

**JPD-FR202**

**CE**<sub>0482</sub>

**JUMPER**

**Infrared Thermometer  
Instruction Manual**

**Shenzhen Jumper Medical Equipment Co., Ltd.**

Manual Version: 1.0  
Date of Issue: 2019/09/16



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**Product Information**

Product Name: Infrared Thermometer

Model: JPD-FR202

Manufacturer: Shenzhen Jumper Medical Equipment Co., Ltd

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**Introduction**

Thank you for purchasing this Infrared Thermometer. Please read the Instruction Manual carefully to make sure safe and proper use of this thermometer.

Please read and fully understand the Safety Precautions before use.

**Keep the Instruction Manual with this thermometer for future**

reference.

## Unpacking Check


Please open the package carefully before use, check whether all accessories are available or not and whether any component is damaged during transportation, and perform installation and operation following this user manual. In case of any damage or operation problem, please contact the dealer or contact Jumper directly. You will need the following information when making your claim: <sup>[1]</sup><sub>[5P]</sub> device model, serial number, purchase date, and your contact information and address.

## Package Contents

No.	Name	Quantity
1	Infrared Thermometer	1
2	Pouch	1
3	Battery (AAA)	2
4	Instruction Manual	1

## Safety Precautions

Read the following precautions carefully before using the thermometer.

 <b>Attention</b>	
◆	Take care of the temperature probe lens, which is fragile.
◆	Dispose used batteries with care. To protect the environment, you are recommended to send the used batteries to a designated collection point.
◆	Remove the batteries if the thermometer will not be used for more than two months.
◆	Do not immerse the thermometer in water or expose it to direct sunlight.
◆	Do not subject the thermometer to vibration or impact.
◆	Do not take body temperature readings within 20 minutes after you do physical exercises or get excited.
◆	Do not use the thermometer for continuous temperature monitoring purposes.
◆	Do not immerse the thermometer into water or other liquid. Clean and disinfect the thermometer as described in the "Cleaning and Disinfection" chapter.
◆	Do not touch the tip of the temperature probe, on which a precise temperature sensor resides.
◆	The ambient temperature must not be extremely high or low. To make sure accurate readings, keep the thermometer under room temperature for more than 30 minutes before use.
◆	Do not use the thermometer under an ambient temperature higher

than 40°C (104°F) or lower than 10°C (50°F), which is beyond the operating temperature range of the thermometer.

- ◆ **Risk of pollution!** The user is recommended to send the overdue thermometer to local garbage disposal site or send it back to us.
- ◆ 2 AAA batteries of 1.5V are the only replaceable accessories of the thermometer. Please do not use the batteries of other voltages or specifications.











## Warning



### Warning

- The thermometer is not intended to diagnose or treat any health problem or disease. The measurement results are for reference only.
- It is dangerous to make a self-diagnosis or self-treatment based on the obtained measurement results. For such purposes, please consult a physician or other medical professionals.
- ⊘ Do not charge an alkaline dry-cell battery or throw it in fire. Otherwise, the battery may explode.
- ⊘ Do not disassemble the thermometer or attempt to repair it. Otherwise, the thermometer may be damaged permanently.
- ⊘ During measurement, do not use a mobile phone or any other device that may cause electromagnetic interference.
- ⊘ Do not use the thermometer in an environment where flammable anesthetic mixture with air or with oxygen, or nitrous oxide is available.
- ⊘ Please keep the thermometer out of the reach of children.
- ⊘ The result may be inaccurate if you use the overdue thermometer.

## Symbols

Symbol	Description
	Type BF applied part.
	Attention must be paid.
	The action is prohibited.
	Information about the manufacturer.
	Date of manufacture.
	Consult the instructions for use.
	This product complies with the MDD93/42/EEC requirements.
	Waste electrical materials should be sent to a dedicated collection point for recycling.
IP22	Degree of protection against the Ingress of water.
 Warning	A personal injury or damage to the thermometer may occur if the thermometer is not used correctly.
 Attention	Inaccurate reading or damage to the thermometer may occur if the thermometer is not used correctly.

## Body Temperature Basics

- The normal body temperature is a range.
- The normal range varies from person to person and can fluctuate throughout the day.
- The normal range also varies by body site. Therefore, measurements

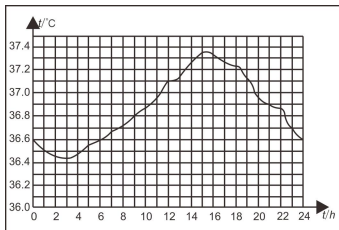


from different sites should not be compared directly. To determine if an individual is experiencing an elevated body temperature and/or having a fever, it is critical to know the individual's normal body temperature when he/she is well. Take multiple readings to obtain the normal body temperature range and note the specific body site measured, for example: forehead or eardrum temperature.

Body Part	Normal Temperature Range
Forehead	34.7°C–37.3°C / 94.5°F–99.1°F
Ear canal	35.8°C–38.0°C / 96.4°F–100.4°F
Mouth	35.3°C–37.5°C / 95.9°F–99.5°F
Armpit	34.7°C–37.3°C / 94.5°F–99.1°F
Anus	36.6°C–38.0°C / 97.9°F–100.4°F

The normal body temperature range slightly varies with age and gender. Generally, newborns or children have higher body temperature than adults, and adults have higher body temperature than the elderly. Women's body temperature are appropriately  $0.3^{\circ}\text{C}$  ( $0.5^{\circ}\text{F}$ ) higher than men's.

### Variation in body temperature



Normal body temperature fluctuates throughout the day and is also affected by external factors. The body temperature of an individual is the lowest between 2:00 a.m. and 4:00 a.m. and the highest between 2:00 p.m. and 8:00 p.m. An individual's body temperature typically changes by less than  $1^{\circ}\text{C}$  ( $1.8^{\circ}\text{F}$ ) each day.

## **Product Description**

### 1) Overview

Infrared Thermometer JPD-FR202 measures the human body or an object temperature based on the infrared energy emitted by the forehead or an object (such as milk and water). You can quickly get measurement results after pointing the temperature probe to the target.

### 2) Structure

The thermometer consists of a shell, an LCD, buttons, a beeper, an infrared temperature sensor, and a Microprocessor.

### 3) Operating principle

The infrared temperature sensor collects infrared energy emitted by the forehead. After being focused by a lens, the energy is converted into a temperature reading by the thermopiles and the measurement circuit.

### 4) Intended use

The Infrared Thermometer JPD-FR202 is a non-contact infrared thermometer intended to obtain the body temperature from the forehead. It may be used by medical professionals or by consumers in a home environment.

