Berrcom®

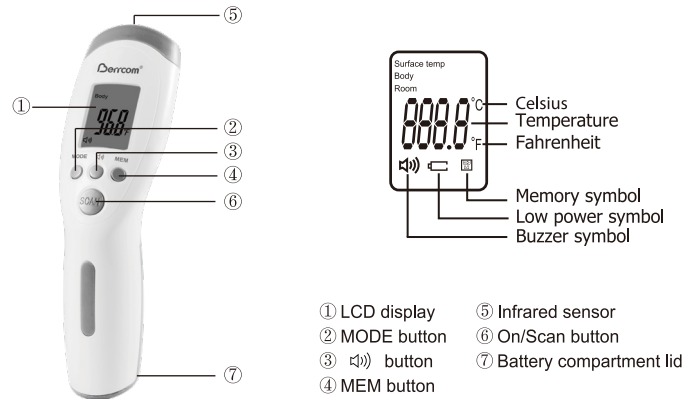## Non-contact Infrared Thermometer
 # JXB-182

⚠ NOTE:
You must read this instruction manual completely before use and follow all instructions. Keep the instructions for later use. You must check the device functions according to this instruction manual prior to each use and only use this device if it is in proper working condition.

CONTENTS

V.02

I. INTENDED USE
The device is an infrared thermometer intended to measure forehead temperature of infants and adults without contacting human body. It can be used by consumers in household environment and doctor in clinic as reference.

II. ⚠ WARNINGS AND PRECAUTIONS
• Only use this thermometer once you have read and understood the instructiofor use.
• Only use this thermometer for the specific purpose described in the instruction manual. Any misuse will void the warranty.
• This thermometer may be used for professional purposes or for personal home use.
• Using this thermometer is not a substitute for consulting a doctor and seeking medical assistance as needed. Do not self-diagnose or self-medicate on the basis of a self-measurement without consulting your doctor and obtaining your doctor's approval. Specially, do not take any new medication or change the type and/or dosage of any existing medication without consulting your doctor and obtaining your doctor's approval.
• Children must not be allowed to use this thermometer. Medical device is not toy.
• If this thermometer is stored in a location that is cooler or warmer than where it is being used, let it sit in the patient's room for at least 30 minutes before taking the measurement.
• After physical activity, a bath or spending time outdoors, wait approx. 30 minutes before you take a measurement on your forehead.
• To ensure an accurate measurement, this device must only be used indoors when the ambient temperature range is between 50°F (10°C) and 104°F (40°C).
• This thermometer must be kept in a clean, dry area.
• Do not expose this thermometer to electric shocks.
• Do not expose this thermometer to extreme temperature conditions of greater than 131°F (55°C) or less than -4°F (-20°C).
• Do not use this thermometer in relative humidity higher than 85%RH.
• Do not expose the thermometer to direct sunlight, extremely high or low temperatures, dirt or dust.
• Do not drop this thermometer.
• DO NOT TOUCH THE GLASS OF THE INFRARED SENSOR WITH YOUR FINGERS AS IT IS EXTREMELY FRAGILE AND COULD CAUSE INJURY.
• For cleaning, follow the instructions in section IX Cleaning and maintenance.
• Do not use this thermometer if it is damaged.
• Do not open up this thermometer. It contains small parts which might be swallowed by children.
• Do not expose the thermometer to water or other liquid, as it is not water resistant or waterproof.
• If an error occurs or if the device is damaged, DO NOT attempt to repair this device yourself, as this will void the warranty. Contact your dealer and only have repairs carried out by authorized service partners.
• Remove the batteries if you do not wish to use the unit for an extended period of time. Otherwise there is a danger that the batteries may leak.
• Keep the thermometer away from electromagnetic fields produced by objects such as microwave ovens, arc welders or induction heaters.
• A control measurement using a conventional thermometer is recommended in the following cases:
  1. If the reading is surprisingly low.
  2. For new-born infants up to 100 days old.
  3. For children under three years of age who have a weakened immune system or who react unusually in the presence or absence of fever.
  4. If you are using the thermometer for the first time or want to familiarise yourself with it.

III. PRODUCT DESCRIPTION

① LCD display
② MODE button
③ 🔊 button
④ MEM button
⑤ Infrared sensor
⑥ On/Scan button
⑦ Battery compartment lid

Buttons	Functions
MODE	Set the measurement mode.
🔊	Turn on or off the beep.
MEM	Display of the saved measurements.
On/Scan	Switch on the device. Measure temperature.

