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Non-Contact Forehead Infrared Thermometer Manual

Part #: FTIR880



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General Description

Non-Contact Forehead IR Thermometer is specifically designed to take human body temperature.

Safety Information

- This device must only be used for the purposes described in this instruction manual.
- This device must only be used in an operating temperature range between 10°C to 40°C (50°F to 104°F).
- Do not expose this thermometer to electric shocks. Do not expose this thermometer to extreme temperature conditions of > 50°C (122°F) or < 0°C (32°F).
- Do not use the device in relative humidity higher than 85%.
- Do not use the device near large electromagnetic fields such as found with cordless or cell phones.
- Keep the device away from water and heat, including direct sunlight.
- Do not drop or strike the device, and do not use if damaged.
- Accuracy of measurements may be affected when the forehead is covered by hair, perspiration, or clothing. (See Part 10-4)
- Maintain a measuring distance of 5 cm to 15 cm (2 in to 5.9 in). (See Part 10-4)
- Allow device to acclimate to ambient temperature for 15 to 20 minutes before using.
- Temperature may also be taken behind the ear lobe. (See Part 10-5)
- Clean the device surface with a cotton pad lightly moistened with 70% Isopropyl alcohol.

Important Information

- Before taking temperature remove hair and perspiration from forehead.
- Select “Body” mode to measure body temperature.
- Select “Surface” mode to measure the surface temperature.

- Use of this thermometer is not intended as a substitute for consultation with a physician.
- Should a problem occur with device, please contact retailer.
- Do not attempt to repair the device.
- Follow EMC guidelines for maintaining medical electronic products.

Features

- Precise non-contact measurements
- User selectable °C or °F
- Selectable Body and Surface mode
- Set Alarm value
- Memory holds 32 points of temperature data
- Automatic data hold
- Auto power off
- Automatic selection range and display resolution 0.1°C (0.1°F)
- Backlight LCD display

Intended Use

Non-Contact Forehead IR Thermometer is designed for forehead temperature measurement for infants and adults without contact to human body.

Non-Contact Forehead IR Thermometer can also be used to measure the temperature of a baby bottle, bath or room temperature (by using the Surface mode).

Normal Temperatures According To Measurement Method

Measurement Method	Normal Temp °C	Normal Temp °F
Rectal	36.6 to 38	97.8 to 100.4
Oral	35.5 to 37.5	95.9 to 99.5
Axillary	34.7 to 37.3	94.4 to 99.1
Ear	35.8 to 38	96.4 to 100.4

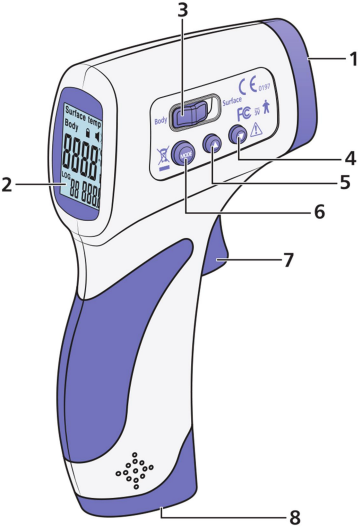
The temperature of the human body varies throughout the day. It can also be influenced by the following factors: age, sex, type and thickness of skin.

Normal Temperatures According To Age

Age	Temp °C	Temp °F
0-2 years	36.4 to 38.0	97.5 to 100.4
3-10 years	36.1 to 37.8	97.0 to 100.0
11-65 years	35.9 to 37.6	96.6 to 99.7
> 65 years	35.8 to 37.5	96.4 to 99.5

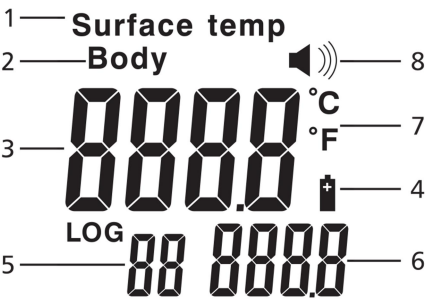
Configuration

- 1. IR Sensor
- 2. LCD Display
- 3. Mode Selection
- 4. Down Button
- 5. Up Button
- 6. Mode Button
- 7. Measurement Trigger
- 8. Battery Cover



LCD Screen Indicators

- 1. Surface Mode Symbol
- 2. Body Mode Symbol
- 3. Digital Readout
- 4. Battery Symbol
- 5. Log Number
- 6. Stored Temperatures
- 7. Temperature °C/°F
- 8. Buzzer symbol



Description of Symbols

	The device is in accordance with Medical Device Directive 93/42/ EEC
	The device is in accordance with FCC Part 15 Subpart B: 2007 /Radio Frequency Devices IC Regulation IOEC-00 3: 2004 Interference-causing Equipment Standard - Digital Apparatus
	3V DC power supply (2x 1.5v AA Batteries)
	Type B Equipment
	In order to protect the environment, please recycle the battery according to the local regulations.
	Indication of Mode
	Attention! Consult accompanying documents.