### 5) Contraindications

None

## Features

### 1. **Good safety**

- Passive infrared receiving technology
- Non-contact measurement, preventing cross-infection

### 2. **Easy operation**

- Handheld design, easy operation
- One-click automatic temperature measurement

### 3. **Quick response**

1-second measurement

### 4. **High accuracy**

- Advanced infrared temperature sensor, with high sensitivity
- Enhanced accuracy with automatic temperature calibration

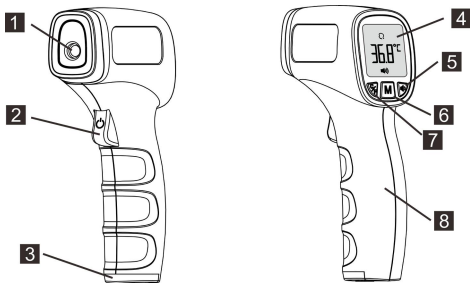
### 5. **Diverse functions**

- 20 temperature readings stored in memory
- Forehead/Object temperature measurement
- Fever alert, with a configurable alert threshold
- Switching between °C and °F
- Switching between mute/un-mute mode (measuring sound notification)
- Automatic power-off, power-saving

### 6. **Extensive application scope**

Applicable to all groups of people

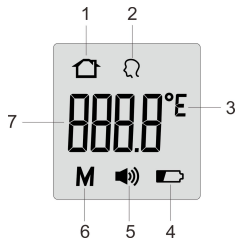
## Product Structure



- 1、 IR sensor
- 2、 Power-on button / Measure button
- 3、 Battery cover
- 4、 LCD display
- 5、 Mute / Un-mute button
- 6、 Mode button
- 7、 Celsius / Fahrenheit Switch button
- 8、 Handgrip

## Display description

1. Object temperature mode
2. Forehead temperature mode
3. Temperature unit ( $^{\circ}\text{C}$  /  $^{\circ}\text{F}$ )
4. Low power indicator
5. Mute / un-mute
6. Memory recall
7. Temperature value





## Sounds and backlight instructions

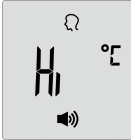

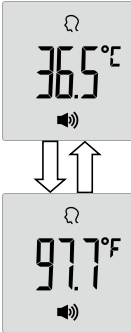
Range	Sounds	Backlight
Forehead temperature		
34.9°C-37.5°C/94.8°F-99.5°F	A long beep	Green
37.6°C-42.2°C/99.6°F-108.0°F	3 short double beeps	Red
Object temperature		
0°C-100°C/32.0°F-212.0°F	A long beep	White

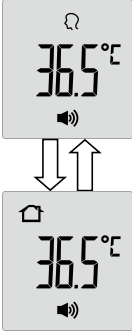
**Note:** When the temperature is between 34.9°C/94.8°F and 37.5°C/99.5°F, there will be a long beep and a green backlight.

When the temperature is between 37.6°C/99.6°F and 42.2°C/108.0°F, there will be 3 short double beeps and a red backlight. This indicates that the body temperature is a little high and you may have a fever. Please consult your doctor if you are not sure.

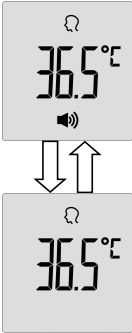


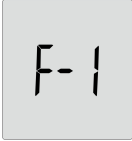
## Display and Operating Instructions

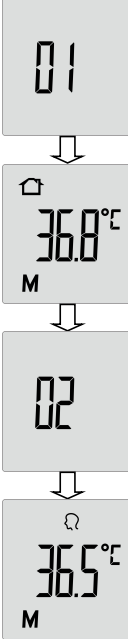


Screen Display	Operating Instructions/ Displayed State	Description
Measuring Forehead temperature		
	<p>In a power-off state, point the IR sensor to the center of the forehead. Move the thermometer towards the forehead. For effective measurement, the distance between the thermometer and the forehead must be ½" to 2" (1-5 cm). Press and release the <b>Measure button</b>. The forehead temperature will be displayed on the screen.</p>	<p>See the table in the “Sounds and Backlight Instructions” section</p>
Measuring Object temperature		
	<p>In a power-on state, press the “<b>Mode button</b>”, the thermometer enters the <b>Object mode</b>.</p> <p>Point the IR sensor to the center of the object, then press and release the <b>Measure button</b>. the object temperature will be displayed on the screen.</p>	<p>See the table in the “Sounds and Backlight Instructions” section</p>







Screen Display	Operating Instructions/ Displayed State	Description
Out of the measuring range display		
	<p>In Object mode, a temperature reading of more than 100°C (212.0°F)</p> <p>In Forehead mode, a temperature reading of more than 42.2°C (108.0°F)</p>	A long beep and a green backlight for 3 seconds.
	<p>In Object mode, a temperature reading of less than 0°C (32.0°F)</p> <p>In Forehead mode, a temperature reading of less than 34.9°C (94.8°F)</p>	A long beep and a green backlight for 3 seconds.
Switching between °C and °F		
	In a power-on state, press the <b>°C/°F button</b> to switch between °C and °F.	Silent

Screen Display	Operating Instructions/ Displayed State	Description
Switching between forehead temperature and object temperature		
	<p>In a power-on state, press the <b>Mode button</b> to switch between forehead temperature (👤) and object temperature (📦).</p>	<p>Silent</p>
Switching between mute and un-mute		



Screen Display	Operating Instructions/ Displayed State	Description
	<p>In a power-on state, press the <b>Mute/Un-mute button</b> (  ) to switch between mute and un-mute.</p>	<p>The  symbol is displayed in Un-mute mode and disappears in mute mode.</p>
Recall 20 memories		
	<p>In a power-on state, press and hold the <b>Mode button</b> for more than 2 seconds. "F-1" is displayed.</p>	<p>Press the Measure button to return to the measurement interface.</p>



Screen Display	Operating Instructions/ Displayed State	Description
 <p>The sequence shows four screen displays connected by downward arrows. The first display shows '01'. The second display shows a house icon, '36.8°C', and 'M'. The third display shows '02'. The fourth display shows a bell icon, '36.5°C', and 'M'.</p>	<p>Press the °C/°F or the  button, <b>1</b> will be shown, followed by the recorded reading.</p> <p>Press the “°C/°F button” again for the next recorded data. <b>2</b> will be shown, followed by the recorded reading.</p> <p>A maximum of 20 temperature readings can be recalled.</p> <p><b>Note:</b> <b>1</b> represents the latest data.</p>	<p>Silent</p>
Fever alert threshold settings		
 <p>The screen displays 'F-2'.</p>	<p>When "F-1" is displayed, press the <b>Mode button</b>. Then "F-2" is displayed.</p>	<p>Press the Measure button to return to the measurement interface.</p>

Screen Display	Operating Instructions/ Displayed State	Description
	Press the °C/°F or the  button. The fever alert threshold is displayed. The threshold value increments by 0.1°C/°F every time the °C/°F button is pressed, and decrements by 0.1°C/°F every time the  button is pressed. The tunable range is 35.0°C–42.0°C (95.0°F–107.6°F).	The default fever alert threshold is 37.6°C.
Error information & low battery		
	The ambient temperature is higher than 40.0°C (104.0°F) or lower than 10.0°C (50.0°F).	A long beep and a red backlight for 3 seconds.
	An error occurs when data is being read from or written to the memory, or the temperature correction is not complete.	A long beep and a red backlight for 3 seconds.
	When the battery voltage is lower than $2.4V \pm 0.1V$ , the low battery symbol will appear on the display. Please replace the batteries.	Silent

Screen Display	Operating Instructions/ Displayed State	Description
Power-off		
In any mode, if there is no operation in 10 seconds, the thermometer will power off automatically.		