IV. HOW TO USE YOUR NON-CONTACT INFRARED THERMOMETER
1. Install 2 AA batteries according to instructions provided in Section VII.
2. For the first time use after installing batteries, wait 10-15 minutes for the device to warm up and adjust to the room temperature.
3. Press On/Scan button, place 1.2-2 in (3-5 cm) away from forehead, aim lens toward forehead. Make sure the measurement mode is "BODY", press the thermometer's On/Scan button, and the temperature will be displayed instantly.
4. Before taking an individual's temperature, make sure any hair, dirt or dust is removed from forehead and forehead is dry. Wait 10 minutes after such removal prior to measuring temperature.

⚠ For reliable results:
• Do NOT attempt to take an individual's temperature by aiming the device at a body part other than the forehead (i.e. arms, legs, torso, etc.).
• Do NOT move the thermometer before the final result is displayed.
• Do NOT take an individual's temperature near any drafts (i.e. wind, air conditioner, fans).
• Do NOT take an individual's temperature shortly after he or she participated in vigorous physical activity, bathed, took medicine, ate or drink, or had a cold or warm compress on his or her forehead.
• Do NOT take an individual's temperature when there has been a significant change in ambient conditions. Allow the device to adjust to a significant change in the ambient temperature due to a change in environment for 30 minutes before using the device.
• Wait at least 3 to 5 seconds between measurements.
• We recommend that you take three measurements on the forehead, and if the results of three measurements are different, use the one with the highest value."

V. TURNING ON AND SETTING THE THERMOMETER
1. Turning on the device.
  Press the "On/Scan" button. The display will illuminate, will enter the "Standby Mode" and will display "---°C" or "----°F". Next, place the device 1.2-2 in (3-5 cm) away from the individual's forehead, aim the sensor of the device toward the forehead, and press the "On/Scan" button again, which will then take the individual's temperature. The device will automatically shut off in 30 seconds of non-use.
2. Setting the MODE when the device is on
  a. Press "MODE" button, and the screen will display: Body…°F
  b. Press again "MODE" button and the screen will display: Room…°F
  c. Press again "MODE" button and the screen will display: SurfaceTemp…°F
  Note: The thermometer default is set to BODY mode.

⚠ IMPORTANT
The surface temperature differs from the body temperature. To obtain the body temperature must use the "BODY" mode.
When measure the temperature of a baby-bottle or bath (by using the Surface Temp Mode), or room temperature (by using the Room Mode).
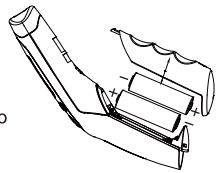
3. Choosing the temperature unit
  When the device is on, Press "MODE" button for 2 seconds, the screen will display "F1", then press "MODE" button to transfer between degree Celsius and Fahrenheit, Confirm by pressing "MEM" button.
4. Alarm setup
  When the device is on, Press "MODE" button for 2 seconds, the screen will display "F1", then press "MEM" button once, the screen will display "F2", press "MODE" button to choose the alarming temperature from 99.1°F to 102.4°F (37.3°C to 39.1°C), Confirm by pressing "MEM" button.
  Note: The alarm threshold default value is 100.4°F (38°C)
5. When the device is on, Press "MEM" (Memory) button, which will then display the last temperature, and allows for a view of the last 32 measurements.
  In the switch on state, Press "MEM" button and hold for 5 seconds, all data in memory will be deleted. Then press "MEM" button again, the display will show "CLr"
6. When the device is on, press " 🔊 " to turn the buzzer on or off.
  When the screen shows "ON", the buzzer opened.
  When the screen shows "OFF", the buzzer closed.
7. Recalibrating the device using the F4 MENU
  Instructions for recalibration:
  When the device is on, Press "MODE" button for 2 seconds, the screenwill display "F1", then press "MEM" button twice ,the screen will display "F4", press "MODE" button to choose the Offset value from -5.4°F to 5.4°F (-3°C to 3°C), Confirm by pressing "MEM" button.
  Recalibrate the device after any seasonal or environmental changes, when you are using the device on people of different skin tones, or when you believe the device is not measuring the same temperature as a mercury thermometer.

VI. TECHNICAL SPECIFICATIONS
1. Normal using condition
  Ambient temperature: 50°F - 104°F (10°C - 40°C)
  Relative humidity: ≤ 85%RH
  Pressure altitude: 700 hPa to 1060 hPa
2. Storage and shipping condition
  Ambient temperature: -4°F - 131°F (-20°C - 55°C)
  Relative humidity: ≤ 95%RH
  Pressure altitude: 700 hPa to 1060 hPa
3. Batteries: DC 3V (2 pcs AA batteries)
4. Unit size: approx. 175 x 50 x 52 mm (L x W x H)
5. Unit weight (without battery): approx. 80g
6. Temperature display resolution: 0.1°F (0.1°C)
7. Measuring range:
  In body mode: 89.6°F – 109.4°F (32.0°C – 43.0°C)
  Under body mode, there is three color backlits:
  Green color backlit: less than 99.1°F (37.3°C), means normal temperature.

