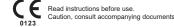
TD-1242

Forehead Thermometer

Operation Instructions

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APPEARANCE AND KEY FUNCTIONS OF THE THERMOMETER

1 Display Screen

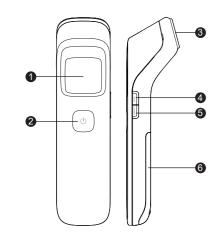
2 Power / Scan Button

3 Probe

4 Mode Button

6 Memory Button

6 Battery Cover



INTRODUCTION

Thank you for choosing TD-1242 Forehead Thermometer. Please read this instruction manual first so you can use this thermometer safely and correctly. Please keep this instruction manual for future reference. This innovative medical device uses advanced infrared (IR) technology to measure temperature instantly and accurately on the forehead / surface. TD-1242 Forehead Thermometer delivers a body temperature reading from the thermal radiation emitted from the forehead without contact to the body.

INTENDED USE

TD-1242 Forehead Thermometer is intended for the intermittent measurement and monitoring of human body temperature from the forehead. The device is intended for use of all ages for home and professional use by one with a good understanding of the operation instruction, where the patient may be an operator.

IMPORTANT SAFETY INSTRUCTIONS

READ THIS BEFORE USING AND KEEP THESE INSTRUCTIONS IN A SAFE PLACE

- Close supervision is necessary when the thermometer is used by, on, or near children, handicapped persons or invalids.
- 2. Use the thermometer only for the intended use described in this manual.
- 3. Do not use the thermometer if it is not working properly, or if it has sustained any damage.
- 4. Keep the sensor end clean and free of debris. See Maintenance section for instructions.5. Do not use ethylene oxide gas, heat, autoclave, or any other harsh
- methods to sterilize the device.
- 6. Do not use the device shortly after exercise, bathing or coming indoors.
- If coming from an environment of warmer or cooler temperature or after a
 period of exertion, allow the user and the thermometer to acclimate to room
 temperature for 20 minutes prior to taking a measurement.
- 8. As the forehead temperature may be affected by sweat, oil and the surrounding temperature, the reading shall be taken as a reference only.
- 9. Do not use in presence of flammable anesthetic mixtures.
- 10. Do not use accessories which are not supplied or recommended by the manufacturer
- 11. Proper maintenance is essential to the longevity of your device. If you are concerned about the accuracy of measurement, please contact the local customer service or place of purchase for help.

311-1242000-001 WARNING AND PRECAUTIONS:

- As with any thermometer, proper technique is crucial to getting accurate temperature readings. Please read this manual thoroughly and carefully before use.
- Always operate the thermometer in an operating temperature range 10°C to 40°C (50°F to 104°F), and relative 30% to 85% relative humidity.
- Always store the thermometer in a cool and dry place: temperatures between -20°C to 60°C (-4°F to 140°F); 30% to 85% relative humidity. Avoid direct sunlight
- · Avoid dropping the thermometer.
- Basic safety precautions should always be observed, especially when the thermometer is used on or near children and disabled persons.
- This thermometer is not intended to be a substitution for a consultation with your physician.

LCD SCREEN

- 1 Temperature display
- 2 Error message
- Memory mode
- 4 Hold symbol
- 6 Temperature unit
- 6 Battery indicator
- General body temperature indicator
- 8 Child body temperature indicator
- 9 Object surface temperature indicator

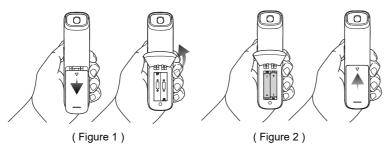
USING THE DEVICE

Selecting the measuring unit

When the thermometer is off, press MODE key for 2 seconds to enter selection mode. Press MODE key again to switch between °C and °F. Press POWER key.

Install Battery

- Remove battery cover by pressing down at the arrow mark and slide in the direction of the arrow as shown in the figures below (Figure 1).
- 2. Install (2) AAA alkaline batteries and close the battery cover (Figure 2).
- 3. If thermometer will be stored without use, remove batteries.



Narning:

Make sure the battery cover is properly closed and secured.

MEASURING TEMPERATURES-GENERALS (older than 36 months)

- 1. The forehead should be clear of hair and perspiration.
- Aim at the center forehead area 3cm to 7cm (1.18" to 2.75") away from skin surface. Be sure the thermometer is perpendicular to the skin surface.



Press and release the SCAN button to take a measurement. A double "beep" sound indicates a reading has been taken and displayed on the LCD screen.



When a reading is greater than 38°C (100.4°F), a warning symbol and backlight will start flashing.



- 4. To take another measurement, follow step 2 and 3.
- 5. The thermometer turns off automatically after 30 seconds.