Specifications

Display Resolution:	0.1°C (0.1°F)
Operating Temperature:	10°C to 40°C (50°F to 104°F)
Storage Temperature:	0°C to 50°C (32°F to 122°F)
Humidity Rate:	≤ 85%
Power:	DC 3V (2x 1.5v AA Batteries)
Size:	149 mm x 77 mm x 43 mm / 5.9 in x 3 in x 1.7 in (L x W x H)
Weight:	Gross: 0.88lbs/400g Net: 0.38lbs/172g

Measurement Range

In Body Mode:	32°C to 42.5°C (90°F to 108°F)
In Surface Mode:	0°C to 60°C (32°F to 140°F)
Accuracy:	± 0.3°C (0.54°F)
Measuring Distance:	5 cm - 15 cm (2 in - 5.9 in)
Response Time:	0.5 second

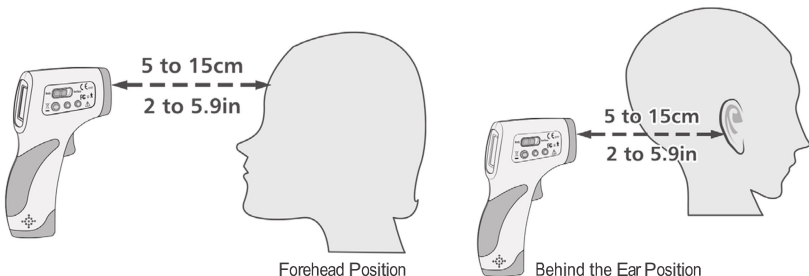
Non-Contact Body Infrared Thermometer Precision

32°C to 35.9°C / 93.2°F to 96.6°F:	± 0.3°C/0.5°F
36°C to 39°C / 96.8°F to 102.2°F:	± 0.2°C/0.4°F
39°C to 42.5°C / 102.2°F to 108.5°F:	± 0.3°C/0.5°F

According to ASTM Standard E1965-1998 (2003)

Use

1. Install batteries.
2. Prior to the first use or when inserting new batteries wait at least 10 minutes for device to warm up.
3. If use is suspended for a long period, once turned on the device will test the room temperature and delay start for 1 to 2 seconds.
4. Aim device at the forehead (see the diagram below for the positioning), from a distance of 5 cm (2 in), press the measuring key; the temperature is displayed immediately. Ensure there is no hair, perspiration, cosmetics or clothing covering the forehead.



5. When there is perspiration on the forehead, temperature may also be taken behind the ear lobe. Ensure there is no hair, perspiration, cosmetics or clothing covering the area.

For First Use and Calibration

For stable and reliable results, it is essential to check the Non-Contact Body Infrared Thermometer and change as needed, as follows:

1. Take the temperature of a person using a CLINICAL THERMOMETER; you will get 37.5°C (99.5°F) for example.
2. Take the temperature of the same person using the Non-Contact Body Infrared Thermometer keeping the 5 cm to 15 cm (2 in to 5.9 in) distance between the thermometer and the forehead. Take care to remove any obstacle which could alter the measurement, such as hair, perspiration, etc. If you get 37.5°C (99.5°F), the Non-Contact Body Infrared Thermometer is properly set and ready for use. If you get a lower temperature, 36.4°C (97.4°F) for example, your difference is 1.1°C (2.2°F). You should adjust the temperature on the Non-Contact Body Infrared Thermometer and add the difference, i.e. 1.1°C (2.2°F). Press MODE button for 2 seconds, the screen displays F1. Press MODE button again until you get F3. Press up ▲ button in order to add the difference. For example: 1.1°C - 2.2°F.
3. To check, take the temperature again using the Non-Contact Body Infrared Thermometer.

Measuring Operation

Choosing the Temperature Scale - F1 Function

Press MODE button for 2 seconds, the screen displays: F1. Select down ▼ for degrees Celsius, up ▲ for degrees Fahrenheit.

Alarm Setup - F2 Menu

Press MODE button for 2 seconds. The screen displays: F1. Press MODE button twice to get F2. Select ▲ to increase the threshold by 0.1°C (0.1°F), or ▼ to reduce it by 0.1°C (0.1°F).


Note: The alarm threshold default value is 38°C (100.4°F).