Orange color backlit: 99.3°F - 100.2°F (37.4°C - 37.9°C), means may be low fever.
  Red color backlit: more than 100.4°F (38°C), means may be high fever.
  In surface temp mode: 32°F – 140°F (0°C – 60°C)
  In room mode: 32°F – 104°F (0°C – 40°C)
8. Accuracy:
  89.6°F - 94.8°F (32.0°C - 34.9°C)   ±0.6°F(±0.3°C)
  95.0°F - 107.6°F (35.0°C - 42.0°C)   ±0.4°F(±0.2°C)
  107.8°F - 109.4°F (42.1°C - 43.0°C)   ±0.6°F(±0.3°C)
9. Consumption: less than 300mW
10. Measuring distance: 3cm – 5cm (1.2in – 2in)
11. Automatic power-off: less than 30 secs
12. Memory capacity: 32 readings
13. Measuring site: Forehead
14. Reference body site: Axillary
15. Mode of operation: Adjusted mode
16. Expiration date: The JXB-182 may last, but is not guaranteed, for up to 5 years from the date of the manufacturing

⚠ **Note:** In the BODY mode, the JXB-182 can take temperature readings below 89.6°F or above 109.4°F (below 32°C or above 43.0°C), however, the temperature reading may be unreliable.

VII. BATTERIES
1. CHANGING THE BATTERIES
When the battery symbol " 🔋 " flashes on the LCD display screen, the batteries need to be changed. To change the batteries, open the lid on the back of the device and ensure the batteries are positioned in the correct manner.
Improperly installing the batteries could cause damage to the device. Do NOT use rechargeable batteries. Only use single-use batteries.

2. DISPOSING OF BATTERIES
To protect environment, dispose of empty batteries at appropriate collection sites according to national or local regulations.

⚠ **Notes on halding batteries**
• If your skin or eyes come into contact with battery fluid, rinse the affected area with water and seek medical assistance.

⚠ **Chocking hazard!** Small children may swallow and choke on batteries. Store batteries out of the reach of small children.
If a battery has leaked, put on protective gloves and clean the battery compartment with a dry cloth.
• Protect batteries form excessive heat.

⚠ **Risk of explosion!** Do not throw batteries into a fire.
• Use idetical or equivalent battery types only.
• Always replace all batteries at the same time.
• Do not use rechargeable batteries.
• Do not disassemble, split or crush the batteries.

VIII. INCLUDED IN DELIVERY
Non-Contact Infrared Thermometer   1 pc
User Manual   1 pc
AA alkaline batteries   2 pcs

IX. CLEANING AND MAINTENANCE
The thermometer is a multi-patient reusable device, and the cleaning and disinfection instructions were validated. Please follow the instructions to clean/disinfect your thermometer prior to use.

Cleaning:
1. Use a cotton swab moistened with hot water or neutral detergent to throughout clean the casing of thermometer and measuring probe to remove stain or oil.
2. Inspect the thermometer visually after the cleaning process, ensure there is no soil or stain is seen. If the device is determined not to be visually clean at the end of the cleaning step, you should either repeat the relevant previous cleaning steps or safely dispose of the device so that a visibly soiled device is not used again.

Disinfection:
1. Disinfect the thermometer casing and the probe for 30 seconds with a cotton swab or non-dust cloth dipped in 75% ethanol.
2. Repeat the above steps at least 3 times, then wipe surface and probe dry with a clean cloth, and wait about 1 minute for drying after disinfection process.

Note:
• Ensure that no liquid enters the interior of the thermometer.
• Never use abrasive cleaning agents, thinners, or benzene for cleaning, and never immerse the thermometer in water or other cleaning liquids.
• Take care not to scratch the surface of the probe lens and the display.
• If the visual inspection identifies unacceptable deterioration such as corrosion, discoloration, pitting, cracked, the device should not be further used and should be discarded.
• If the thermometer has been used in patients, please visually inspect the thermometer to determine if there is stain or oil on the casing or probe after each use, and follow the instruction of cleaning and disinfection to cleaning your thermometer.