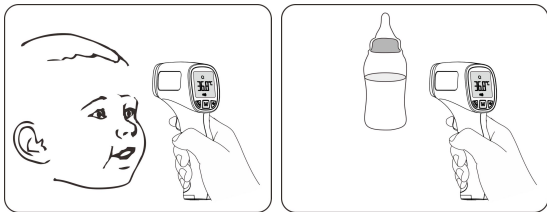
## Measurement Process

### 1. Select the measurement mode.

- Press the **Measure button** to power on the thermometer. Select the measurement mode using the Mode button.
- The  symbol indicates the Forehead temperature mode. The  symbol indicates the Object temperature mode.

### 2. Press the Measure button to start a measurement.

- When taking the forehead temperature, point the IR sensor to the center of the forehead. Move the thermometer towards the forehead. the distance between the thermometer and the forehead must be ½" to 2" (1-5 cm). Press and release the **Measure button**. The forehead temperature will be displayed on the screen.
- When taking the object temperature, Point the IR sensor to the center of the object. The distance between the thermometer and the object must be ½" to 2" (1-5 cm). Press and release the **Measure button**. The object temperature will be displayed on the screen.



### 3. After a measurement

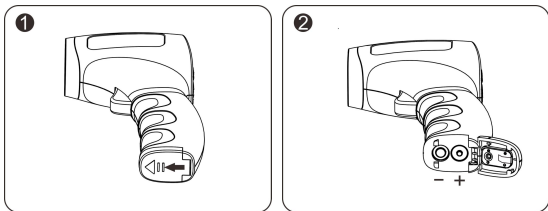
- After each measurement, clean the thermometer with a dry soft cloth, and put the thermometer in a dry and well-ventilated place.
- The thermometer automatically powers off if it is not used in 10 seconds.

#### Notes:

- (1) The thermometer is suitable for an indoor environment without strong air convection between the thermometer and the target. For example, winds from a fan, an air-conditioner, or a heater.
- (2) Do not hold the thermometer for a long time, because it is sensitive to the ambient temperature.
- (3) Make sure the sense head is free of foreign matters before use;
- (4) Make sure the forehead has no sweat and no hairs covered before measure the forehead temperature; otherwise, the result could be incorrect;
- (5) No intense emotion or strenuous exercises before measuring;

## Replacing Batteries

- 1) Slide the battery cover off along the marked direction. Insert the two AAA batteries into the compartment correctly.
- 2) If the low-battery symbol is displayed on the screen, replace the batteries.



Make sure that the batteries are installed correctly. Otherwise, the thermometer may be damaged.



Batteries of a same type should be used. Dispose the used batteries in accordance with the local environmental policies.



The thermometer is provided with batteries that were installed in the factory. When you start to use it in the first time, open the battery cover, then remove the insulating piece.

## Cleaning and Disinfection

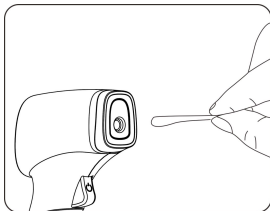
### Cleaning

Recommended detergents:

- \* Medical detergents;
- \* Home use mild detergents;

Cleaning steps:

- 1) Take the batteries out before cleaning.
- 2) Clean the temperature with a soft cloth. Clean the lens of the temperature probe with a cotton swab.
- 3) Wipe the thermometer body with a slightly damp soft cloth.



⚠ Keep water off the lens during the cleaning process. Otherwise, the lens may be damaged.

⚠ The lens may be scratched if it is cleaned with a piece of tissue paper, which might result in inaccurate readings.

⚠ Do not clean the thermometer with corrosive cleansers. During the cleaning process, do not touch the lens using hard objects, do not immerse any part of the thermometer into liquid, or allow liquid to penetrate the thermometer.

### **Disinfection**


Recommended disinfectants:

- \* Isopropyl alcohol solution (concentration: 70%)


- \* Medicinal alcohol (concentration: 75%)
- \* Sodium hypochlorite solution (concentration: 3%)

Disinfecting steps:

- 1) Wet the clean soft cloth with a small quantity of disinfectant, wipe the thermometer and quickly dry it.
- 2) Disinfect the thermometer body with a cloth slightly moistened with 75% medical alcohol.

 Do not use hot steam or ultraviolet radiation for disinfection.

Otherwise, the thermometer may be damaged or quickly aged.

 Clean and disinfect the thermometer under the temperature of  $+10^{\circ}\text{C}\sim+40^{\circ}\text{C}$  ( $50^{\circ}\text{F}\sim 104^{\circ}\text{F}$ ), the relative humidity of 15%~85%RH (no condensation) and the barometric pressure of 86kPa~106kPa.

## Maintenance

Preventive inspection & maintenance period

- 1) Ensure the safety of thermometer, and check whether it has potential safety hazards in normal use each week, e.g. whether the lens is broken, the shell has cracks and the sensing head is polluted. Do not use the thermometer with potential safety hazard. Clean the thermometer if not used for a long time.
- 2) Store the thermometer in a dry, dust-free, and well-ventilated place. Make sure that the thermometer is not exposed to sunlight. Make sure that the storage and transportation environments meet the requirements.
- 3) Remove the batteries if the thermometer will not be used for more than two months.



## Troubleshooting

Problem	Possible Cause	Solution
The thermometer fails to power on.	Low battery	Change the batteries.
	Polarities of the batteries are reversed.	Make sure that the batteries are installed correctly.
	The thermometer is damaged.	Contact the manufacturer.
"Er1" is displayed.	The ambient temperature is lower than 10°C (50.0°F) or higher than 40°C (104°F).	Take a measurement under an ambient temperature between 10°C (50.0°F) and 40°C (104°F).
The temperature reading is lower than the typical body temperature range.	The lens of the temperature probe is dirty.	Clean the lens using a cotton swab.
	The distance between the temperature probe and the target is too long.	Move the thermometer closer to the target.
	The thermometer is used within 30 minutes after being taken from a cold environment.	Wait for more than 30 minutes after the thermometer is moved into the measurement environment.
The temperature reading is higher than the typical body temperature range.	The temperature probe is damaged.	Contact the manufacturer.


## Specifications

Product Name	Infrared Thermometer
Product Model	JPD-FR202
Power Supply Mode	Internal power supply
Operating Voltage	DC 3V
Battery Model	AAA x 2
Operating Mode	Continuous operating
Display	Segment LCD
Measure time	About 1 second
Latency Time	About 1 second
Emissivity	0.95
Measuring Distance	½" to 2" (1 to 5 cm)
Measuring Range	Forehead: 34.9°C–42.2°C (94.8°F–108.0°F)
	Object: 0.0°C–100.0°C (32.0°F–212.0°F)
Accuracy (Laboratory)	±0.4°F/±0.2°C from 94.8°F to 108.0°F (34.9°C to 42.2°C) ±0.5°F/±0.3°C, Outside the range of 94.8°F to 108.0°F (34.9°C to 42.2°C)
Resolution	0.1°C (0.1°F)
Memory	20 temperature readings
Low-battery Alert	The low-battery symbol is displayed if the power voltage is lower than 2.4 V±0.1V.
Automatic Power-off	The thermometer automatically powers off if it is not used in 10±1 seconds.
Dimensions (mm)	150×88.2×40.6
Weight (g)	109.5 g (with batteries)
Operating Environment	Temperature: 10°C–40°C (50°F–104°F)
	Humidity: 15%–95% RH, non-condensing
	Atmospheric pressure: 86–106 kPa
Storage and Transportation	Temperature: -20°C to 55°C (-4°F–131°F)
	Humidity: 0–95% RH, non-condensing
	Atmospheric pressure: 50–106 kPa

Manufacturing date	see the label
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The infrared thermometer has been tested and conforms to the standard ASTM E1965-98. ASTM laboratory accuracy requirements in the display range of 98°F to 102°F (37°C-39°C) for skin IR thermometers is  $\pm 0.5^{\circ}\text{F}$  ( $\pm 0.3^{\circ}\text{C}$ ). Note that for mercury-in-glass and electronic thermometers, the requirement per ASTM Standards E667-86 and E1112-86 is  $\pm 0.2^{\circ}\text{F}$  ( $\pm 0.1^{\circ}\text{C}$ ).

