TH36F Non-contact Forehead Thermometer

Specifications	 ☑ Temper Forehea Surface ☑ Operati ☑ Storage RH ≤ 8 Transpo ☑ Atmosp ☑ Comply IEC/EN ☑ Atmosp ☑ Comply IEC/EN ☑ Atmosp ☑ Comply IEC/EN ☑ Atmosp ☑ Comply IEC/EN ☑ Atmosp ☑ Gouply ☑ Fever a ☑ Battery ☑ Battery ☑ Battery ☑ Battery ☑ Expected ☑ This the (accord ☑ Dimens ☑ Weight: △ There △ This i 	ature measurement range: tid mode: $34-42.2^{\circ}C(93.2-108^{\circ}F)$ mode: $22-80^{\circ}C(7.6-176^{\circ}F)$ ng temperature range: $10-40^{\circ}C(50-104^{\circ}F)$, $15\%-85\%$ RH temperature range: $10-40^{\circ}C(50-104^{\circ}F)$, $15\%-85\%$ RH temperature range: $10-40^{\circ}C(50-104^{\circ}F)$, $15\%-85\%$ RH temperature range: $10-40^{\circ}C(50-107.6^{\circ}F)$, tation temperature shall be less than $70^{\circ}C$, RH $\leq 95\%$ heric pressure: $800-1013$ hPa with ASTM E1965-98, EN ISO 80601-2-56, IEC/EN60601-1-2(EMC), 60601-1(Safety) standards, ISO10993, RoHS. '' di mode: $\pm 0.2^{\circ}C(0.4^{\circ}F)$ within $35-42^{\circ}C(95-107.6^{\circ}F)$, $\pm 0.3^{\circ}C(0.5^{\circ}F)$ for other range. mode: $\pm 0.3^{\circ}C(0.5^{\circ}F)$ for other range. mode: $\pm 0.3^{\circ}C(0.5^{\circ}F)$ within $22-42.2^{\circ}C(71.6-108^{\circ}F)$, $\pm 0.3^{\circ}C(0.5^{\circ}F)$ within $22-42.2^{\circ}C(71.6-108^{\circ}F)$, others $\pm 4\%$ or $\pm 2^{\circ}C(4^{\circ}F)$ whichever is greater. larm, memory and "C/F switch function one lithium cell battery (CR2032 *1pcs). Iffe: around 3,000 continuous readings. ed Service Life: 4 years mometer converts the forehead temperature to display its "oral equivalent." ing to the result of the clinical evaluation to get the offset value) re Rating: IP22 loiss: $81.02 \times 46.17 \times 40.03$ mm 59.4 grams including battery evice should not submerge into any liquids and expose it to direct moisture. is no gender and age limitation for using the infrared thermometer. is no gender and age limitation for using the infrared thermometer. is no gender and age limitation for using the infrared thermometer. is no gender and age limitation for using the infrared thermometer. is no gender and age limitation for using the infrared thermometer. is no gender and age limitation for using the infrared thermometer. is no gender and age limitation for using the infrared thermometer. is no gender and age limitation for using the infrared thermometer. is no gender and age limitation for using the infrared thermometer. is no gender and age limitation for using the infrared thermometer.					
Functions							
Forehead temp	erature	The thermometer has been designed for practical use. It's not meant to replace a visit to the doctor. Please also remember to compare the measurement result to your regular body temperature. Please consult with doctor if you have health concerns. → Please see the "Use of the thermometer" section to learn how to measure the body temperature.					
Surface temperature		The surface mode shows the actual and unadjusted surface temperature which is different from the body temperature. It can help you monitor if the object temperature is suitable for the baby or patient, for example the baby's milk. → Please see the "Use of the thermometer" section to learn how to measure the object temperature.					
Room temperature		Suitable ambient temperature is important for the baby and patient. The thermometer always helps you recognize the room temperature. → After power off, the room temperature will be shown on the screen with ✓ icon.					
Fever alarm		If the thermometer detects a temperature \geq 37.5°C (or 99.5°F) under forehead mode, three short beep sound will follow one long beep sound to warn the user for potential fever.					
Last reading		When you get a new body temperature, the last reading will be shown on the screen (at top right corner) with the R icon.					
Memory locations		There are total 25 sets of measurement condition for body temperature. → When power on, press the O ON/MEM button to see the temperature records with O icon.					
°C / °F switch		In "Power Off" mode, press and hold the "SCAN" button, then press the O ON/MEM button for 3 seconds, icon "°C" will be switched to icon "°F". You can also use the same process to change the LCD display from °F to °C.					
Mute mode		The device setting with buzzer is on, you can set buzzer on/off under Mute mode. When power on, press and hold the "ON/MEM" button for 3 seconds. The icon 🕲 will flash on the LCD screen and then release the "ON/MEM" button to set MUTE. Thus you will not hear beep sounds. You can also use the same process to turn off the Mute function. NOTE: If keep pressing "ON/MEN" button for 5 seconds after 💐 icon flashing, the device will be power off WITHOUT setting Mute.					