Temperature Reading Adjustment - F3 Menu

To adjust the total variation of the Non-Contact Body Infrared Thermometer, press MODE button for 2 seconds. The screen displays: F1. Press MODE button two times to get F3. Select ▲ to increase the difference by 0.1°C (0.1°F), or ▼ to reduce it by 0.1°C (0.1°F). In the case of seasonal or environmental changes, verification and adjustment should be completed.

Note: This function is only effective in Body mode.

Buzzer ON/OFF - F4(F3) Menu

Press MODE button for 2 seconds. The screen displays: F1. Press the MODE button three times to get F4. Select ▲ to enable the buzzer (a sound icon “”) is displayed on the LCD screen). Press ▼ to disable it (the icon disappears).

Exiting the Setting Mode

Press MODE button until the screen turns off.

The Non-Contact Body Infrared Thermometer is designed to take the body temperature of a human being. Measurement range for Body mode is 32°C to 42.5°C (86°F to 108°F). In Surface mode you can also use the Non-Contact Body Infrared Thermometer to measure the temperature of an area or an object, a food, a liquid or room temperature. Measurement range for Surface mode is 0°C to 60°C (32°F to 140°F).


Important: The area temperature differs from the internal body temperature. To obtain the internal temperature always use the Body mode.

Please make sure to select Body mode for an internal temperature reading and Surface mode for an external area reading, such as bottle, bath, room, etc.

Data Memory

The device will automatically hold in memory the last 32 temperature measurements, which will display at the right corner of LCD. Press ▲ or ▼ button to display the last temperature measurement. In power off, press ▲ and ▼ button together for two seconds, to display the last temperature measurement. In this mode, change the order number to 0 and press the MODE button, to delete all memory.

Changing the Batteries

When the LCD screen displays “”, the battery is depleted. When changing the batteries, be careful not to damage the apparatus, which will compromise the warranty of the device. Never use rechargeable batteries. Use only single-use batteries. Remove old battery immediately to avoid damage to the thermometer resulting from battery leakage.

Warranty

The Non-Contact Body Infrared Thermometer was developed for professional use, and has a limited warranty period of 1 year or 40,000 measurements against defects in material and workmanship from the date of purchase.

Advice

- The protective glass covering the lens is the most fragile part of the thermometer. Please take great care to prevent damage.
- Do not use rechargeable batteries.
- Do not place device in fire.
- Do not expose the device to sunlight or water.
- Maintain measuring distance of 5 cm to 15 cm (2 in to 5.9 in).

Maintenance and Cleaning

- Prevent damage to the infrared sensor.
- Clean the device surface with a cotton pad lightly moistened with 70% Isopropyl alcohol.
- Do not clean with corrosive detergent.
- Keep the device away from water or other liquid.
- Store in a dry environment.
- Keep away from dust and direct sunlight.

Troubleshooting

The following may be used to address common problems. If the problem persists please contact customer service.

The display shows a temperature lower than 32°C (89.6°F)

In Surface mode, the device will display the surface (external) temperature instead of the core (internal) body temperature. Switch the device to BODY mode to obtain a core body temperature measurement.

The screen displays “HI”

The measurement is above the range selected, either higher than 42.5°C (108 °F) in Body mode or higher than 60°C (140°F) in Surface mode.



The screen displays “LO”

The measurement is lower than the range selected, either lower than 32°C (90°F) in Body mode or lower than 0°C (32°F) in Surface mode.



Troubleshooting, continued

Reasons LO or HI displayed on screen:	Solution:
Temperature reading hampered by hair, perspiration, cosmetics, etc.	Remove all obstructions prior to taking temperature.
Temperature hampered by an air flux.	Avoid air flux, as this may interfere with infrared system.
The measuring distance is too far.	Maintain a distance of 5 cm to 15 cm (2 in to 5.9 in).
Device has not acclimated to the screening room temperature.	Wait 10 minutes and repeat temperature measurement.

Compliance

- EN12470-5: European Standard for Clinical Thermometer Performance - Infrared Ear Thermometers
- ASTM E1965-199: ASTM (American Society of Testing and Methodology)-Standard Specification of Infrared Thermometers for Intermittent Determination of Patient Temperature
- EN 980: Graphical symbols for use in the labeling of medical devices
- EN 1041:Information supplied by the manufacturer with medical devices
- EN 60601-1: Medical electrical equipment Part 1: General requirements for safety (IEC:60601-1 :1998)
- EN 60601-1-2: Medical electrical equipment Part 1-2 : General requirements for safety Collateral standard Electromagnetic compatibility Requirements and test (IEC 60601-1-2:2001)

EMC Statement

This device has been tested and approved in accordance with EN60601-1-2:2007 for EMC. This does not guarantee in any way that the device will not be affected by electromagnetic interference. Avoid using the device in high electromagnetic environments.



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