## Security Class

- Type of protection against electric shock: internally powered equipment.
- Degree of protection against electric shock: Type BF applied part. 
- Degree of protection against ingress of water: IP22
- Safety degree of using in flammable anesthetic gas blending with air, oxygen or nitrous oxide: Non-AP/APG
- No application parts of the thermometer prevents defibrillation charge effect.
- No application parts of the thermometer output signal.
- The thermometer is impermanent installed device.

## Storage and Transportation

### 1) Transportation

The thermometer can be transported using general transportation tools. Severe vibration, shock, or rain must be avoided during transportation.

### 2) Storage

The thermometer must be packaged and then stored in a well-ventilated room without corrosive gas. The ambient temperature must be between  $-20^{\circ}\text{C}$  and  $+55^{\circ}\text{C}$  ( $-4^{\circ}\text{F}$ – $131^{\circ}\text{F}$ ), the relative humidity must be lower than

95% (non-condensing), and the atmospheric pressure must be 50–106 kPa.

## EMC Information-Guidance and Manufacture's

### Declaration



#### CAUTION:

- The Infrared Thermometer JPD-FR202 needs special precautions regarding EMC and needs to be installed and put into service according to the EMC information provided for in the ACCOMPANYING DOCUMENTS.
- Portable and mobile RF communications equipment can affect Infrared Thermometer JPD-FR202.
- The Infrared Thermometer JPD-FR202 should not be used adjacent to or stacked with other equipment.

### Guidance and manufacturer's declaration – Electromagnetic emission –for all equipment and systems


Guidance and manufacturer's declaration – Electromagnetic emission		
The Infrared Thermometer JPD-FR202 is intended for use in the electromagnetic environment specified below. The customer or the user of the Infrared Thermometer JPD-FR202 should assure that it is used in such an environment.		
Emissions test	Compliance	Electromagnetic environment - guidance
RF emissions CISPR 11	Group 1	The Infrared Thermometer JPD-FR202 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 Infrared Thermometer JPD-FR202 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.

**Guidance and manufacturer's declaration – Electromagnetic immunity –for all equipment and systems**

Guidance and manufacturer's declaration – Electromagnetic immunity			
The Infrared Thermometer JPD-FR202 is intended for use in the electromagnetic environment specified below. The customer or the user of the Infrared Thermometer JPD-FR202 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 %.
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.

**Guidance and manufacturer's declaration – Electromagnetic immunity –for equipment and systems that are not life-supporting**

Guidance and manufacturer's declaration – Electromagnetic immunity			
The Infrared Thermometer JPD-FR202 is intended for use in the electromagnetic environment specified below. The customer or the user of the Infrared Thermometer JPD-FR202 should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment -guidance
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5	3 V/m	Portable and mobile RF communications equipment should be used no

	GHz	<p>closer to any part of the JPDFR202, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.</p> <p>Recommended separation distance</p> $d = \left[ \frac{3.5}{E_1} \right] \sqrt{P} \quad 80 \text{ MHz to } 800 \text{ MHz}$ $d = \left[ \frac{7}{E_1} \right] \sqrt{P} \quad 800 \text{ MHz to } 2.5 \text{ GHz}$ <p>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).<sup>b</sup></p> <p>Field strengths from fixed RF transmitters, as determined by an Electromagnetic site survey,<sup>a</sup> should be less than the compliance level in each frequency range.<sup>b</sup></p> <p>Interference may occur in the vicinity of equipment marked with the following symbol:</p> 
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NOTE 1 At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic 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 JPD-FR202 is used exceeds the applicable RF compliance level above, the JPD-FR202 should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the JPD-FR202.

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

**Recommended separation distances between portable and mobile RF communications equipment and the EQUIPMENT or SYSTEM -for EQUIPMENT and SYSTEMS that are not LIFE-SUPPORTING**

The Infrared Thermometer JPD-FR202 is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the Infrared Thermometer JPD-FR202 can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the Infrared Thermometer JPD-FR202 as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter W	Separation distance according to frequency of transmitter m	
	80 MHz to 800 MHz	800 MHz to 2,5 GHz
	$d = \left[ \frac{3.5}{E_1} \right] \sqrt{P}$	$d = \left[ \frac{7}{E_1} \right] \sqrt{P}$
0.01	0.12	0.23
0.1	0.38	0.73
1	1.2	2.3
10	3.8	7.3
100	12	23

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.



## Warranty and After-Sale Service

The device is under warranty for one year from the date of purchase.

The batteries, the packaging, and any damage caused by improper use are not covered by the warranty.

Excluding the following user-caused failures:

- 1.Failure resulting from unauthorized disassembly and modification.
- 2.Failure resulting from an unexpected dropping during application or transportation.
- 3.Failure resulting from not following the instructions in the user's manual.

After-sale service unit: Shenzhen Jumper Medical Equipment Co., Ltd.

Address: D Building, No. 71, Xintian Road, Fuyong Street, Baoan, Shenzhen,Guangdong,China

Tel: +86-755-26696279

Fax: +86-755-26852025

E-mail: [info@jumper-medical.com](mailto:info@jumper-medical.com)

Website: [www.jumper-medical.com](http://www.jumper-medical.com)

Postal Code: 518103

### Authorized European Representative:



Wellkang Ltd

Suite B, 29 Harley Street, London W1G 9QR, UK

Vielen Dank, dass Sie sich für dieses Infrarot-Thermometer entschieden haben. Bitte lesen Sie die Bedienungsanleitung sorgfältig durch, um sicherzustellen, dass dieses Thermometer sicher und ordnungsgemäß verwendet wird.

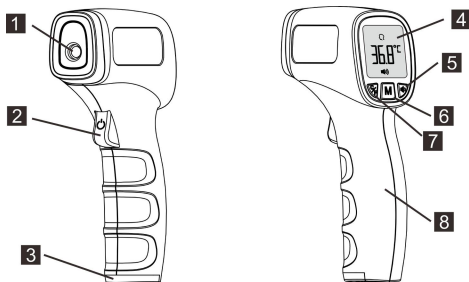
Bitte lesen Sie die Sicherheitshinweise vor dem Gebrauch vollständig durch.