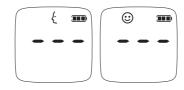
WARNING AND PRECAUTIONS:

- If the reading is < 31.9°C (89.5°F), the display will show "Lo".
- If the reading is ≥ 32.0°C (89.6°F) and ≤ 37.9 °C (100.3°F), the display will show the reading with backlight.
- If the reading is ≥ 38°C (100.4 °F) and ≤ 43°C (109.4 °F), the display will show the reading with flash backlight.
- If the reading is ≥ 43.1°C (109.5 °F), the display will show "Hi".

MEASURING TEMPERATURES-CHILDREN

(younger than 36 months)

- 1. Press the SCAN button to turn on the thermometer.
- Press and hold the MODE button for1 second before releasing. An adult facial profile should be flashing, indicating that the preset mode is for adults.
- Press the MODE key to switch to Child mode, indicated by a smiley face icon.



4. Aim the scanner at the center of the child's forehead or temple 3cm to 7cm (1.18" to 2.75") away from skin surface. Be sure the thermometer is perpendicular to the skin surface. Press and release the SCAN button to take a measurement.



Flash backlight with a warning symbol indicates a reading greater than 37.6 $^{\circ}\text{C}$ (99.8 $^{\circ}\text{F}$).



- The thermometer automatically switches off when left idle for 30 seconds NOTE:
- If the reading is ≤ 31.9°C (89.5°F), the display will show "Lo".
- If the reading is ≥ 32°C (89.6°F) and ≤ 37.6 °C (99.8°F), the display will show the reading with backlight.
- If the reading is ≥ 37.7 °C (99.9°F) and ≤ 43°C (109.4°F), the display will show the reading with flash backlight.
- If the reading is \geq 43.1°C (109.5°F), the display will show "Hi".
- Parents should not rely only on temperature readings. If you have concerns, please seek medical advice.

MEASURING TEMPERATURES-SURFACE

- 1. Press the SCAN button to turn on the thermometer.
- Press and hold the MODE button for 1 second before releasing. A general facial profile should be flashing, indicating that the preset mode is for generals.
- Press the MODE key to switch to Surface mode, indicated by a thermometer icon.



4. Make sure the probe is flat and close to the object surface, not at an angle. Perform an object measurement with a distance within 5 cm (1.9 in). Press and hold the SCAN button as you move the meter along the surface. The HOLD symbol will be flashing.



- Release the button and read the result. If the reading is ≥ 0°C (32°F) and ≤ 100.1°C (212.2°F), the display will show the reading with backlight.
- If the reading is ≤ 0°C (32°F), the display will show "Lo".
- If the reading is \geq 100.1°C (212.2°F), the display will show "Hi".

RECALLING PAST READINGS

TD-1242 stores 30 most recent readings.

- 1. Press and release the SCAN button to turn on the thermometer.
- Press and hold the MEMORY button for 1 second to enter the memory mode indicated by a flashing " im " symbol. The most recent reading stored will be displayed.



- 3. Press and release the MEMORY button to cycle through older readings.
- ${\it 4.} \quad \hbox{When left idle for 30 seconds, the thermometer automatically switches off.}$

NOTE:

When the memory is full, the oldest result is deleted as the neones are added. While recalling previous readings, you may take a measurement by pressing the SCAN button.

ABOUT NORMAL BODY TEMPERATURE & FEVER

Body temperature can vary from one individual / person to the next. It also varies by location on the body and time of day. Fever indicates that the body temperature is higher than normal. This symptom may be caused by infection, overdressing or immunization. Some people may not experience fever even when they are ill. These include, but are not limited to, infants younger than 3 months old, persons with compromised immune systems, persons taking antibiotics, steroids or antipyretics (aspirin, ibuprofen, acetaminophen), or persons with certain chronic illnesses. *Please consult your physician if you are concerned about your body temperature readings*.

MAINTENANCE

- TD-1242 has no user serviceable internal parts except battery replacement.
- Store in a dry location free of dust and away from direct sunlight.

CARE AND CLEANING

- Use a soft dry cloth to clean the plastic casing or a cloth dampened with 70% isopropanol.
- For the measuring probe you can use only soft dry cloth or Cotton swabs for cleaning.

TROUBLESHOOTING

INOUBLESHOOTING						
MESSAGE	WHAT IT MEANS	WHAT TO DO				
E-1 E-2 E-4	Appear when ambient temperature is outside of the operating temperature range. Only operate the thermometer in ambient temperature range 10°C to 40°C (50°F to 104°F).					
Lo	Measured temperature below the measurement range (below 32°C / 89.6°F).	Review instructions and repeat measurement. Make sure distance from forehead is not greater than 7cm (2"), and that the forehead is clear.				
Hı	Measured temperature above the measurement range (above 43°C / 109.4°F).	Review instructions and repeat measurement. Consult with a physician if the problem persists.				
	Low or no power.	Replace with new batteries.				
Lo Hi	Surface temperature measured outside of the measurement range 0°C to 100°C/32°F to 212°F	Review the instructions and re-start the measurement procedure.				

