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DIGITAL THERMOMETER MANUAL

TMP-05

Warning :

⚠ Read instructions thoroughly before using digital thermometer.

⚠ Choking Hazard: Thermometer cap and battery may be fatal if swallowed. Do not allow children to use this device without parental supervision.

⚠ Do not use thermometer in ear. Designed use is for oral, rectal, and armpit (axilla) readings only.

⚠ Do not place thermometer battery near extreme heat as it may explode.

⚠ Remove battery from the device when not in operation for a long time.

⚠ The use of temperature readings for self-diagnosis is dangerous. Consult your doctor for the interpretation of results. Self-diagnosis may lead to the worsening of existing disease conditions.

⚠ Do not attempt measurements when the thermometer is wet as inaccurate readings may result.

⚠ Do not bite the thermometer. Doing so may lead to breakage and/or injury.

⚠ Do not attempt to disassemble or repair the thermometer. Doing so may result in inaccurate readings.

⚠ After each use, disinfect the thermometer especially in case the device is used by more than one person.

⚠ Do not force the thermometer into the rectum. Stop insertion and abort the measurement when pain is present. Failure to do so may lead to injury.

⚠ Do not use thermometer orally after being used rectally.

⚠ For children who are two years old or younger, please do not use the devices orally.

⚠ If the unit has been stored at temperatures over 5℃～40℃(41℉～104℉) , leave it in 5℃～40℃ (41℉～104℉) ambient temperature for about 15 minutes before using it.

PLEASE READ CAREFULLY BEFORE USING

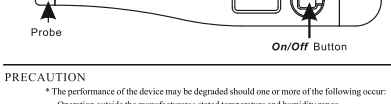
This digital thermometer provides a quick and highly accurate reading of an individual's body temperature. To better understand its functions and to provide years of dependable results, please read all instructions first.

CONTENTS

1N Digital Thermometer with Battery,1N Storage Case, 1N IFU.

PRODUCT ILLUSTRATION

Figure 1



PRECAUTION

* The performance of the device may be degraded should one or more of the following occur:
  - Operation outside the manufacturer's stated temperature and humidity range.
  - Storage outside the manufacturer's stated temperature and humidity range.
  - Mechanical shock (for example, drop test) or degraded sensor.
  - Patient temperature is below ambient temperature.
* Portable and mobile RF communications can affect the device. The device needs special pre-cautions regarding EMC according to the EMC information provided in the accompany documents.

SPECIFICATIONS

Type:	Digital Thermometer (Not Predictive)
Measure Range:	32.0℃－42.9℃(90.0℉-109.9℉) (℃/℉ chosen by manufacturer)
Accuracy:	±0.1℃(±0.2℉) during 35.5℃~42.0℃(95.9℉~107.6℉) at 18℃~28℃(64.4℉~82.4℉) ambient operating range ±0.2℃(±0.4℉) for other measuring and ambient operating range
Operating mode:	Direct Mode
Display:	Liquid crystal display, 3 1/2 digits
Memory:	For storing the last measured value
Battery:	One 1.5 V DC. button battery (size LR41or SR41, UCC 392)
Battery life:	Approx. 200hours of continuous operation or 1 year with 3 measurements per day
Dimension:	12.3cm x 1.8cm x 0.9cm (L x W x H)
Weight:	Approx. 10 grams including battery
Expected service life:	One year
Ambient operating range:	Temperature: 5℃～40℃(41℉～104℉) Relative humidity: 15%~95%RH Atmospheric Pressure : 700hPa ~ 1060hPa
Storage and transportation condition:	Temperature: -20℃~55℃(-4℉～131℉) Relative humidity: 15%~95%RH Atmospheric Pressure : 700hPa ~ 1060hPa
Ingress Protection Rating:	IP 22
Classification:	Type BF

℃/℉ SWITCHABLE

Temperature readings are available in the Celsius or Fahrenheit scale (℃/℉; located in the upper right corner of LCD.) With the unit off, press and hold the *On/Off* Button for approximately 2 seconds to change the current setting.