**Bewahren Sie die Bedienungsanleitung mit diesem Thermometer zum späteren Nachschlagen auf.**

### **Packungsinhalt**

<b>No.</b>	<b>Name</b>	<b>Menge</b>
1	Infrarot Thermometer	1
2	Beutel	1
3	Batterien (AAA)	2
4	Bedienungsanleitung	1

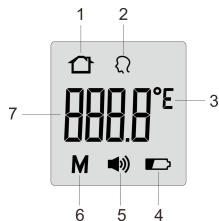
## Produktstruktur



- 9、IR Sensor
- 10、Einschalttaste / Messtaste
- 11、Batterieabdeckung
- 12、LCD Bildschirm
- 13、Stummschaltung / Stummschaltungstaste
- 14、Modustaste
- 15、Celsius / Fahrenheit Umschalttaste
- 16、Handgriff

## Beschreibung anzeigen

- 1. Objekttemperaturmodus
- 2. Stirntemperaturmodus
- 3. Temperatureinheit (° C / ° F)
- 4. Anzeige für geringen Stromverbrauch
- 5. Stummschalten / Stummschaltung aufheben
- 6. Speichermodus
- 7. Temperaturwert





## Töne und Anweisungen zur Hintergrundbeleuchtung

Angebot	Töne	Hintergrund- beleuchtung
Stirntemperatur		
34.9°C-37.5°C/94.8°F-99.5°F	Ein langer Piepton	Grün
37.6°C-42.2°C/99.6°F-108.0°F	3 kurze doppelte Piep- -töne	Rot
Objekttemperatur		
0°C-100°C/32.0°F-212.0°F	Ein langer Piepton	Weiß

**Hinweis:** Wenn die Temperatur zwischen 34.9 ° C/94.8 °F und 37.5 ° C/99.5 °F liegt, ertönt ein langer Piepton und eine grüne Hintergrundbeleuchtung.

### Messprozess

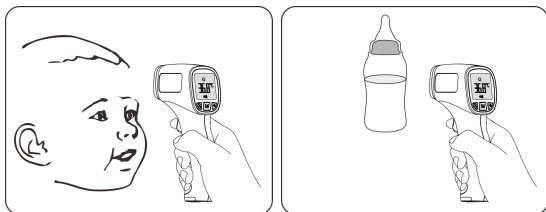
#### 1. Wählen Sie den Messmodus.

- Drücken Sie die **Messtaste**, um das Thermometer einzuschalten. Wählen Sie den Messmodus mit der Modustaste.
- Das Symbol  zeigt den Stirntemperaturmodus an. Das Symbol  zeigt den Objekttemperaturmodus an.

#### 2. Drücken Sie die Messtaste, um eine Messung zu starten.

- Wenn Sie die Stirntemperatur messen, richten Sie den IR-Sensor auf die Mitte der Stirn. Bewegen Sie das Thermometer in Richtung Stirn. Der Abstand zwischen dem Thermometer und der Stirn muss 1 bis 5 cm betragen. Drücken Sie die **Messtaste** und lassen Sie sie los. Die Stirntemperatur wird auf dem Bildschirm angezeigt.
- Richten Sie den IR-Sensor bei der Objekttemperatur auf die

Objektmitte. Der Abstand zwischen dem Thermometer und dem Objekt muss 1 bis 5 cm betragen. Drücken Sie die **Messtaste** und lassen Sie sie los. Die Objekttemperatur wird auf dem Bildschirm angezeigt.



### 3. Nach einer Messung

- Reinigen Sie das Thermometer nach jeder Messung mit einem trockenen, weichen Tuch und legen Sie es an einen trockenen und gut gelüfteten Ort.
- Das Thermometer schaltet sich automatisch aus, wenn es nicht innerhalb von 10 Sekunden verwendet wird.

## Fehlerbehebung

Problem	Mögliche Ursache	Lösung
Das Thermometer lässt sich nicht einschalten.	Niedriger Batteriestatus	Wechseln Sie die Batterien.
	Die Polaritäten der Batterien sind vertauscht.	Stellen Sie sicher, dass die Batterien richtig eingesetzt sind.
	Das Thermometer ist beschädigt.	Wenden Sie sich an den Hersteller.
"Er1" wird	Die	Messen Sie bei einer

<b>Problem</b>	<b>Mögliche Ursache</b>	<b>Lösung</b>
angezeigt.	Umgebungstemperatur ist niedriger als 10° C (50.0° F) oder höher als 40° C (104° F).	Umgebungstemperatur zwischen 10° C (50.0° F) und 40° C (104° F).
Die Temperaturanzeige ist niedriger als der typische Körpertemperaturbereich.	Die Linse des Temperaturfühlers ist verschmutzt.	Reinigen Sie die Linse mit einem Wattestäbchen..
	Der Abstand zwischen Temperaturfühler und Ziel ist zu groß.	Bewegen Sie das Thermometer näher an das Ziel..
	Das Thermometer wird nicht innerhalb von 30 Minuten verwendet, nachdem es aus einer kalten Umgebung entnommen wurde..	Warten Sie mehr als 30 Minuten, nachdem das Thermometer in die Messumgebung gebracht wurde.
Der Temperaturmesswert ist höher als der typische Körpertemperaturbereich.	Der Temperaturfühler ist fehlerhaft.	Wenden Sie sich an JUMPER.

## Spezifikationen

Produktname	Infrarot Thermometer
Produktmodell	JPD-FR202
Stromversorgungsmodus	Interne Stromversorgung
Betriebsspannung	DC 3V
Batteriemodell	AAA x 2

Betriebsart	Dauerbetrieb
Anzeige	Segment LCD
Messzeit	Ungefähr 1 Sekunde
Latenzzeit	Ungefähr 1 Sekunde
Emissionsgrad	0,95
Abstand messen	½ "bis 2" (1 bis 5 cm)
Messbereich	Stirn: 34.9°C–42.2°C (94.8°F–108.0°F)
	Objekt: 0.0°C–100.0°C (32.0°F–212.0°F)
Richtigkeit (Labor)	±0.4°F/±0.2°C von 94.8°F bis 108.0°F (34.9°C bis 42.2°C) ±0.5°F/±0.3°C, Außerhalb des Bereichs von 94.8°F bis 108.0°F (34.9°C bis 42.2°C)
Auflösung	0.1°C (0.1°F)
Erinnerung	20 Temperaturablesungen
Batteriealarm	Das Symbol für eine schwache Batterie wird angezeigt, wenn die Versorgungsspannung unter 2.4 V ± 0,1 V liegt.
Automatisches Ausschalten	Das Thermometer schaltet sich automatisch aus, wenn es innerhalb von 10 ± 1 Sekunden nicht verwendet wird
Abmessungen (mm)	150×88.2×40.6
Gewicht (g)	109.5 g (mit Batterien)
Betriebsumgebung	Temperatur: 10°C–40°C (50°F–104°F)
	Luftfeuchtigkeit: 15% -95% RH, nicht kondensierend
	Atmosphärendruck: 86 - 106 kPa
Lagerung und Transport	Temperatur: -20°C to 55°C (-4°F–131°F)
	Luftfeuchtigkeit: 0-95% RH, nicht kondensierend
	Atmosphärendruck: 50 - 106 kPa

Merci d'avoir acheté ce thermomètre infrarouge. Veuillez lire attentivement le manuel d'utilisation pour vous assurer que ce thermomètre est utilisé correctement et en toute sécurité.

Veuillez bien lire et comprendre les précautions de sécurité avant utilisation.