CARE AND MAINTENANCE
• Please clean the thermometer regularly, usually once a month.
• If the probe tip is damaged, please contact the maintenance center.
• If necessary, you can clean it properly according to the actual dirt of the product; if you do not use this product for a long time (more than 2 months), replace all the batteries take out.
• Store the thermometer in a dry location free from dust and contamination and away from direct sunlight.
• Do not use other batteries than mentioned batteries, do not use rechargeable batteries, do not throw in fire.
• Do not expose the thermometer to sunlight or water.
• Do not use the thermometer rudely. Dropping, crashing and severe shock will damage the product

Calibration:
This thermometer is calibrated at the time of manufactured, If the thermometer is used according to the instruction, periodic recalibration is not required. If at any time you question the accuracy of the measurement, please contact the retailer immediately.
Don't attempt to modify or reassemble the thermometer.
The calibration operation of this product must have corresponding calibration equipment, otherwise it cannot calibrate by itself.

X. GUIDEIINES
This device complies with the ISO 80601-2-56 and IEC60601-1-2 and is subject to particular precautions with regard to electromagnetic compatibility.
This thermometer conforms to all of the requirements established in ASTM E 1965-98. Full responsibility for conformance of this thermometer to the specification is assumed by Berrcom.

XI. CLASSIFICATION
1. Internally powered equipment;
2. Type Bf applied part;
3. IP22;
4. Sterilization or disinfection: N/A;
5. Category AP / APG equipment: N/A;
6. Continuous operation;

XII. TROUBLESHOOTING
If you have problems while using your thermometer, please refer to this guide to help resolve the problem. If the problem persists, please contact our customer service.

THE SCREEN DISPLAYS TEMPERATURE HIGHER THAN 109.4°F (43.0°C):
The temperature is in Fahrenheit. Change the measurement to Celsius.

THE SCREEN DISPLAYS TEMPERATURE LOWER THAN 89.6°F (32.0°C):
To take the surface temperature, press the "MODE" button and set to the reading called "Body" , If the device is in Surface Temp Mode, the 89.6°F (32.0°C) temperature displayed is showing the external temperature of your body, rather than the internal.

THE SCREEN DISPLAYS THE MESSAGE HI
When using the JXB-182 Thermometer, the message "HI" can show on the screen.
In this case,the temperature is above the measurement range selected, either above 109.4°F (43.0°C) in Body Mode.

THE SCREEN DISPLAYS THE MESSAGE LO
When using the JXB-182 Thermometer, the message "LO" can show on the screen.
In this case, the temperature analyzed is under the measuring range selected, either less than 89.6°F (32.0°C) in Body Mode.

This message displays for various reasons. Please find below a list of the main issues:

Reasons for LO message display	Advice
Temperature reading hampered by hair or perspiration.	Make sure there is no obstruction or dampness prior to taking temperature.
Temperature hampered by an air draft or dramatic change in ambient temperature.	Make sure there is no air blowing in the area of use; this could affect the infrared reading.
Temperature readings are too close together, and the thermometer did not have time to reboot.	Wait a minimum of 3 to 5 seconds between readings; a 15 second pause is recommended
The measuring distance is too far.	Hold the device 1.2-2 inches (3-5 cm) away from forehead.

XIII. SIGNS AND SYMBOLS

Symbol	Description of symbol
Berrcom®	Trade mark
🖈	Application part, Type BF
---	Direct current
IP22	Degree of protection against harmful ingress of water and particulate matter 2 Protected and against solid foreign objects of 12.5mm Φ and greater 2 Protection against vertically falling water drops when ENCLOSURE titled up to 15°
🕮	Refer to instruction manual / booklet
♻	DISPOSAL: Do not dispose this product as unsorted municipal waste. Collection of such waste separately for special treatment is necessary.
🏭	Manufacturer
SN	Serial number
FC	This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules.
〰	Date of manufacture
#	Model number
MD	Medical device
〰CN	Made in China
UDI	Unique device identifier
⚠	Indicates the need for the user to consult the instructions for use for important cautionary information such as warning and precautions that can not, for a variety of reasons, be presented on the medical device itself.