DIRECTIONS

1. Press the *On/Off* Button next to LCD display. A tone will sound as the screen shows 88.8, followed by last recorded temperature. After showing the self-test temperature, the thermometer is now in the testing mode.
2. Position thermometer in desired location (mouth, rectum, or armpit.)
   a) **Oral Use:** Place thermometer under tongue as indicated by " ↓ " position shown in Figure 2. Close your mouth and breathe evenly through the nose to prevent the measurement from being influenced by inhaled/exhaled air.

   Figure 2

   b) **Rectal Use:** Lubricate silver probe tip with petroleum jelly for easy insertion. Gently insert sensor approximately 1cm (less than 1/2") into rectum.
   c) **Armpit Use:** Wipe armpit dry. Place probe in armpit and keep arm pressed firmly at side. From a medical viewpoint, this method will always provide inaccurate readings, and should not be used if precise measurements are required.
3. The degree sign flashes throughout the testing process. When flashing stops an alarm will beep for approximately 10 seconds. The measured reading will appear on the LCD simultaneously. The minimum measurement time until the signaling tone (beep) must be maintained without exception. The measurement continues even after the buzzer notification. So that in order to achieve better body temperature measurement result, recommend to keep the probe in mouth and rectum about 2 minutes, or in armpit about 5 minutes regardless of the beep sound and at least 30 seconds measurement interval should be maintained.

   *Note: Normally the buzzes are " Bi-Bi-Bi-Bi-" ; Alarm beeps more rapidly when temperature reaches 37.8℃ (100℉) or higher ,and the buzzes are " Bi-Bi-Bi----- Bi-Bi-Bi------- Bi-Bi-Bi"
4. To prolong battery life, press the *On/Off* Button to turn unit off after testing is complete. If no action is taken, the unit will automatically shut off after around 10 minutes.

TROUBLESHOOTING

Error message	Problem	Solution
Lo	Temperature taken is lower than 32.0°C(90.0°F)	Turn off, wait one minute and take a new temperature via close contact and sufficient rest.
Hi	Temperature taken is higher than 42.9°C(109.9°F)	Turn off, wait one minute and take a new temperature via close contact and sufficient rest.
Err	The system is not functioning properly.	Unload the battery, wait for 1 minute and repower it. If the message reappears, contact the retailer for service.
	Dead battery: Battery icon is flashing, can't be measurable.	Replace the battery.

BATTERY REPLACEMENT

1. Replace battery when " ▮ " appears in the lower right corner of LCD display.
2. Pull battery cover off as shown in Figure 3.
3. Gently pull out plastic circuit board with battery chamber approximately 1 cm (slightly less than 1/2".) (See Figure 4)
4. Use pointed object such as a pen to remove old battery. Discard battery lawfully. Replace with new 1.5V DC button type LR41 or SR41,UCC392, or equivalent. Be sure battery is installed with "+" polarity facing up. (See Figure 5)
5. Slide battery chamber back into place and attach cover.

Figure 3

Figure 4

Figure 5

CALIBRATION

The thermometer is initially calibrated at the time of manufacture. If the thermometer is used according to the use instruction, periodic readjustment is not required. However, we recommend checking calibration every two years or whenever clinical accuracy of the thermometer is in question. Turn on the thermometer and insert into the water bath and then check the laboratory accuracy of thermometer. Please send the complete device to the dealers or manufacturer.

The above recommendations do not supersede the legal requirements. The user must always comply with legal requirements for the control of the measurement, functionality, and accuracy of the device which are required by the scope of relevant laws, directives or ordinances where the device is used.

