USER MANUAL

1.Product introduction

This product is a non-contact remote electronic infrared thermometer for professional measurement of human body temperature. Widely used in schools, customs, hospitals, homes.

Easy to use, the functions such as: mode selection, LCD display, buzzer reminder, memory reading, backlight reminder, temperature offset setting, alarm threshold setting, automatic shutdown, etc.

【Product performance, Main structure】

（1）Product performance：

Temperature range: 0-80 ° C (surf mode), 32.0-42.9 ° C (body mode)

Temperature measurement time: about 1 second

Measuring distance: 1-5CM

Display mode: LCD display

Appearance size: 154 × 96 × 42mm

Weight: ≤93g

Electronic thermometer with automatic shutdown and self-detection function, current consumption: static OFF≤10μA, dynamic ON≤100mA

Power: 2 x AA batteries (3.0v)

（2）Main structure:

Mainly composed of ABS plastic housing, copper head structure, PCB circuit board, IC, resistor, capacitor, infrared sensor, LCD, buzzer, battery line.

【Range of application】

Suitable for measuring the temperature of the body's forehead or object

2.Basic working principle

Understanding the principle of infrared temperature measurement can help you use this product correctly and make the test data more accurate.

◆ All objects radiate energy to the surrounding environment

◆ The temperature of the object is proportional to the intensity of the radiant energy, that mean the higher the temperature, the greater the radiant energy

◆The human body's externally radiated energy is mainly infrared radiation, so the body temperature can be calculated by measuring the intensity of the infrared energy radiated from the human body to the surroundings.

◆ Non-contact electronic thermometer accurately measures the weak infrared radiation energy released by the human body, after complex calculations and various compensation corrections, can get the body temperature accurately. The product has a built-in infrared detector and related hardware and software, which can receive, analyze, and record the temperature of the measured object and the environment.

Therefore, once the user brings the product close to a specific part of the human body (forehead) and presses the measurement button, the infrared sensor can be activated immediately, and the passive infrared sensor can quickly detect the thermal energy generated by the arterial blood flow, to accurately measure the body temperature.
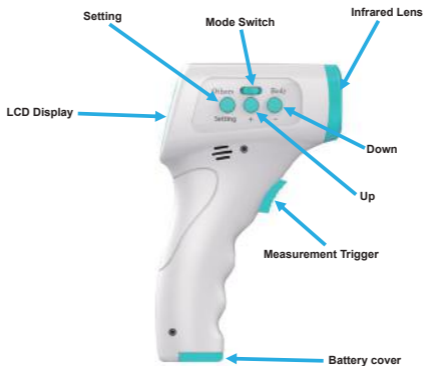
3.Appearance

Fig 3-1

See picture [Fig 3-1] it's the appearance of the whole machine, which consists of the following parts:

◆ Infrared Lens
◆ Measurement Trigger
◆ LCD Display
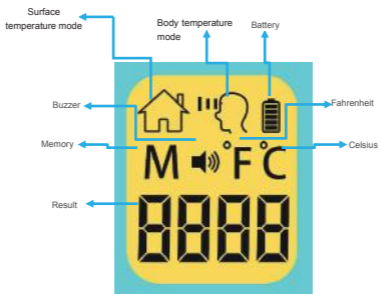◆ Battery cover
◆ Up
◆ Down
◆ Setting

4.Icon Definition

Fig 4-1

5. Technical Specification

Technical specification		
Measurement mode	Non-contact infrared measurement	
Measurement range	Body mode	32.0℃~42.9 ℃
	Object mode	0~80℃
Accuracy	0.1℃	
Measurement accuracy	0℃~31.9℃	±2℃
	32.0℃~34.9 ℃	±0.3℃
	35.0℃~41.9 ℃	±0.2℃
	42.0℃~42.9 ℃	±0.3℃
	43℃~80 ℃	±4%
Ambient temperature	10~40 ℃ / 50~104℉	
Battery type	DC 3V (2 units AA battery)	
Measurement in	Celsius （℃）/ Fahrenheit（℉）	
Auto power off	8s	
Battery reminder	2.4+/-0.1v	
Backlight	3 colors	
Number of memory data	32 groups each for Human body temperature and object temperature	
Weight	≤93g	

