124.00 mm

420.00 mm

Digital Thermometer

OWNER'S MANUAL

Model:DMT-4770b

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 41℉～104℉(5℃～40℃), leave it in 41℉～104℉ (5℃～40℃) ambient temperature for about 15 minutes before using it.
⚠ Use of this equipment adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, this equipment and the other equipment should be observed to verify that they are operating normally.
⚠ PORTABLE RF communications equipment (including peripherals such as antenna cables and external antennas)should be used no closer than 30 cm (12 inches) to any part of the [ME EQUIPMENT or ME SYSTEM],including cables specified by the MANUFACTURER. Otherwise, degradation of the performance of this equipment could result.
⚠ It is not intended for use in the oxygen rich environment and presence of flammable anesthetic mixture with air, oxygen or nitrous oxide.
⚠ Do not put the thermometer in direct sunlight or with cotton wool, otherwise the accuracy will be affected.
⚠ ME equipment should not be cleaned and disinfected while in use.

Indications For Use

The digital thermometers are intended to measure the human body temperature in regular mode orally, rectally or under the arm. And the devices are reusable for clinical or home use on people of all ages, including children under 8 years old with adult supervision.

Expected Operator

- The patient is an intended operator. The Applied part is the probe.
- All functions the patient can safely use.
- The patient can replace the batteries.

PLEASE READ CAREFULLY BEFORE USING

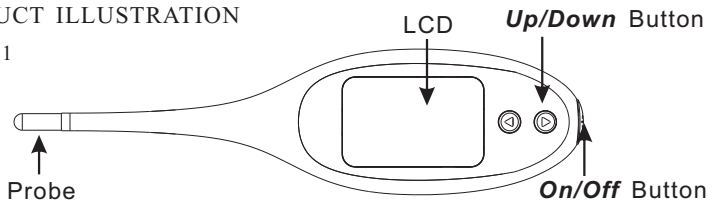
This digital thermometer provides a quick and highly accurate reading of an individual's body temperature. To better understand its functions and to provide years of dependable results, please read all instructions first.
This appliance conforms to the following standards:
ASTM E1112 Standard Specification for Electronic Thermometer for Intermittent Determination of Patient Temperature,
ISO 80601-2-56 Medical electrical equipment —Part 2-56:Particular requirements for basic safety and essential performance of clinical thermometers for body temperature measurement,
IEC 60601-1-11 Medical electrical equipment —Part 1-11: General requirements for basic safety and essential performance –Collateral Standard: Requirements for medical electrical equipment and medical electrical systems used in the home healthcare environment and complies with the requirements of IEC 60601-1-2(EMC), AAMI/ANSI ES60601-1(Safety) standards. And the manufacturer is ISO 13485 certified.

CONTENTS

1 Thermometer, 1 Owner's Manual, 1 Storage Case

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 s tated te mperature and humidity range.
- Storage outside the manufacturer's s tated te mperature 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.
*Do not use the devices in the MR environment.

SYMBOL EXPLANATION

⚠	Caution	⎓	Direct Current		TYPE BF APPLIED PART		Manufacturer
	Date of manufacture	LOT	Batch Code		Refer to instruction manual/ booklet		General symbol for recovery/recyclable
35% 95%	Storage and Transportation Humidity limitation: 15%~95%RH			70kPa 106kPa	Atmospheric pressure limitation		
	Disposal of this product and used batteries should be carried out in accordance with the national regulations for the disposal of electronic products.			-4℉ 131℉	Storage and Transportation Temperature Limit: -4℉～131℉ (-20℃~55℃)		
IP27	The first num.2:Protected against solid foreign objects of 12,5 mm ⌀ and greater. The second num.7:Protected against the effects of temporary immersion in water.						

SPECIFICATIONS

Type:	Digital Thermometer (Not Predictive)
Measure Range:	89. 60℉-109.38℉(32.00℃－42.99℃)(℉/℃ chosen by manufacturer)
Accuracy:	±0.1℉(±0.05℃) during 95.00℉~100.40℉(35.00℃~38.00℃) at 64.4℉~82.4℉ (18℃~28℃) ambient operating range ±0.2℉(±0.1℃) for other measuring and ambient operating range
Operating mode:	Direct Mode
Display:	Liquid crystal display, 4 ½ digits
Memory:	The last thirty memories
Battery:	One 3.0V DC button battery type CR2032
Battery life:	Approx. 60hours of continuous operation or 6 months with 3 measurements per day
Dimension:	13.3cm×3.4cm×1.6cm(L x W x H)
Weight:	Approx. 23 grams including battery
Expected service life:	Three years
Ambient operating range:	Temperature: 41℉～104℉(5℃～40℃) Relative humidity: 15%~95%RH Atmospheric Pressure : 70kPa ~ 106kPa
Storage and transportation condition:	Temperature: -4℉～131℉(-20℃~55℃) Relative humidity: 15%~95%RH Atmospheric Pressure : 70kPa ~ 106kPa
Ingress Protection Rating:	IP 27
Classification:	Type BF
Contraindication:	No contraindication

Set the thermometer

1.Set ℉/℃ temperature unit
- Turn off the thermometer.
- Press and hold the *On/Off* Button for approximately 2 seconds, until the ℉/℃ is flashing.
- Press the UP/Down Button to choose ℉/℃.
- Press *On/Off* Button to confirm the ℉/℃ unit.

