Quick guide

Measure Temperature Indoors

Berrcom Non-Contact Infrared Thermometer JXB-178 -- indoors

Before measuring

Berrcom Non-Contact Infrared Thermometer JXB-178 -- guide2

Note

1. Lo may display due to following circumstances

Berrcom Non-Contact Infrared Thermometer JXB-178 -- guide3**2.**Hi may display due **to following circumstances**

Berrcom Non-Contact Infrared Thermometer JXB-178 -- guide3b

Temperatures are measured by the energy emitted by humans. A thermometer does not emit radiation as it is harmless.

Safety precautions

– Follow the maintenance advice stipulated in this instruction manual.

– This device may be used for professional purposes or for personal home use. – This device must only be used for the purposes described in this instruction manual.

– This device must only be used in an ambient temperature range of between 10°C and 40°C.

– This device must always 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 >55°C or -20°C.
– Do not use this device in relative humidity higher than 85%.
– The protective glass over the lens is the most fragile part of the thermometer. – Do not touch the glass of the infrared lens with your fingers
– Clean the glass with a cotton bud slightly moistened with 95° alcohol.
– Do not expose the thermometer to sunlight or to water.
– Never drop the device.
– Should a problem occur with your device. please contact your retailer. Do not attempt to repair this device yourself.

Intended use

The device is an infrared thermometer intended to measure the forehead temperature of infants and adults without contacting the human body. It can be used by consumers in a household environment and doctors in clinics as a reference.

Introduction

The JXB-178 Non-contact Infrared to now. the most suitable thermometer for no risk on temperature measurement thermometer has been developed by using the latest infrared technology. This technology allows temporal artery (TA) temperature to be taken at a distance of about 3cm-5cm away from the forehead. Precise. Instantaneous and without Contact. the JXB-178 is. up. It has been demonstrated that this method of TA temperature measurement is more precise than the tympanic thermometry and better tolerated than rectal thermometry (1).

However, as with other types of thermometers, it is essential to use the JXB-178 properly in order to obtain reliable and stable results. You are therefore advised to read this instruction manual and the safety precautions carefully before use. (1)Greenes D, Fleisher G. Accuracy of a Noninvasive Temporal Artery Thermometer for Use in Infants. Arch Pediatr Adolesc Med 20011 55:376

Precautions before use

The JXB-178 is pre-set at the factory.
It is not necessary to calibrate the device when starting it up.

In order to obtain reliable and stable results, you are advised each time there is **a** significant change in the ambient temperature due to a change in environment, to avow the JX8-178 to acclimatize to this ambient temperature for 15 to 20 minutes before using it

It is important to allow 3-5 seconds intervals between two measurements.

Operating principle

All objects, solid, liquid, or gas, emit energy by radiation. The Intensity of this energy depends on the temperature of the object. The JX13-178 infrared thermometer is, therefore, able to measure the temperature of a person by the energy the person emits. This measurement can be taken thanks to an extremal temperature probe on the device which permanently analyses and registers the ambient temperature. Therefore. as soon as the operator holds the thermometer near the body and activates the radiation sensor. the measurement is taken instantly by detection of the Infrared heat generated by the arterial blood flow. Body heat can therefore be measured without any interference from the heat of the surrounding environment.

THE DIFFERENT METHODS OF TEMPERATURE MEASUREMENT

Core temperature

Core temperature is the most precise measurement and involves measuring the temperature In the pulmonary artery by means of a catheter equipped with a thermal probe that can read the temperature in situ. The same method is employed for probes measuring the oesophageal temperature. However. such invasive temperature measurement methods require specific equipment and expertise.

Reetal thermometry

Rectal temperature adjusts slowly in comparison to the evolution of the body's internal temperature. It has been demonstrated that rectal temperature remains raised long after the internal temperature of after patent has started to drop and vice versa. Furthermore. rectal perforations have been known to occur as a result of this method and without appropriate sterilization techniques, rectal thermometry can spread germs often found in feces.