Use of the thermometer

Note: The device must stay in stable ambient (room) temperature for 15 minutes before operating.

1. Always make sure the probe lens is clean without any damage and the forehead is clean.

A Warning: Choking from swallowing small parts and batteries by children or pets is possible, please keep small parts and batteries at places where children and pets can't reach.

2. Power on:

For the first time, pull out the insulated strip from the battery cover to activate the thermometer.

Press the ON/MEM button (see figure 1).



Press the ON/MEM button to power on the device. Forehead mode is the default mode. You can see the ON/MEM button to power on the device. Forehead mode is the default mode. You can see the ON/MEM button to go the forehead (See Figure 1). In this mode, you can hold the thermometer 1 to 3 cm from the central forehead (See Figure 2) and press the "Scan" button to get the forehead measurement. The time consuming for measurement might be 1 second.



°C

es"Ø

Figure 2

A Points for attention:

a. Forehead temperature is displayed in oral mode. This mode converts the forehead temperature to display its "oral-equivalent" value.

- b. Before the measurement, please stay in a stable environment for 5 minutes and avoid exercise, bath for 30mins.
- c. Remember to keep the forehead area clean and away from sweat, cosmetics and scar while taking temperature.
- d. The "Clinical Bias" is -1.4 ~ -1.7°C.
- e. The "Limits of Agreement" is 0.98.
- f. The "Repeatability" is 0.20°C.

4. Measuring surface temperature:

- 4.1 After power on, press and hold the ON/MEM button, and press the "SCAN" button once for "Infrared thermometer" mode to see 🗢 icon on your LCD display. In this mode, you can get the target surface temperature.
- 4.2 When you press the "Scan" button, you will get the real time temperature immediately. If you press and hold the "Scan" button, the reading of measurement will be continuously updated.
- 4.3 Applications include temperature measurements for water, milk, cloth, skin or other objects.
- * Note: This mode shows the actual and unadjusted surface temperature which is different from the body temperature.

5. Power off:

5.1 Device will automatically shut off if left idle for more than 1 minute to extend battery life.

Important Notes						
Cleaning And	Please make sure the probe is clean to ensure an accurate reading.					
	Δ The probe lens is the most delicate part of the thermometer. Use with care when cleaning the probe lens to avoid damage.					
	a. Use the 70% alcohol swab or the soft cotton moistened with the 70% alcohol to clean the probe lens.					
	b. Allow the probe to fully dry for at least 1 minute.					
Storage	C. Keep the unit dry and away from any liquids and direct sunlight.					
Ũ	a. Storage temperature range. It should be stored at room temperature between -20~+50°C, R⊓≥65%					
	e. The Probe should hot be submerged into inquios.					
	This could make the body temperature measurement lower than usual					
	This device is supplied with one lithium cell CR2032x1					
	1 Open the battery cover: Use the thumbs to push battery cover out (See Figure 3)					
	2. Hold the device and flin the battery out with a small screwdriver (See Figure 3)					
	3. Insert a new battery under the metal book and press down until you bear a "click" sound. (See Figure 5)					
Battery replacement	A Replace the battery cover					
	Λ The positive (.) side up and the pogetive (.) side pointed down					
	A CAR A C					
	Figure 3 Figure 4 Figure 5					
L						

Trouble shooling:						
Error Message	Problem	Solution				
Er	Error 5~9, 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.				
Erl	Measurement before device stabilization.	Wait until all the icons stop flashing.				
Er3	The ambient temperature is not within the range between 10°C and 40°C (50°F ~104°F).	Allow the thermometer to rest in a room for at least 15 minutes at room temperature: 10° C and 40° C (50° F $\sim 104^{\circ}$ F).				
H'	 In forehead mode: Temperature taken is higher than +42.2°C (108°F) In surface mode: Temperature taken is higher than +80°C (176°F) 	Please select the target within specifications. If a malfunction still exists, please contact the nearest retailer.				
Lo	 In forehead mode: Temperature taken is lower than +34°C (93.2°F) In surface mode: Temperature taken is lower than -22°C (-7.6°F) 					
1888 1888 1888	Device cannot be powered on to the ready stage.	Change with a new battery.				