6. Operations

| Fig 6-1 | Fig 6-2 | Fig 6-3 | Fig 6-4 |

1.Button Instructions

Measure button: short button measure button, Wake up the device

Up button： Memory data up inquiry

Alarm number setting、Buzzer setting、Measure unit setting

delete local mode memory

Down button: Data memory down inquiry

Mode switch

Setting button

2.Human measure

Press measure button open forehead thermometer, at the moment display full screen.

As the photo【Fig 6-1】, one second later display local measure temperature.

Switch forehead thermometer to human temperature mode status【Fig 6-3】

Take thermometer sensor point forehead middle with keep straight. About distance 1-5cm, press measure button, start measure, if hearing one time "di" voice, it's display measure number. If finished, once human temperature over temperature alarm point.

It's get there time short voice"di,di,di," yi、yi、yi、di、di、di、remind alarm

If measure is finished, or without operate, 8 seconds later will power off

3.Object measure

Press measure button open forehead thermometer, at the moment display full screen, as the photo, one second later display local measure temperature

Switch forehead thermometer to human temperature mode status, as the photo

【Fig6-2】

Take thermometer sensor point forehead middle with keep straight，about distance 1-5cm, press measure button, once hearing one time "di"voice, it's display measure number with measure finished.

If measure is finished, or without operate, 8 seconds later will power off

7. Testing result instructions:

Fig 7-1   Fig 7-2   Fig 7-3

●**Human body mode**：Once lower 37.5℃,it's show green backlight.as the photo 【Fig 7-1】．Over or equal to 37.5℃ with low 38.5℃, it's show yellow backlight.as the photo 【Fig 7-3】．

Over or equal to 38.5℃ with low 43.0℃, it's show red backlight, as the photo 【Fig 7-2】．

●**Object mode**：Green backlight，as the photo 【Fig 7-1】

●**Out of normal range**：

1.While human body low 32 celsius, display screen will show "LO" with hearing "di" six times short voice, with show red backlight. As the photo 【Fig 7-2】

2.While human body over 42.9 celsius, display screen will show" hi "with hearing six times short voice, with show red backlight . As the photo 【Fig 7-2】

3.While object temperature low 0 celsius, display screen will show lo with hearing with hearing six times short voice, with show the red backlight. As the photo 【Fig 7-2】

4. While object temperature over 80 celsius, will show Hi with hearing "di" six times short voice, with show the red backlight. As the photo. As the photo 【Fig 7-2】

5. While object mode, environment temperature low 0 celsius or human body mode, environment temperature low 10celsius. It's show "Lo" with hearing "di" short voice six times.

6. While environment over 40 celsius, display screen will show "Hi" with hearing " di" short voice six times. With show red backlight. As the photo 【Fig 7-2】

8. Setting operations
●Measure mode setting

Toggle the mode switch to switch between body mode and object mode

Manual	Function	Down button	Up button	Initial value	Remark
F-1	temperature unit setting	temperature unit switch	temperature unit switch	degree celsius	optional with memory
F-2	alarm point setting	reduce 0.1 celsius	increase 0.1	38度 38 celsius	Object mode invalid, valid distance ±2 celsius
F-3	Temperature offset setting	reduce 0.1 celsius	increase 0.1	0.0 celsius	Object mode invalid,valid distance ± 1.6 celsius
F-4	Buzzer setting	On-off switch	On-off switch	open	optional with memory

●Temperature unit

Long press setting 2 seconds, it's display screen show F1, while initial value is temperature celsius, press down button or up button while temperature unit switch, press setting confirm with entrance F2 alarm point setting

●Alarm point setting

Long press setting 2 seconds, it's show "F1", short press setting one time. Display screen show F2 entrance alarm point setting, while initial valid 38.0 celsius, press down button downward excursion 0.1celsius, up button upward excursion 0.1 celsius, setting alarm point setting, press setting button confirmation with directly entrance "F3" temperature excursion setting.