CLEANING AND DISINFECTION

1)Immerse the thermometer probe in distilled water for at least 1 minute;
2)Using a clean, soft cloth to wipe the thermometer down to remove any residue;
3)Repeat step 1 and 2 for three times until no soil is seen with visual inspection after cleaning;
4)For thoroughly clean and disinfection, please use method A or B:
  Method A(High level disinfection): immerse the thermometer probe in 0.55% OPA(O-Phthaldehyde), such as CIDEX OPA, for at least 12 minutes under temperature at 20℃;
  Method B(Low level disinfection): Using a clean soft cloth dipped in 70% medical alcohol, wipe the probe 3 times, at least one minute for each time.
5)Repeat step 1 to 3 to remove OPA residuals;

Note1: Rectal use is not recommended for home use as OPA will not be readily available outside of a hospital. If rectal measurement is necessary, we strongly recommend high level disinfection.

Note2: Please operate according to the manual of OPA for reference.

To prevent damage to the thermometer please note and observe the following:

-Do not use benzene, paint thinner, gasoline or other strong solvents to clean the thermometer.
-Do not attempt to disinfect the sensing probe (tip) of the thermometer by immersing in alcohol, OPA or in hot water (water over 122℉ (50℃) for long time.
-Do not use ultrasonic washing to clean the thermometer.

LIMITED WARRANTY

The thermometer is guaranteed for one year from the date of purchase. If the thermometer does not function properly due to defective components or poor workmanship, we will repair or replace it free of charge. All components are covered by this warranty excluding the battery. The warranty does not cover damages to your thermometer due to improper handling. To obtain warranty service, an original or copy of the sales receipt from the original retailer is required.

MFG By: MEDTECH LIFE PVT. LTD.

Regd. address: B6, Byculla Service Industries, Off D. K. Marg,
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For Consumer complaint,
Please contact Consumer Care Officer at Regd. address
+91 720 8088 720 support@medtechlife.com

Electromagnetic Compatibility Information

The device satisfies the EMC requirements of the international standard IEC 60601-1-2. The requirements are satisfied under the conditions described in the table below. The device is an electrical medical product and is subject to special precautionary measures with regard to EMC which must be published in the instructions for use. Portable and mobile HF communications equipment can affect the device. Use of the unit in conjunction with non-approved accessories can affect the device negatively and alter the electromagnetic compatibility. The device should not be used directly adjacent to or between other electrical equipment.

Table 1

Guidance and manufacturer`s declaration – electromagnetic emission

The device is intended for use in the electromagnetic environment specified below. The customer or the user of the device should assure that it is used in such an environment.

Emissions test	Compliance	Electromagnetic environment – guidance
RF emissions CISPR 11	Group 1	The device 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 CISPR 11	Class B	The device 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	

Table 2

Guidance and manufacturer`s declaration – electromagnetic immunity

The device is intended for use in the electromagnetic environment specified below. The customer or the user of the device 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	± 8 kV contact ±2 kV, ±4 kV, ±8 kV, ±15 kV air	± 8 kV contact ±2 kV, ±4 kV, ±8 kV, ±15 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 %.
Electrostatic transient / burst IEC 61000-4-4	± 2 kV for power supply lines 100 kHz repetition frequency ± 1 kV for input/output lines	N/A	N/A
Surge IEC 61000-4-5	± 0.5 kV, ± 1 kV differential mode line-line	N/A	N/A
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	0 % UT (100 % dip in UT) for 0.5 cycle at 0°, 45°, 90°, 135°, 180°, 225°, 270°, and 315° 0 % UT (100 % dip in UT) for 1 cycle at 0° 70 % UT (30 % dip in UT) for 25/30 cycles at 0° 0 % UT (100 % dip in UT) for 250/300 cycle at 0°	N/A	N/A
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	30 A/m, 50/60Hz	30 A/m, 50/60Hz	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.

NOTE UT is the a. c. mains voltage prior to application of the test level.