Oral thermometry

Oral temperature is easily influenced by recent ingestion of food *or* drinks and by breathing through the mouth. To measure oral temperature, the mouth must remain closed and the tongue lowered for three to four minutes which is a difficult task for young children to accomplish.

Raillery (armpit) temperature

Although it may be easy to measure axillary temperature, it has been proven that it does not provide an accurate measurement of the child's internal temperature. To make this type of temperature, the thermometer must be wedged tightly over the axillary artery. Despite the low sensitivity and reffitWe inaccuracy of axillary temperature in detecting fever, this method is recommended by The American Academy of Pediatrics as a screening test for fever in newborns.

Tympanic thermometry

In order to able, a precise temperature reading, good command of the measurement technique is required. The thermometer probe must be placed as close as possible to the warmest part of the external ear canal

Normal temperatures according to measurement method

MEASUREMENT METHOD	NORMAL TEMP°	
RECTAL	36.6°C	– 38°C
ORAL	35.5°C	– 37.5°C
AXILLARY	34.7°C	– 37.3°C
AURICULAR	35.8°C	– 38°C
TEMPORAL	35.8°C	– 37.8°C

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

Advantages of temporal artery (ta) temperature

Infrared arterial temperature can be measured using a device placed on the forehead. in the temporal artery region. It has been demonstrated that this relatively new method of measuring temperature is more precise than tympanic thermometry and better tolerated than rectal thermometry.

The JXB-178 thermometer has been designed to produce an instant forehead temperature reading without any contact with the temporal artery. As this artery is quite close to the surface of this skin and therefore accessible and given the blood flow is permanent and regular, it allows precise measurement of the temperature. This artery is linked to the heart by the carotid artery which is directly linked to the aorta. It forms part of the main trunk of the arterial system. The efficiency, speed, and comfort of taking a temperature from this area make it ideal compared with other temperature measurements methods.

The normal temperature according to age

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

Practical considerations when taking a temperature

– In order to ensure that precise and accurate temperature measurements are obtained, it is essential that each user has received adequate information on and training in the temperature measurement technique when using such a device.
– It is essential to remember that although procedures such as taking a temperature may be simple they must not be trivialised.
– Temperature should be taken in a neutral context. The patient must not have undertaken vigorous physical activity prior to taking his/her temperature and the room temperature must be moderate.
– Be aware of physiological variations in temperature which must be taken into consideration when evaluating the results: temperature increases by 0.5°C between 6 am and 3 pm. Women have a temperature that is higher, on average, by around 0.2°C. Their temperature also varies in accordance with their ovarian cycle. It rises by 0.5°C in the second half of the cycle and at the early stages of pregnancy.
– When sitting, the temperature is lower by about 0.3°C to 0.4°C than when standing.

How to take a temperature

Aim at the middle of the forehead, from a distance of about 3cm-5cm, press the thermometers measurement button and the temperature is instantly displayed.
Berrcom Non-Contact Infrared Thermometer JXB-178 -- take

Berrcom Non-Contact Infrared Thermometer JXB-178 -- warning The reliability of the measurement cannot be guaranteed if the temperature is measured over another part of the body (e.g.arm, torso…)

Constraints

Please observe the following before any temperature measurement to ensure a stable and reliable result:

- Push back the hair from the forehead.
- Wipe away any perspiration from the forehead.

– Avoid any drafts (e.g. from nasal specs, air conditioning…)

- Allow a 3-5 seconds interval between two measurements.

– Each time there is a significant change in the ambient temperature due to a change in environment, to allow the JXB-178 to acclimatize to this ambient temperature for at least 15 minutes before using it.

Basic instrument

The type BF applied part: Sensor.

Berrcom Non-Contact Infrared Thermometer JXB-178 -- basic

Features

1. Special design to take the Human Body Temperature with a 3cm-5cm (1.2-2 in) distance from the forehead.
2. Reliable and stable measurement. thanks to the advantage Infrared Detection System.
3. Audible alarm if the temperature is more than 38°C (100.4°F).
4. Memorize the last 32 temperature measurements.
5. Three-color backlit LCD digital display screen.
6. Temperature units can be displayed in either Celsius or Fahrenheit.
7. Automatic power-off (<30 secs) to conserve energy.
8. Longevity use (100,000 readings).
9. Practical, easy to use.