SYMBOL INFORMATION

Symbol	Referent	Symbol	Referent		
[]i	Consult instructions for use	Type BF applied part			
•••	Manufacturer	1	Temperature limit		
SN	Serial number	Humidity limitation			
<u> </u>	Caution	IP22	Resistant to liquid ingress		
<u>C</u> E	CE mark	RoHS	RoHS Compliance		
Ž	This device does not belong to household waste and must be returned to a collection point for recycling electric and electronic devices according to local laws. If it contains batteries, the batteries should be removed and disposed in accordance with local regulations for separate collection of spent batteries.				
EC REP	Authorized representative in the European Community				

SPECIFICATIONS

Model No.: TD-1242

Dimension & Weight:

155.46 (L) x 40.14 (W) x 39.45 (H) mm, 61.8g (without battery)

Power Source: 2 x 1.5V AAA alkaline batteries

Battery Life: With new batteries, approx. 3,000 measurements.

Displayed Temperature range:

• Forehead: 32°C to 43°C (89.6°F to 109.4°F)

• Surface: 0°C to 100°C (32°F to 212°F)

Display Resolution: 0.1°C / 0.1°F Accuracy: Meet the accuracy requirement specified in ASTM E1965-98

• Forehead: ±0.2°C (±0.4°F) for the range of 35.0°C to 42.0°C (95°F to $107.6^{\circ}F$) / $\pm 0.3^{\circ}C$ ($\pm 0.5^{\circ}F$) for the range of < $35.0^{\circ}C$ ($95^{\circ}F$) or > $42.0^{\circ}C$

(107.6°F)

• Surface: ±1°C (±2°F)

Device Standard: Device Corresponds to the requirements of the standard for infrared thermometers ASTM E1965-98, EN ISO 80601-2-56, EN 60601-1-2,

IEC 60601-1, EN 60601-1, EN 60601-1-6

Electromagnetic Compatibility:

Device fulfills the stipulations of the standard IEC 60601-1-2, EN 60601-1-2.

The stipulations of EU-Directive 93/42/EEC for Medical Devices Class IIa have

been fulfilled.

Temperature unit: °C (Default) or °F

Operating temperature range: 10°C to 40°C (50°F to 104°F)

Operating humidity: 30% to 85% relative humidity (non-condensing)

Operating Atmosphere Pressure: 700hPa to 1060hPa

Storage / transportation temperature range: -20°C to 60°C (-4°F to 140°F)

Storage / transportation humidity: 30% to 85% relative humidity (non-condens-

Memory capacity: 30 measurements

Water-resistance: IP22 Type BF Applied part

The specifications may be changed without prior notice.

Electromagnetic environment-guidance (for home and professional healthcare environment) The TD-1242 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 RF emissions CISPR 11 Class B
Harmonic emissions IEC 61000-3-2
Not applicable
Voltage fluctuations / flicker emissions IEC 61000-3-3
Not applicable
uvoltage power supply network that supplies buildings
used for domestic purposes.

The TD-1242 is intended for use in the electromagnetic environment (for home and profess

The customer or the user of the TD-1242 should assure that it is used in such an environment.				
IEC 60601 test level	Compliance level	Electromagnetic environment-guidance (for home and professional healthcare environment)		
Contact:±8 kV Air±2 kV,±4 kV, ±8 kV,±15 kV	Contact:±8 kV Air±2 kV,±4 kV, ±8 kV,±15 kV	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%		
+ 2kV for power supply lines + 1kV for input/output lines	Not applicable Not applicable	Mains power quality should be that of a typical home and professional healthcare environment.		
+ 0.5kV, +1kV line(s) to line(s) + 0.5kV, +1kV,+ 2kV line(s) to earth	Not applicable Not applicable	Mains power quality should be that of a typical home and professional healthcare environment.		
Voltage dips: 0 % UT; 0,5 cycle 0 % UT; 1 cycle 70 % UT; 25/30 cycles Voltage interruptions: 0 % UT; 250/300 cycle	Voltage dips: Not applicable Not applicable Not applicable Voltage interruptions: Not applicable	Mains power quality should be that of a typical home and professional healthcare environment. If the user of the TD-1242 requires continued operation during power mains interruptions, it is recommended that the TD-1242 be powered from an uninterruptible power supply or a battery.		
30 A/m 50 Hz or 60 Hz	30 A/m 50 Hz and 60 Hz	The TD-1242 power frequency magnetic fields should be at levels characteristic of a typical location in a typical home healthcare environment.		
	IEC 60601 test level Contact±8 kV Air±2 kV,±4 kV, ±6 kV,±15 kV + 2kV for power supply lines + 1kV for input/output lines + 0.5kV, +1kV line(s) to line(s) + 0.5kV, +1kV,+ 2kV line(s) to earth Voltage dips: 0 % UT; 0.5 cycle 0 % UT; 0.5 cycle 70 % UT; 25/30 cycles Voltage interruptions: 0 % UT; 250/300 cycle 30 A/m	IEC 60601 test level Compliance level		