Table 3

Guidance and manufacturer`s declaration – electromagnetic immunity

The device is intended for use in the electromagnetic environment specified below. The customer or the user of the device should assure that it is used in such an environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz 6 Vrms 150 kHz to 80 MHz outside ISM bandsa	N/A	Portable and mobile RF communications equipment should be used no closer to any part of the device, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance** $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$ $d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$ 80MHz to 800MHz $d = \left[\frac{7}{E_1}\right]\sqrt{P}$ 800MHz to 2.7GHz 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). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, [a] should be less than the compliance level in each frequency range [b] Interference may occur in the vicinity of equipment marked with the following symbol:
Radiated RF IEC 61000-4-3	10 V/m 80 MHz to 2.7 GHz	10 V/m	

NOTE 1 At 80 MHz and 800 MHz, 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.

a The ISM (industrial, scientific and medical) bands between 0,15 MHz and 80 MHz are 6,765 MHz to 6,795 MHz, 13,553 MHz to 13,567 MHz, 26,957 MHz to 27,283 MHz, and 40,66 MHz to 40,70 MHz. The amateur radio bands between 0,15 MHz and 80 MHz are 1,8 MHz to 2,0 MHz, 3,5 MHz to 4,0 MHz, 5,3 MHz to 5,4 MHz, 7 MHz to 7,3 MHz, 10,1 MHz to 10,15 MHz, 14 MHz to 14,2 MHz, 18,07 MHz to 18,17 MHz, 21,0 MHz to 21,4 MHz, 24,89 MHz to 24,99 MHz, 28,0 MHz to 29,7 MHz and 50,0 MHz to 54,0 MHz.

b The compliance levels in the ISM frequency bands between 150 kHz and 80 MHz and in the frequency range 80 MHz to 2,7 GHz are intended to decrease the likelihood that mobile/portable communications equipment could cause interference if it is inadvertently brought into patient areas. For this reason, an additional factor of 10/3 has been incorporated into the formulae used in calculating the recommended separation distance for transmitters in these frequency ranges.

c 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 device is used exceeds the applicable RF compliance level above, the device should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the device.

d Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

Table 4

Recommended separation distances between portable and mobile RF communications equipment and the device

The device is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the device can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the device as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output of transmitter W	Separation distance according to frequency of transmitter m		
	150 kHz to 80 MHz $d = [\frac{3.5}{V_1}]\sqrt{P}$	80 MHz to 800 MHz $d = [\frac{3.5}{E_1}]\sqrt{P}$	800 MHz to 2.7 GHz $d = [\frac{7}{E_1}]\sqrt{P}$
0.01	0.12	0.04	0.07
0.1	0.37	0.12	0.23
1	1.17	0.35	0.7
10	3.7	1.11	2.22
100	11.7	3.5	7.0

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.

Table 5

Recommended separation distances between RF wireless communications equipment

The device is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the device can help prevent electromagnetic interference by maintaining a minimum distance between RF wireless communications equipment and the device as recommended below, according to the maximum output power of the communications equipment.

Frequency MHz	Maximum Power W	Distance	IEC 60601 Test Level	Compliance Level	Electromagnetic Environment - Guidance
385	1.8	0.3	27	27	RF wireless communications equipment should be used no closer to any part of the device, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance** $E = \frac{6}{d}\sqrt{P}$ Where P is the maximum output power rating of the ransmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m). Field strengths from fixed RF transmitter, 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:
450	2	0.3	28	28	
710	0.2	0.3	9	9	
745					
780					
810	2	0.3	28	28	
870					
930					
1720	2	0.3	28	28	
1845					
1970					
2450	2	0.3	28	28	
5240	0.2	0.3	9	9	
5500					
5785					

Note 1: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

WARNINGS!

• This device should not be used in the vicinity or on the top of other electronic equipment such as cell phone, transceiver or radio control products. If you have to do so, the device should be observed to verify normal operation.

• The use of accessories and power cord other than those specified, with the exception of cables sold by the manufacturer of the equipment or system as replacement parts for internal components, may result in increased emissions or decreased immunity of the equipment or system.