FORA IR20 Ear Thermometer

IR20c / IR20z / IR20b

Owner's Manual

311-1261000-017 Version 1.0 2010/11

IMPORTANT SAFETY INSTRUCTIONS

READ THIS BEFORE USING

The following basic safety precautions should always be taken.

1. Close supervision is necessary when the thermometer is used by, on, or near children, handicapped persons or invalids.
2. Use the thermometer only for the intended use described in this manual.
3. Do not use the thermometer if it is not working properly, or if it has suffered any damage.
4. Do not use accessories which are not supplied or recommended by the manufacturer.

KEEP THESE INSTRUCTIONS IN A SAFE PLACE

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Cautions and Warnings

- As with any thermometer, proper technique is crucial to getting accurate temperature readings. ***Please read this manual thoroughly and carefully before using.***
- Always store the thermometer in a cool and dry place: temperatures between -20℃ to 60℃ (-4℉ to 140℉) relative humidity less than 95%. ***Avoid direct sunlight.***
- ***Avoid dropping*** the thermometer from a height or strongly hitting it with a hard object.
- Only use the probe cover for infrared FORA IR20 ear thermometer.
- For proper hygiene, do not share probe cover. Damaged probe cover may result in error display.
- Do not disassemble the thermometer.
- Basic safety precautions should always be observed, especially when the thermometer is used on or near children and disabled persons.
- This thermometer is not intended to be a substitution for consultation with your physician.
- Keep probe cover out of reach of children.
- Temperature of left and right ear may differ. Always measure using same ear.

Restrictions of Use

This thermometer is clinically proven to produce accurate temperature measurements. However, please be advised if you have the following situations:

- The accuracy cannot be ensured for a person who has deformity in the ear such that the thermometer probe can not be properly inserted into the ear canal.
- The accuracy cannot be ensured when blood or drainage is found in the ear canal.
- Take temperature from the other ear if ear drops or medications have been placed in an ear.
- For a person who wears ear plug or hearing aid, remove the device and wait for 15 minutes before taking temperature.

NOTE

Never try to clean inside the ears. You may accidentally damage the eardrum or its surrounding tissues. Remove excess earwax only when you can reach it with a clean cloth. Consult a physician if you suspect the presence of excess earwax.

Introduction

Thank you for choosing FORA IR20 ear thermometer. This innovative medical device relies on on advanced infrared (IR) technology to measure temperature instantly FORA IR20 ear thermometer is an elegantly designed infrared thermometer meant for your family.

Intended use

FORA IR20 ear thermometer is intended for the intermittent measurement and monitoring of human body temperature from ear canal. The device is intended for use by people of all ages in the home.

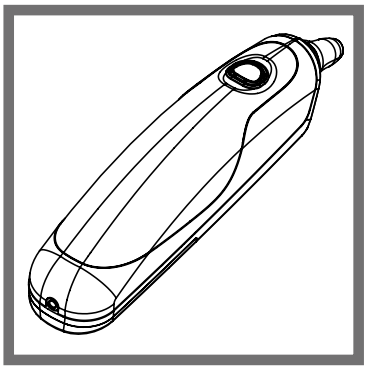
How does it work

The thermometer measures the infrared heat generated by the eardrum and its surrounding tissue. The thermometer then converts it into a temperature value shown on LCD.

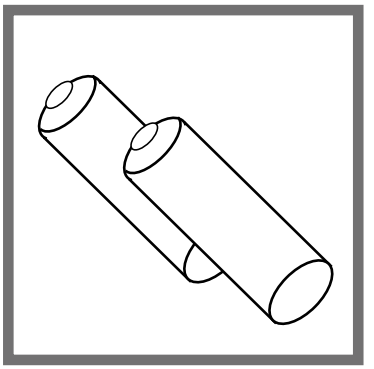
NOTE

The thermometer does not emit any infrared signal.

