexible Digital Thermometer is intended for use in the electromagnetic environment specified below. The customer or the user of MPT2002 Flexible Digital Thermometer should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Electrostatic discharge (ESD) IEC 61000-4-2	±6 kV contact ±8 kV air	±6 kV contact ±8 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
Power frequency (50Hz) magnetic field IEC 61000-4-8	3A/m	3A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.

Recommended separation distances between portable and mobile RF communications equipment and the EQUIPMENT or SYSTEM - for EQUIPMENT or SYSTEM that are not LIFE-SUPPORTING

Recommended separation distances between portable and mobile RF communications equipment and the MPT2002 Flexible Digital Thermometer		
The MPT2002 Flexible Digital Thermometer is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the MPT2002 Flexible Digital Thermometer can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the MPT2002 Flexible Digital Thermometer as recommended below, according to the maximum output power of the communications equipment.		
Rated maximum output power of transmitter (W)	Separation distance according to frequency of transmitter (m)	
	80 MHz to 800 MHz	800 MHz to 2.5 GHz
	$d = \left[\frac{3.5}{E_1} \right] \sqrt{P}$	$d = \left[\frac{7}{E_1} \right] \sqrt{P}$
0.01	0.1167	0.2334
0.1	0.3689	0.7378
1	1.1667	2.3334
10	3.6893	7.3786
100	11.6667	23.3334
For transmitters rated at a maximum output power not listed above, the recommended separation distance d in metres (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.		
NOTE 1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.		
NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.		



The functioning of this Flexible Digital Thermometer may be adversely affected by electromagnetic interference exceeding the levels specified in EN60601-1-2.

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