Additional usage:

JXB-178 can also be used to measure the temperature of a baby bottle or bath (by using the Surface Temp Mode), or room temperature (by using the Room Mode).

Instructions

1. Install battery.

2. For the first use or when inserting a new Battery. wait from 10-15 minutes for the warm-up of the unit. This will allow the unit to become acclimated to the temperature of the room.
3. Press the On/Scan button, aim towards the forehead (see the diagram below for the JXB-178 positioning), from a distance of 3cm-5cm, When pressing the “OnIScan” button in the standby mode, the measuring is done when the temperature is showing in the screen or the beep is announcing, measuring time is one second.
   Tips: Do not move the position of the thermometer before the testing is done.
4. Before taking the temperature, make sure to remove hair and perspiration from the forehead.

Setting and function of menu

Berrcom Non-Contact Infrared Thermometer JXB-178 -- menu

1. Switch on the device press the **‘On/Scan” button, one second after the screen panel in full display, it** will enter the standby mode with the sign “—°C” or”—°F”.
   Then press the ‘On/Scan” button again, you will get the measuring result in 1 second.
   But if there is no more operation, it will turn off in 30 seconds automatically.
2. In the switch-on state, Setting the mode
   A. Press ‘MODE button and the screen will display Body…°C
   B. Press again “MODE button and the screen will display: Room…°C
   C. Press again “MODE’ button and the *screen* will display Surface Temp…°C
   Note: The thermometer default is set to BODY mode.

1. F1:Choosing the temperature unit
   In the switch-on state, Press the “MODE button for 2 seconds, the screen will display “F1′, then press the “MODE button to transfer between degrees Celsius and Fahrenheit, Confirm by pressing the “MEM’ button.
2. F2:Alarm setup
   In the switch-on state, Press the “MODE” button for 2 seconds, the screen will display “Fl”, then press the “MEM” button once, the screen will display “F2”, press the “MODE” button to choose the alarming temperature from 37.3°C to 39.1°C(99.1°F to 102.4°F), Confirm by pressing “MEM” button.
   Note: The alarm threshold default value is 38°C(100.4°F)
3. In the switch-on state, Press the “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 the “MEM” button and hold for 5 seconds, all data in memory will be deleted. Then press the “MEM” button again, the display will show “CLR”
4. In the switch-on state, press ” Berrcom Non-Contact Infrared Thermometer JXB-178 -- 00 ” can open or close the buzzer.

When the screen shows “ON”, the buzzer opened.
When the screen shows “OFF”, the buzzer closed.

5. Recalibration of the device via the F4 MENU
   When there is a difference between JXB-178 and mercury thermometer, and you believe mercury thermometer from its temperature but it is not convenient to use. You can use the recalibration function to adjust the JXB-178 to make it the same test result as the mercury thermometer after recalibration.Besides, when you use JXB-178 for people with different skin colors (For example the yellow race, the white race, black people, and so on) you can use recalibration too.**Instructions for recalibration:**In the switch-on state, Press the “MODE” button for 2 seconds, the screen will display “Fl”, then press the “MEM” button twice, the screen will display
   “F4”, press the “MODE” button to choose the Offset value from -3°C to 3°C(-5.4°F to 5.4°F), Confirm by pressing the “MEM” button.
   In the cases of seasonal or environmental changes, verification and adjustment should be carried out.
6. HANGING THE BATTERIES
   Berrcom Non-Contact Infrared Thermometer JXB-178 -- 11
7. Display: when the LCD screen displays the flashed symbol ” Berrcom Non-Contact Infrared Thermometer JXB-178 -- battery” the battery is used.Operation: Open the lid and change the batteries, taking great care with the correct positioning. A mistake with this could cause damage to the apparatus and compromise the guarantee of your JXB-178. Never use rechargeable batteries. Use only batteries for single usage.