Warranty:

Warranty :12 months

Manufacture Date : as the serial number (please open the battery cover, it is shown on the inside of the device.)

Ex.SN:E912A000001, the first "E" is External, the second number "9" is the manufacture year 2009, the third and the fourth number "12" is the manufacture month, the others is the serial number.

Note: The thermometer is calibrated at the time of manufacture. If at any time you question the accuracy of temperature measurements, please contact the dealers or nearest service address.

Marning: No modification of this equipment is allowed.

III Please read the instructions for use III BF type applied part

Radiant Innovation Inc.

Http://www.radiantek.com.tw

EC	RE

Medical Technology Promedt Consulting GmbH Add: Altenhofstrasse 80, D-66386 St. Ingbert, Germany



Add: 1F, No.3, Industrial East 9th Road, Science-Based Industrial Park, HsinChu, Taiwan 300.

Symbol Descriptions					
CE 0120	The CE mark and Notified Body Registration Numbers, the requirement of Annex II from Medical Device Directive 93/42/EEC are met.		Indicates this device is subject to the Waste Electrical and Electronic Equipment Directive in the European Union. To protect the environment, dispose of useless device at appropriate collection sites according to national or local regulations.	EC REP	Authorized representative in the European community
\wedge	Caution	ī	Please read the instructions for use		Manufacturer
Ϊ	BF type applied part	X	Battery Recycling		Paper Recycling
IP22	Classification for water ingress and particulate matter.				

Guidance and manufacturer's declaration – electromagnetic emissions

The TH36F is intended for use in the electromagnetic environment specified below. The customer or the user of the TH36F should assure that it is used in such an environment.

Emissions test	Compliance	Electromagnetic environment – guidance	
RF emissions CISPR 11	Group 1	The TH36F 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		
Harmonic emissions IEC 61000-3-2 Not applicable		The TH36F 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.	
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Not applicable		

Guidance and manufacturer's declaration – electromagnetic immunity

The TH36F is intended for use in the electromagnetic environment specified below. The customer or the user of the TH36F should assure that it is used in such an environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment – guidance	
			Portable and mobile RF communications equipment should be used no closer to any part of the TH36F, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.	
			Recommended separation distance	
			$d = 1,2 \sqrt{P}$	
Conducted RF	3 Vrms	Not applicable 3 V/m	$a = 1,2 \sqrt{P}$ 80 MHz to 800 MHz	
IEC 61000-4-6	150 kHz to 80 MHz 3 V/m 80 MHz to 2,5 GHz		$a = 2,3 \sqrt{P}$ 800 MHZ to 2,5 GHZ	
Radiated RF IEC 61000-4-3			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 meters (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: $(((\cdot)))$	

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. 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 TH36F is used exceeds the applicable RF compliance level above, the TH36F should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the TH36F.

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

Guidance and manufacturer's declaration - electromagnetic immunity

The TH36F is intended for use in the electromagnetic environment specified below. The customer or the user of the TH36F 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 %.
Electrical fast transient/burst IEC 61000-4-4	2 kV for power supply lines 1 kV for input/output lines	Not applicable	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	1 kV line(s) to line(s) 2 kV line(s) to earth	Not applicable	Mains power quality should be that of a typical commercial or hospital environment.
interruptions and voltage variations on power supply input lines IEC 61000-4-11	<5 % UT (>95 % dip in UT) for 0,5 cycle 40 % UT (60 % dip in UT) for 5 cycles 70 % UT (30 % dip in UT) for 25 cycles <5 % UT (>95 % dip in UT) for 5 sec	Not applicable	Mains power quality should be that of a typical commercial or hospital environment. If the user of the TH36F requires continued operation during power mains interruptions, it is recommended that the TH36F be powered from an uninterruptible power supply or a battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	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.

Recommended separation distances between portable and mobile RF communications equipment and the ME EQUIPMENT or ME SYSTEM

The TH36F is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the TH36F can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the TH36F 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 $d = 1.2 \sqrt{P}$	80 MHz to 800 MHz $d = 1.2 \sqrt{P}$	800 MHz to 2,5 GHz $d = 2,3 \sqrt{P}$			
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	23			

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 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.