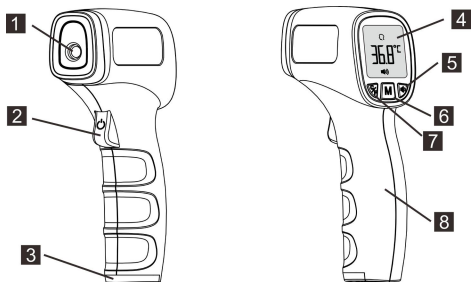
**Conservez le manuel d'instructions avec ce thermomètre pour référence ultérieure.**

### **Contenu du colis**

<b>No.</b>	<b>Nom</b>	<b>Quantité</b>
1	Thermomètre infrarouge	1
2	Poche	1
3	Batterie (AAA)	2
4	Manuel d'instructions	1



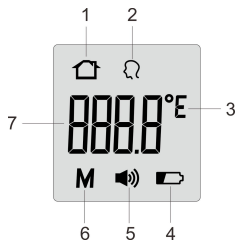
## Structure de Produit



- 17、 IR capteur
- 18、 Bouton de mise en marche / bouton de mesure
- 19、 Couvercle de la batterie
- 20、 LCD écran
- 21、 Bouton de Mute / Un-mute
- 22、 Bouton de mode
- 23、 Bouton de change entre Celsius / Fahrenheit
- 24、 Poignée

## Description d'affichage

- 1. Mode de température d'objet
- 2. Mode de température frontale
- 3. Unité de température (° C / ° F)
- 4. Indicateur de faible puissance
- 5. Mute / Un-Mute
- 6. Mode mémoire
- 7. Valeur de température





## Sons et instructions de rétroéclairage

Gamme	Sons	Rétroéclairage
Température frontale		
34.9°C-37.5°C/94.8°F-99.5°F	Un long bip	Vert
37.6°C-42.2°C/99.6°F-108.0°F	3 doubles bips courts	Rouge
Température de l'objet		
0°C-100°C/32.0°F-212.0°F	Un long bip	Blanc

**Remarque:** lorsque la température est comprise entre 34,9 ° C / 94,8 et 37,5 ° C / 99,5, un bip long et un rétroéclairage vert sont émis.

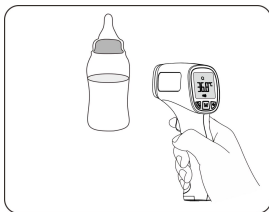
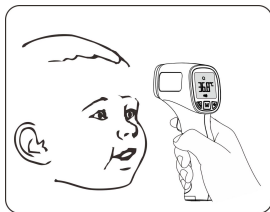
## Processus de mesure

### 1. Sélectionnez le mode de mesure.

- Appuyez sur le bouton Mesurer pour allumer le thermomètre. Sélectionnez le mode de mesure à l'aide du bouton Mode.
- Le symbole  indique le mode de température frontale. Le symbole  indique le mode de température de l'objet.

### 2. Appuyez sur le bouton Mesurer pour lancer une mesure.

- Lorsque vous prenez la température du front, dirigez le capteur IR vers le centre du front. Déplacez le thermomètre vers le front. la distance entre le thermomètre et le front doit être de 1 à 5 cm (½ ”à 2”). Appuyez et relâchez le bouton Mesurer. La température du front sera affichée à l'écran.
- Lorsque vous prenez la température de l'objet, pointez le capteur infrarouge vers le centre de l'objet. La distance entre le thermomètre et l'objet doit être comprise entre 1 et 5 cm. Appuyez et relâchez le bouton Mesurer. La température de l'objet sera affichée à l'écran.



### 3. Après une mesure

- Après chaque mesure, nettoyez le thermomètre avec un chiffon doux et sec, puis placez-le dans un endroit sec et bien ventilé..
- Le thermomètre s'éteint automatiquement s'il n'est pas utilisé dans les 10 secondes.

## Dépannage

Problème	Cause Possible	Solution
Le thermomètre ne s'allume pas.	Batterie faible	Changer les piles.
	Les polarités des piles sont inversées.	Assurez-vous que les piles sont correctement installées.
	Le thermomètre est endommagé.	Contactez le fabricant.
"Er1" est affiché.	La température ambiante est inférieure à 10 ° C (50.0 ° F) ou supérieure à 40 ° C (104 ° F).	Prenez une mesure à une température ambiante comprise entre 10 ° C (40 ° C) et 40 ° C (104 ° F).
La lecture de la température est	La lentille de la sonde de température est	Nettoyez la lentille avec un coton-tige.

<b>Problèm</b>	<b>Cause Possible</b>	<b>Solution</b>
inférieure à la plage de température corporelle typique.	sale.	
	La distance entre la sonde de température et la cible est trop longue.	Rapprochez le thermomètre de la cible.
	Le thermomètre est utilisé dans les 30 minutes qui suivent son prélèvement dans un environnement froid.	Attendez plus de 30 minutes après le transfert du thermomètre dans l'environnement de mesure.
La lecture de la température est supérieure à la plage de température corporelle typique.	La sonde de température est endommagée.	Contactez le fabricant.

## Spécifications

Nom du produit	Thermomètre infrarouge
modèle du produit	JPD-FR202
Mode d'alimentation	Alimentation interne
Tension de fonctionnement	DC 3V
Modèle de batterie	AAA x 2
Mode de fonctionnement	Fonctionnement continu
Afficher	Segment LCD
Mesurer le temps	Environ 1 seconde
Temps de latence	Environ 1 seconde
Émissivité	0.95

Distance de mesure	½" à 2" (1 à 5 cm)
Gamme de mesure	Front: 34.9°C–42.2°C (94.8°F–108.0°F)
	Object: 0.0°C–100.0°C (32.0°F–212.0°F)
Précision (laboratoire)	±0.4°F/±0.2°C de 94.8°F à 108.0°F (34.9°C à 42.2°C) ±0.5°F/±0.3°C, En dehors de la gamme de 94.8°F à 108.0°F (34.9°C à 42.2°C)
Résolution	0.1°C (0.1°F)
Mémoire	20 lectures de température
Alerte de pile faible	Le symbole de pile faible s'affiche si la tension d'alimentation est inférieure à 2.4 V ± 0.1 V.
Mise hors tension automatique	Le thermomètre s'éteint automatiquement s'il n'est pas utilisé dans 10 ± 1 secondes.
Dimensions (mm)	150×88.2×40.6
Poids (g)	109.5 g (avec batteries)
Environnement d'exploitation	Température: 10°C–40°C (50°F–104°F)
	Humidité: 15%–95% RH, sans condensation
	Pression atmosphérique: 86–106 kPa
Stockage et transport	Température: -20°C to 55°C (-4°F–131°F)
	Humidité: 0- 95% RH, sans condensation
	Pression atmosphérique: 50–106 kPa

Grazie per aver acquistato questo termometro a infrarossi. Si prega di leggere attentamente il Manuale di istruzioni per assicurarsi di utilizzare questo termometro in modo sicuro e corretto.

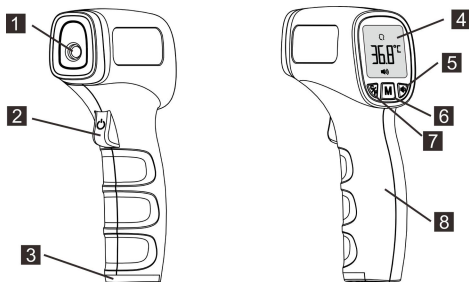
Si prega di leggere e comprendere appieno le Precauzioni di sicurezza prima dell'uso.