Technical specifications

1. Normal using condition Ambient temperature: 10°C – 40°C (50°F – 104°F) Relative humidity: 585%
2. Batteries: DC 3V (2 pcs AA batteries)

- Unit size: 155 x 100 x 40 mm (L x W x H)
- Unit weight (without battery): 105g
- Temperature display resolution: 0.1°C (0.1°F)
- Measuring range:
  In body mode: 32.0°C – 43.0°C (89.6°F – 109.4°F) Underbody mode, there is three color backlit:
  Green color backlit: 537.3°C (99.1°F), means normal temperature.
  Orange color backlit: 37.4°C – 37.9°C (99.3°F – 100.2°F), means low fever. Red color backlit: 38°C (100.4°F), means high fever.
  In surface temp mode: 0°C – 60°C (32°F – 140°F) In room mode: 0°C – 40°C (32°F – 104°F)

• Precision :

32.0°C	– 34.9°C	(89.6°F – 94.8°F)	±0.3°C(±0.6°F)
35.0°C	– 42.0°C	(95°F – 107.6°F)	±0.2°C(±0A°F)
42.1°C	– 43.0°C	(107.8°F – 109.4°F)	±0.3°C(±0.6°F)

1. Accuracy: ± 0.3°C (0.6°F)
2. Consumption: 5300mW
3. Measuring distance: 3cm – 5cm (1.2in – 2in)
4. Automatic power-off: <30 secs
5. Memory: 32 sets

Berrcom Non-Contact Infrared Thermometer JXB-178 -- note**Note:** The Non-contact Infrared Thermometer Model JXB-178 can take temperature readings below 32.0°C or above 43.0°C (89.6°F to 109.4°F) but precision is not guaranteed outside of this range.

Longevity of the product

The JXB-178 was conceived for intense and professional use, its longevity is guaranteed for 100,000 takings.

Maintenance of the product

– The protective glass over the lens is the most important and fragile part of the thermometer, please take great care of it.

– Clean the glass with cotton fabric, wet it with 95° alcohol.
– Do not use other batteries than mentioned batteries, do not recharge non-rechargeable batteries, do not throw in fire.
– Remove the batteries when the thermometer is not used for an extended period of time.
– Do not expose the thermometer to sunlight or water.
– An impact will damage the product.

Accessories

User Manual in English 1 pc

Guidelines

This device complies with the EU Directive 93/42/EEC concerning medical products, the ISO 80601-2-56 and the European Standard EN60601-1-2, and is subject to particular precautions with regard to electromagnetic compatibility.

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 43.0°C (109.4°F):

The temperature is in Fahrenheit. Change the measurement to Celsius.

THE SCREEN DISPLAYS TEMPERATURE LOWER THAN 32°C (89.6°F):

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 32°C (89.6°F) temperature displayed is showing the external temperature of your body, rather than the internal.

THE SCREEN DISPLAYS THE MESSAGE HI
Berrcom Non-Contact Infrared Thermometer JXB-178 -- hi When using the JXB-178 Thermometer, the message “HI” can show on the screen. In this case, the temperature is above the measurement range selected, either above 43.0 °C (109.4°F) in Body Mode.

THE SCREEN DISPLAYS THE MESSAGE LO
Berrcom Non-Contact Infrared Thermometer JXB-178 -- indoors

When using the JXB-178 Thermometer, the message “LO” can show on the screen. In this case, the temperature analyzed is under the measuring range selected, either less than 32°C (89.6°F) in Body Mode.

Explanation of symbols

Symbol	Reference
Beurer	Trade mark
	IEC 60417-5333,Type BF applied part
	IEC 60417-5031 Direct current
IP22	Protected against access to hazardous parts with a finger and against vertically falling water drops when enclosure tilted 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.
	This symbol shall be accompanied by the name and the address of the manufacturer
SN	Specifies serial number

Warning

This content is compiled from multiple sources and is provided for reference purposes only. It may not be complete or fully applicable to all situations. If you are unable to resolve your issue, please contact the product manufacturer or an authorized service provider for official support.