2.Set Alarm Clock Time
- Turn off the thermometer.
- Press the UP and Down Button, to enter Clock Setting.
- Press UP/Down Button to choose time, press *On/Off* Button to confirm .

3.Turn ON/OFF the Alarm Clock
- After confirmed the Alarm Clock will enter setting the alarm to turn on or off
- Press the UP and Down Button, to enter Clock Setting.
- Press the up or down button to turn the alarm on or off. The alarm symbol is displayed when the alarm is on, but not when the alarm is off .
- Press *On/Off* Button to confirm the Alarm Clock On/Off.

Recall memory

- Turn off the thermometer.
- Press the UP or Down Button to enter memory mode.
- Press the UP or Down Button to view the memory.
- Press *On/Off* Button to power off.

Delete all memory

- In the memory mode, press and hold UP and Down Button until the Choose Whether to Delete Memory screen is displayed .
- Press the UP/Down Button to select whether to delete all memories.
- Press *On/Off* Button to confirm whether to delete all memories.

Delete one memory

- In the memory mode, press UP or Down Button to stop the interface at the memory you want to delete.
- Press and hold the *On/Off* Button until the Choose Whether to Delete Memory screen is displayed.
- Press the UP/Down Button to select whether to delete the memory.
- Press *On/Off* Button to confirm whether to delete the memory.
- Return to the Display memory value screen.

Bluetooth requirements

1. The thermometer requires a bluetooth device with:
 * Bluetooth 4.0 or later *Android 6.0 or later *IOS 10.0 or later.
2. And works with: . iphone , iPod, iPad . Android Phones and Tablets.

DIRECTIONS

1. Press the *On/Off* Button next to LCD display. A tone will sound as the screen shows , the thermometer then goes into 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 1. Close your mouth and breathe evenly through the nose to prevent the measurement from being influenced by inhaled/exhaled air.

Figure 1

   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. The measured reading will appear on the LCD simultaneously. The measurement time until the signaling tone (beep) must be maintained without exception.
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 5 minutes

*Note: Normally the buzzes are " 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-Bi"

TROUBLESHOOTING

Error message	Problem	Solution
Lo	Temperature taken is lower than 89.60°F(32.00°C).	Turn off, wait one minute and take a new temperature via close contact and sufficient rest.
Hi	Temperature taken is higher than 109.38°F(42.99°C).	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.
	The thermometer works properly.	Use the thermometer normally
	When battery outline flashes, it indicates that the power is low, but you can continue to measure.	The thermometer will take a proper measurement but batteries must be replaced soon.
	The thermometer could not work due to low battery.	Replace the battery.

BATTERY REPLACEMENT

1. Replace battery when " " or " " appears in the lower right corner of LCD display.
2. Put a thin board such as a coin on fillister of cover. Turn the battery anti-clockwise until the cover is off (See Figure 2).
3. Use a non-meteal instrument such as a pen to remove old battery from the battery holder (See Figure 3). Discard battery according to local law.
4. Place a new 3.0V DC CR2032 into the chamber with positive side facing up(See Figure4).
5. With a thin pin to turn the cover clockwise until the " " facing towards " " (See Figure 5)

Note: The following schematic diagram of battery replacement is from the back of the thermometer. After each battery replacement, the system enters the setting mode to set the unit and time.

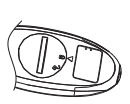


Figure 2

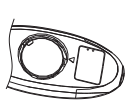


Figure 3

Figure 4

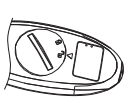


Figure 5

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. ASTM laboratory accuracy requirements in the display range of 98.6 to 102.2 °F(37.0 to 39.0 °C) for electronic thermometers is ±0.2°F(±0.1°C).
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 68℉(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.

FCC INFORMATION

FCC Warning:
Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.
Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
-Reorient or relocate the receiving antenna.
-Increase the separation between the equipment and receiver.
-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-Consult the dealer or an experienced radio/TV technician for help.
This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

124mm

320mm

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.

The software identifier refers to the Software validation Report document, and the file code is JYRJ201203004 the file version is A0.

Disposal of this product and used batteries should be carried out in accordance with the national regulations forthe disposal of electronic products.

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Made in China

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Version: Z
Date of Issue: 2023.07

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** $d=\left[\frac{3.5}{V_1}\right]\sqrt{P}$
Radiated RF IEC 61000-4-3	10 V/m 80 MHz to 2.7 GHz	10 V/m	$d=\left[\frac{3.5}{E_1}\right]\sqrt{P}$ 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:

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.			

124mm

320mm

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.