**Conservare il manuale di istruzioni con questo termometro per riferimento futuro.**

### **Contenuto della confezione**

<b>No.</b>	<b>Nome</b>	<b>Quantità</b>
1	Termometro a infrarossi	1
2	Marsupio	1
3	Batterie(AAA)	2
4	Manuale di istruzioni	1

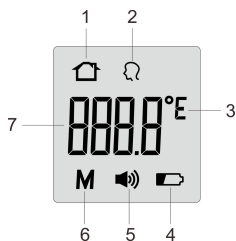
## Struttura del prodotto



- 25、 Sensore IR
- 26、 Pulsante di accensione / pulsante Misura
- 27、 Coperchio della batteria
- 28、 Display LCD
- 29、 Pulsante Mute / Unmute
- 30、 Pulsante Modalità
- 31、 Pulsante interruttore Celsius / Fahrenheit
- 32、 Impugnatura

## Mostra descrizione

- 1. Modalità temperatura dell'oggetto
- 2. Modalità temperatura della fronte
- 3. Unità di temperatura (° C / ° F)
- 4. Indicatore di bassa potenza
- 5. Disattiva / disattiva audio
- 6. Modalità memoria
- 7. Valore di temperatura





## Suoni e istruzioni di retroilluminazione

Gamma	Suoni	Controluce
Temperatura della fronte		
34.9°C-37.5°C/94.8°F-99.5°F	Un lungo bip	Verde
37.6°C-42.2°C/99.6°F-108.0°F	3 brevi bip doppi	Rosso
Temperatura dell'oggetto		
0°C-100°C/32.0°F-212.0°F	Un lungo bip	Bianco

**Nota:** quando la temperatura è tra 34.9° C/94.8°F e 37.5° C/99.5°F, ci sarà un segnale acustico lungo e una retroilluminazione verde.

## Processo di misurazione

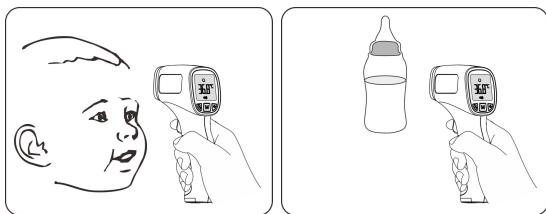
### 1. Selezionare la modalità di misurazione.

- Premere il **pulsante Misura** per accendere il termometro. Seleziona la modalità di misurazione usando il pulsante Mode.
- Il simbolo  indica la modalità di temperatura della fronte. Il simbolo  indica la modalità della temperatura dell'oggetto.

### 2. Premere il pulsante Misura per avviare una misurazione.

- Quando si prende la temperatura della fronte, puntare il sensore IR al centro della fronte. Muovi il termometro verso la fronte. la distanza tra il termometro e la fronte deve essere da ½ "a 2" (1-5 cm). Premere e rilasciare il **pulsante Misura**. La temperatura della fronte verrà visualizzata sullo schermo.
- Quando si prende la temperatura dell'oggetto, puntare il sensore IR al centro dell'oggetto. La distanza tra il termometro e l'oggetto deve essere da ½ "a 2" (1-5 cm). Premere e rilasciare il **pulsante Misura**. La temperatura dell'oggetto verrà visualizzata sullo schermo.





### 3. Dopo una misurazione

- Dopo ogni misurazione, pulire il termometro con un panno morbido e asciutto e collocare il termometro in un luogo asciutto e ben ventilato.
- Il termometro si spegne automaticamente se non viene utilizzato entro 10 secondi.

### Risoluzione dei problemi

Problema	Causa possibile	Soluzione
Il termometro non si accende.	Batteria scarica	Cambia le batterie.
	Le polarità delle batterie sono invertite.	Assicurarsi che le batterie siano installate correttamente.
	Il termometro è danneggiato.	Contattare il produttore.
"Er1" viene visualizzato.	La temperatura ambiente è inferiore a 10° C (50.0° F) o superiore a 40° C (104° F).	Effettuare una misurazione a una temperatura ambiente compresa tra 10° C (50.0° F) e 40° C (104° F).
La lettura della temperatura è inferiore al tipico	La lente della sonda di temperatura è sporca.	Pulire l'obiettivo con un batuffolo di cotone..
	La distanza tra la	Muovi il termometro più

<b>Problema</b>	<b>Causa possibile</b>	<b>Soluzione</b>
intervallo di temperatura corporea.	sonda di temperatura e il bersaglio è troppo lunga.	vicino al bersaglio.
	Il termometro non viene utilizzato entro 30 minuti dopo essere stato prelevato da un ambiente freddo..	Attendere più di 30 minuti dopo che il termometro è stato spostato nell'ambiente di misurazione.
La lettura della temperatura è superiore al tipico intervallo di temperatura corporea.	La sonda di temperatura è difettosa.	Contatta JUMPER.

## Specificazioni

Nome del prodotto	Termometro a infrarossi
Modello di prodotto	JPD-FR202
Modalità di alimentazione	Alimentazione interna
Tensione di esercizio	DC 3V
Modello di batteria	AAA x 2
Modalità operativa	Funzionamento continuo
Display	LCD a segmenti
Misura il tempo	Circa 1 secondo
Tempo di latenza	Circa 1 secondo
Emissività	0.95
Distanza di misurazione	Da ½ "a 2" (da 1 a 5 cm)
Campo di misura	Fronte: 34.9°C–42.2°C (94.8°F–108.0°F)
	Oggetto: 0.0°C–100.0°C (32.0°F–212.0°F)

Precisione (Laboratorio)	$\pm 0.4^{\circ}\text{F}/\pm 0.2^{\circ}\text{C}$ da $94.8^{\circ}\text{F}$ a $108.0^{\circ}\text{F}$ (da $34.9^{\circ}\text{C}$ a $42.2^{\circ}\text{C}$ ) $\pm 0.5^{\circ}\text{F}/\pm 0.3^{\circ}\text{C}$ , fuori da $94.8^{\circ}\text{F}$ a $108.0^{\circ}\text{F}$ (da $34.9^{\circ}\text{C}$ a $42.2^{\circ}\text{C}$ )
Risoluzione	$0.1^{\circ}\text{C}$ ( $0.1^{\circ}\text{F}$ )
Memoria	20 letture della temperatura
Avviso batteria scarica	Il simbolo di batteria scarica viene visualizzato se la tensione di alimentazione è inferiore a $2.4\text{ V} \pm 0.1\text{ V}$
Spegnimento automatico	Il termometro si spegne automaticamente se non viene utilizzato entro $10 \pm 1$ secondi.
Dimensioni (mm)	$150 \times 88.2 \times 40.6$
Peso (g)	109.5 g (con batterie)
Ambiente operativo	Temperatura: $10^{\circ}\text{C} - 40^{\circ}\text{C}$ ( $50^{\circ}\text{F} - 104^{\circ}\text{F}$ )
	Umidità: 15% -95% UR, senza condensa
	Pressione atmosferica: 86-106 kPa
Stoccaggio e trasporto	Temperatura: Da $-20^{\circ}\text{C}$ a $55^{\circ}\text{C}$ ( $-4^{\circ}\text{F} - 131^{\circ}\text{F}$ )
	Umidità: 0-95% RH, senza condensa
	Pressione atmosferica: 50-106 kPa

ES

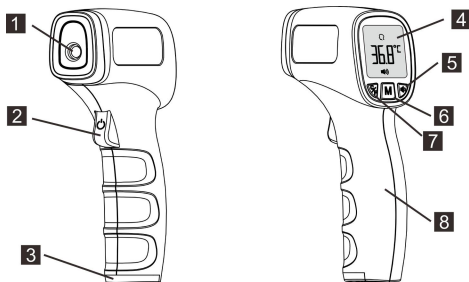
Gracias por comprar este termómetro infrarrojo. Lea atentamente el Manual del usuario para asegurarse de que este termómetro se usa de manera segura y adecuada. Lea y entienda completamente las Precauciones de seguridad antes de usar.