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

Manufacturer's declaration-electromagnetic immunity

The customer or the user of the TD-1242 should assure that it is used in such and environment.					
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment-guidance (for home and professional healthcare environment)		
Conducted RF IEC 61000-4-6	3 Vrms: 0,15 MHz – 80 MHz 6 Vrms: in ISM and amateur radio bands between 0,15 MHz and 80 MHz 80 % AM at 1 kHz	Not applicable Not applicable	Portable and mobile RF communications equipment should be used no closer to any part of the TD-1242 including cables, than the recommended separation distance calculated from the equation applicable to the frequency of		
Radiated RF IEC 61000-4-3	80 % AM at 1 kHz 10 V/m 80 MHz – 2,7 GHz 80 % AM at 1 kHz	10 V/m 80 MHz – 2,7 GHz 80 % AM at 1 kHz	Recommended separation distance: $d=1,2 \ \ VP$ $d=1,2 \ \ VP$ 80MHz to 800 MHz $d=2,3 \ \ VP$ 800MHz to 2,7 GHz $Where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in metres (m). Interference may occur in the vicinity of equipment marked with the following symbol: (§)$		

NOTE1 At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

Recommended separation distance between portable and mobile RF communications equipment and the TD-1242

The TD-1242 is intended for use in an electromagnetic environment (for home and professional healthcare) in which radiated RF disturbances are controlled. The customer or the user of the TD-1242 can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the TD-1242 as recommended below according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter	Separation distance according to frequency of transmitter m				
w	150 kHz to 80 MHz d =1,2√P	80 MHz to 800 MHz d =1,2√P	800 MHz to 2,7 GHz d =2,3√P		
0,01	N/A	0,12	0,23		
0,1	N/A	0,38	0,73		
1	N/A	1,2	2,3		
10	N/A	3,8	7,3		
100	N/A	12	22		

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where p is the maximum output power rating of the transmittin watts (W) according to the transmitter manufacturer.

NOTE1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies

NOTE2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

Manufacturer's declaration-electromagnetic immunity Test specifications for ENCLOSURE PORT IMMUNITY to RF wireless commu

The TD-1242 is intended for use in the electromagnetic environment (for home and professional healthcare) specified below The customer or the user of the TD-1242 should assure that it is used in such an environment.

Test frequency (MHz)	Band a) (MHz)	Service a)	Modulation b)	Maximum power (W)	Distance (m)	IMMUNITY TEST LEVEL (V/m)	Compliance LEVEL (V/m) (for home and professional healthcare
385	380 –390	TETRA 400	Pulse modulation b) 18 Hz	1,8	0,3	27	27
450	430 – 470	GMRS 460, FRS 460	FM c) ±5 kHz deviation 1 kHz sine	2	0,3	28	28
710 745 780	704 – 787	LTE Band 13, 17	Pulse modulation b) 217 Hz	0,2	0,3	9	9
810	800 – 960	GSM 800/900, TETRA 800.	Pulse				
870		800 – 960 iDEN 820, modulation b)	2	0,3	28	28	
930		CDMA 850, LTE Band 5	18 Hz				
1 720		GSM 1800; CDMA 1900;					
1 845	1 700 – 1 990	GSM 1900; DECT;	Pulse modulation b) 217 Hz	2	0,3	28	28
1 970		LTE Band 1, 3, 4, 25; UMTS	217112				
2 450	2 400 – 2 570	Bluetooth, WLAN, 802.11 b/g/n, RFID 2450, LTE Band 7	Pulse modulation b) 217 Hz	2	0,3	28	28
5 240 5 500 5 785	5 100 – 5 800	WLAN 802.11 a/n	Pulse modulation b) 217 Hz	0,2	0,3	9	9

NOTE If necessary to achieve the IMMUNITY TEST LEVEL, the distance between the transm ME SYSTEM may be reduced to 1 m. The 1 m test distance is permitted by IEC 61000-4-3.

a) For some services, only the uplink frequencies are included.
b) The carrier shall be modulated using a 50 % duty cycle square wave signal.
c) As an alternative to FM modulation, 50 % pulse modulation at 18 Hz may be used because while it does not represent actual.

modulation, it would be worst case.