XIV. EMC DECLARATION
The ME EQUIPMENT or ME SYSTEM is suitable for home healthcare and clinic environments.
Warning: Don't near active HF surgical equipment and the RF shielded room of an ME system for magnetic resonance imaging, where the intensity of EM disturbances is high.
Warning: Use of this equipment adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, this equipment and the other equipment should be observed to verify that they are operating normally.
Warning: Use of accessories, transducers and cables other than those specified or provided by the manufacturer of this equipment could result in increased electromagnetic emissions or decreased electromagnetic immunity of this equipment and result in improper operation."
Warning: Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of the equipment JXB-182, including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result.
1. All necessary instructions for maintaining BASIC SAFETY and ESSENTIAL PERFORMANCE with regard to electromagnetic disturbances for the excepted service life.
   Portable and mobile RF communication equipment may affect the performance of the JXB-182, avoiding strong electromagnetic interference when used, such as near mobile phones, microwave ovens, etc.
2. Guidance and manufacturer's declaration -electromagnetic emissions and Immunity.

Guidance and manufacturer's declaration -electromagnetic emissions and Immunity
Table 1

Guidance and manufacturer's declaration - electromagnetic emissions	
Emissions test	Compliance
RF emissions CISPR 11	Group 1
RF emissions CISPR 11	Class B
Harmonic emissions IEC 61000-3-2	Not application
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Not application

Table 2

Guidance and manufacturer's declaration - electromagnetic Immunity		
Immunity Test	IEC 60601-1-2 Test level	Compliance level
Electrostatic discharge (ESD) IEC 61000-4-2	±8 kV contact ±2 kV, ±4 kV, ±8 kV, ±15 kV air	±8 kV contact ±2 kV, ±4 kV, ±8 kV, ±15 kV air
Electrical fast transient/burst IEC 61000-4-4	Not application	Not application
Surge IEC 61000-4-5	Not application	Not application
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	Not application	Not application
Power frequency magnetic field IEC 61000-4-8	30 A/m 50Hz/60Hz	30 A/m 50Hz/60Hz
Conduced RF IEC61000-4-6	Not application	Not application
Radiated RF IEC61000-4-3	10 V/m 80 MHz – 2,7 GHz 80 % AM at 1 kHz	10 V/m 80 MHz – 2,7 GHz 80 % AM at 1 kHz

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

Table 3

Guidance and manufacturer's declaration - electromagnetic Immunity							
Radiated RF IEC61000-4-3 (Test specifications for ENCLOSURE PORT IMMUNITY to RF wireless communications equipment)	Test Frequency (MHz)	Band (MHz)	Service	Modulation	Modulation	Distance (m)	IMMUNITY TEST LEVEL (V/m)
	385	380–390	TETRA 400	Pulse modulation 18 Hz		1.8	0.3	27
	450	430–470	GMRS 460, FRS 460	FM ± 5 kHz deviation 1 kHz sine		2	0.3	28
	710	704–787	LTE Band 13,17	Pulse modulation 217 Hz		0.2	0.3	9
	745							
	780							
	810	800–960	GSM 800/900, TETRA 800, iDEN 820, CDMA 850, LTE Band 5	Pulse modulation 18 Hz		2	0.3	28
	870							
	930							
	1720	1700–1990	GSM 1800; CDMA 1900; GSM 1900; DECT; LTE Band 1, 3, 4, 25; UMTS	Pulse modulation 217 Hz		2	0.3	28
	1845							
	1970							
	2450	2400–2570	Bluetooth, WLAN, 802.11 b/g/n, RFID 2450, LTE Band 7	Pulse modulation 217 Hz		2	0.3	28
	5240	5100–5800	WLAN 802.11 a/n	Pulse modulation 217 Hz		0.2	0.3	9
	5500							
	5785							

XV. FCC DECLARATION
This device complies with Part 15 of the FCC Rules. Operation is subject to the following conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

XVI. WARRANTY/SERVICE
In accordance with our policy of continued product improvement and subject to the regulations and rules, we reserve the right to make technical and optical adjustments without notice.
Warranty and repair terms
Please contact your dealer or the service centre in case of a claim under the warranty. If you have to return the thermometer, please enclose a copy of your receipt and state what the defect is.
The following warranty terms apply:
1. The warranty period for your product is 18 months from date of purchase. In case of a warranty claim, the date of purchase has to be proven by means of the sales receipt or invoice.
2. Defects in material or workmanship will be removed free of charge within the warranty period.
3. Repairs under warranty do not extend the warranty period either for the thermometer or for the replacement parts.
4. The following is excluded under the warranty:
   a. All damage which has arisen due to improper treatment, e.g. nonobservance of the user instructions.
   b. All damage which is due to repairs or tampering by the customer or unauthorised third parties.
   c. Damage which has arisen during transport from the manufacturer to the consumer or during transport to the service centre.
   d. Accessories which are subject to normal wear and tear.
5. Liability for direct or indirect consequential losses caused by the thermometer are excluded even if the damage to the thermometer is accepted as a warranty claim.

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