●Temperature offset setting

Long press setting button 2 sends, short button press two times setting, with entrance "F3" setting temperature excursion menu, while initial valid value 0.0 celsius, press up button reduce 0.1 celsius. Up button increase 0.1 celsius. Setting temperature excursion value, press setting confirmation with directly entrance "F4" buzzer setting.

●Buzzer setting

Long press setting 2 seconds, short press three setting button, with entrance F4 buzzer setting, while initial value for buzzer open, press up/down button, switch buzzer on/off setting mode, screen point display "on "and "off", press setting confirmation with memory configuration setting. With back setting mode. If not save setting, it's not need save mode setting, waiting 8 seconds entrance sleep mode directly quit.

●Memory inquiry

If every time measure finished, machine will automatic record test data, press"up button" and "down button, it can up down check memory value. It can make machine inside each save 32 group measure value. If over 32 group data will automatic cover first

●Arouse button

Ⅰ. If measure short press later, with press directly process arouse. At the same time process full display(500m) later with process temperature.

●Memory delete

Ⅰ. Long press up button 3 seconds, it show "CLr" word indicate already deleted mode memory.

9. Battery Replacement

■ When the battery voltage is lower than 2.4v, the lack of power icon blinks as shown in [Fig 6-4]. It can only respond to the action of pressing the button and cannot continue to measure. Replace the battery immediately.

10. Troubling shootings

Error Tips	Reasons	Solution
HI	Body temperature mode: >42.9℃ Surface temperature mode: >80℃ Or environmental temperature is beyond maximum range	Please use under measurable temperature range, if it keeps appearing, please contact the after-sales
LO	Body temperature mode: <32.0℃ Surface temperature mode: <0℃ Or environmental temperature is beyond minimum range	Please use under measurable temperature range, if it keeps appearing, please contact the after-sales
Err	Data Error	Please contact after sales
Battery icon flash	Low battery power	Please replace battery

11. Transportation and Storage

1、Thermometer transport and storage environment: Temperature -20℃－60℃;
Relative humidity ≤85％

2、Cargo transportation test should be carried out. Common transportation is allowed, but need to avoid rain, moisture, crushing and mechanical collisions.

3、Product should be stored in a well-ventilated and dry interior. Packing box should be placed more than 500mm away from the ground, and the room should be protected from strong sunlight and other gases that can cause corrosion.

12. Cautions:

Infrared Thermometer is a kind of sophisticated electronic product, please use carefully and note below:

1、Do not drop and twist.

2、Do not disassemble device.

3、Infrared Thermometer is non-waterproof, and can be cleaned up with dry cloth only instead of water.

4、Keep device away from high temperature、direct sunlight and contact of chemical solvent，to avoid damage on components and operation function.

5、Take out of battery if you don't use the infrared Thermometer for a long time.

6、Please deal well with waste battery. Do not discard randomly and pollute environment and water

7、In order to get stable and reliable data, it have to take measurement above 10 ℃ circumstances, preferably at room temperature

8、Should put the device in higher 10℃ circumstances for 30 mins before use, if operating temperature doesn't meet the requirement.

Before use

9、Please make sure forehead is clean, no sweat、hair and hat when measuring the forehead temperature，otherwise measured data will be lower than actual.

10、Under shell temperature measurement, please note that emissivity of the measured objects will affect the data. Please refer to following emissivity for common objects. Glass: 0.94; Plastics: 0.85; ceramics: 0.93; water: 0.95; rubber: 0.91; anodized stainless steel: 0.85; polished stainless steel: 0.25