**Conserve el manual de instrucciones con este termómetro para futuras consultas.**

### **Contenidos del paquete**

<b>No.</b>	<b>Nombre</b>	<b>Cantidad</b>
1	Termómetro infrarrojo	1
2	Bolsa	1
3	Batería (AAA)	2
4	Manual de instrucciones	1

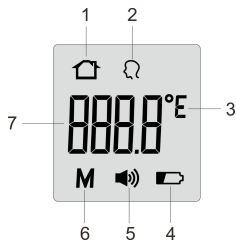
## Estructura del producto



- 33、 Sensor de infrarrojos
- 34、 Botón de encendido / botón de medición
- 35、 Tapa de la batería
- 36、 Pantalla LCD
- 37、 Botón Mute / Un-mute
- 38、 Botón de modo
- 39、 Botón Celsius / Fahrenheit Interruptor
- 40、 Empuñadura

## Descripción de la pantalla

- 1. Modo de temperatura del objeto.
- 2. Modo de temperatura de la frente.
- 3. Unidad de temperatura (°C / °F)
- 4. Indicador de baja potencia
- 5. Mute / un-mute
- 6. modo de memoria
- 7. Valor de temperatura





## Instrucciones de sonido y contraluz

Distancia	Los sonidos	Iluminar desde el fondo
Temperatura de la frente		
34.9°C-37.5°C/94.8°F-99.5°F	A long beep	Green
37.6°C-42.2°C/99.6°F-108.0°F	3 short double	Red
Temperatura del objeto		
0°C-100°C/32.0°F-212.0°F	A long beep	White

**Note:** Cuando la temperatura está entre 34.9°C/94.8°F y 37.5°C/99.5°F, habrá un pitido largo y una luz de fondo verde.

## Proceso de medición

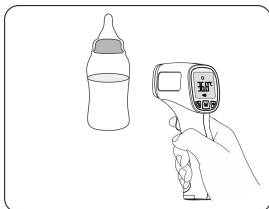
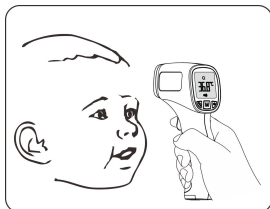
### 1. Seleccione el modo de medición.

- Presione **el botón Medir** para encender el termómetro. Seleccione el modo de medición utilizando el botón Modo.
- El símbolo  indica el modo de temperatura de la frente. El símbolo  indica el modo de temperatura del objeto.

### 2. Presione el botón Medir para iniciar una medición.

- Cuando tome la temperatura de la frente, apunte el sensor de IR al centro de la frente. Mueva el termómetro hacia la frente. La distancia entre el termómetro y la frente debe ser de ½ "a 2" (1-5 cm). Presione y suelte **el botón Medir**. La temperatura de la frente se mostrará en la pantalla.
- Al tomar la temperatura del objeto, apunte el sensor de infrarrojos al centro del objeto. La distancia entre el termómetro y el objeto debe ser de ½ "a 2" (1-5 cm). Presione y suelte **el botón Medir**. La

temperatura del objeto se mostrará en la pantalla.



### 3. Después de una medida

- Después de cada medición, limpie el termómetro con un paño suave y seco, y colóquelo en un lugar seco y bien ventilado.
- El termómetro se apaga automáticamente si no se usa en 10 segundos.

## Solución de problemas

Problema	Causa posible	Solución
El termómetro no se enciende.	Batería baja	Cambia las baterías.
	Se invierten las polaridades de las baterías.	Asegúrese de que las baterías estén instaladas correctamente.
	El termómetro está dañado.	Póngase en contacto con el fabricante.
Se muestra "Er1".	La temperatura ambiente es inferior a 10 ° C (50.0 ° F) o superior a 40 ° C (104 ° F).	Realice una medición a una temperatura ambiente entre 10 ° C (50.0 ° F) y 40 ° C (104 ° F).
La lectura de temperatura es más baja que el rango	La lente de la sonda de temperatura está sucia.	Limpie la lente con un hisopo de algodón.

<b>Problema</b>	<b>Causa posible</b>	<b>Solución</b>
de temperatura corporal típico.	La distancia entre la sonda de temperatura y el objetivo es demasiado larga.	Mueva el termómetro más cerca del objetivo.
	El termómetro se usa dentro de los 30 minutos posteriores a la extracción de un ambiente frío.	Espere más de 30 minutos después de mover el termómetro al entorno de medición.
La lectura de temperatura es más alta que el rango de temperatura corporal típico.	La sonda de temperatura está dañada.	Póngase en contacto con el fabricante.

## Presupuesto

Nombre del producto	Termómetro infrarojo
Modelo del Producto	JPD-FR202
Modo de fuente de alimentación	Fuente de alimentación interna
Tensión de funcionamiento	DC 3V
Modelo de batería	AAA x 2
Modo operativo	Funcionamiento continuo
Monitor	Segmento LCD
Medir el tiempo	Alrededor de 1 segundo
Tiempo de latencia	Alrededor de 1 segundo
Emisividad	0.95
Distancia de medición	½ "a 2" (1 a 5 cm)
Rango de medición	Fronte: 34.9 ° C – 42.2 ° C (94.8 ° F – 108.0 ° F)



	Objeto: 0.0 ° C – 100.0 ° C (32.0 ° F – 212.0 ° F)
Exactitud (laboratorio)	$\pm 0.4$ ° F / $\pm 0.2$ ° C de 94.8 ° F a 108.0 ° F (34.9 ° C a 42.2 ° C)
Resolución	0.1 ° C (0.1 ° F)
Memoria	20 lecturas de temperatura
Alerta de batería baja	El símbolo de batería baja se muestra si la tensión de alimentación es inferior a 2.4 V $\pm$ 0.1V.
Apagado automático	El termómetro se apaga automáticamente si no se usa en 10 $\pm$ 1 segundos.
Dimensiones (mm)	150 $\times$ 88.2 $\times$ 40.6
Peso (gramos)	109.5 g (con pilas)
Entorno operativo	Temperatura: 10 ° C – 40 ° C (50 ° F – 104 ° F)
	Humedad: 15% –95% HR, sin condensación
	Presión atmosférica: 86–106 kPa
Almacenaje y Transporte	Temperatura: de -20 ° C a 55 ° C (-4 ° F a 131 ° F)
	Humedad: 0- 95% RH, sin condensación
	Presión atmosférica: 50–106 kPa





# JUMPER

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