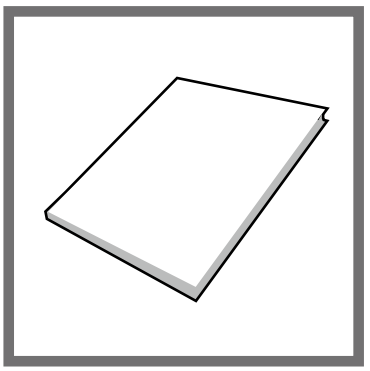
Package Contents



FORA IR20
Ear Thermometer



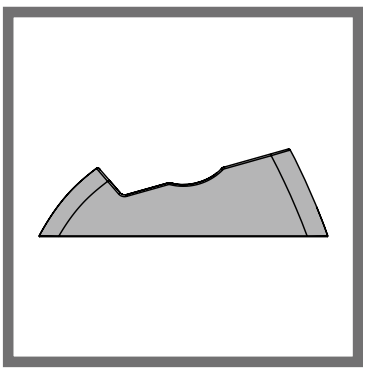
Two 1.5V AAA
Batteries



Owner’s Manual

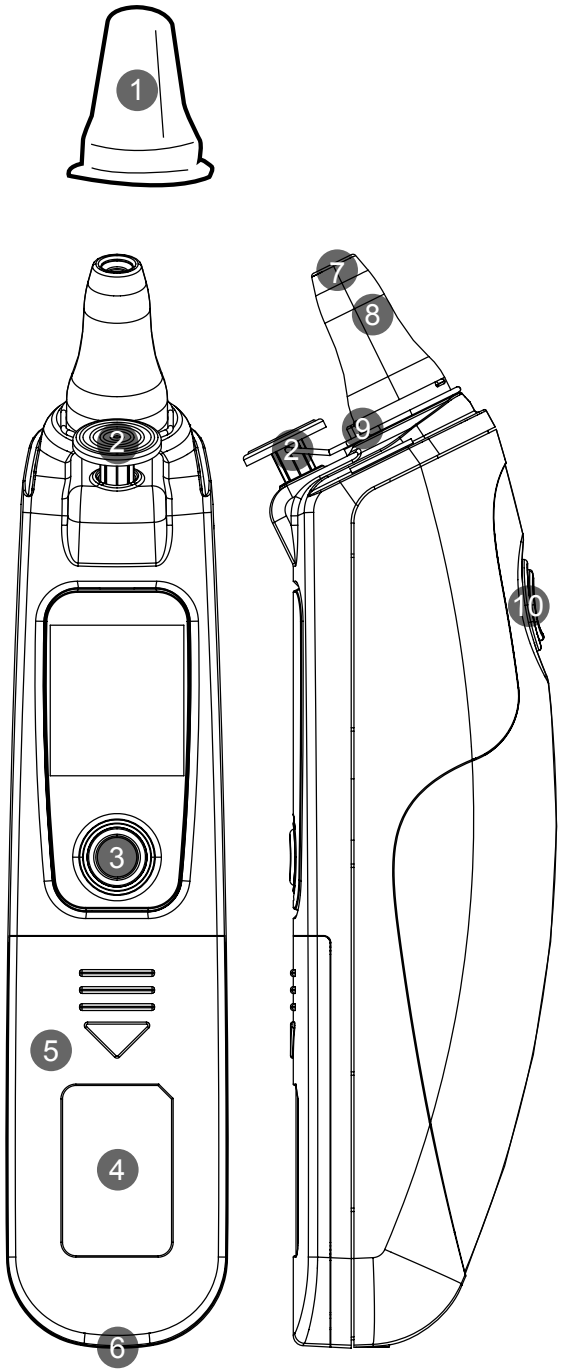
Probe Cover

Warranty Card



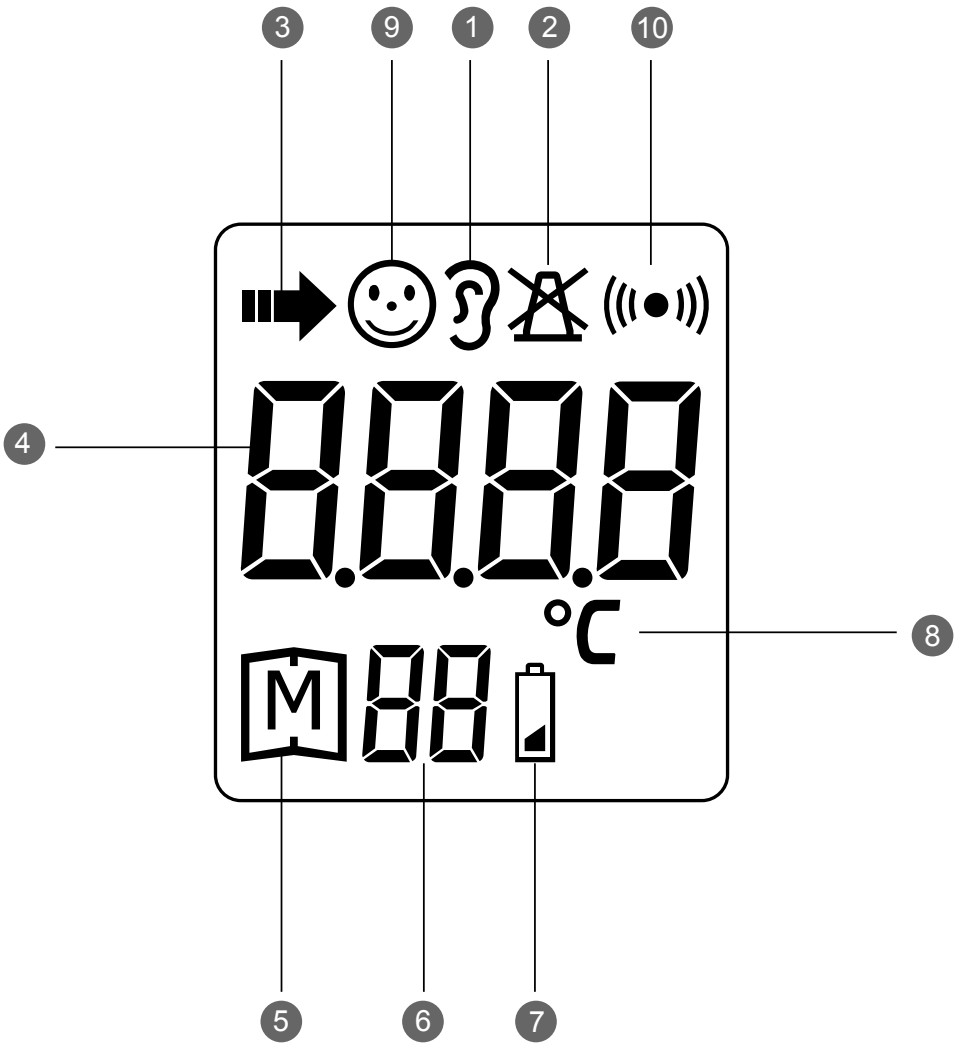
Storage Case

Thermometer Parts



1. Probe cover
2. Probe cover ejection button
3. On/Memory button
4. Sticker
5. Battery cover
6. Data port
7. Probe lens
8. Probe
9. Probe cover detector
10. Scan button

LCD Screen



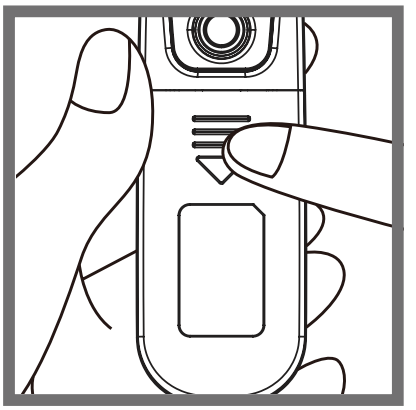
1. Ear temperature indicator
2. Non-probe cover warning
3. Temperature scanning in progress
4. Temperature display
5. Memory mode
6. Record numbers
7. Low bettery indicator
8. Temperature unit
9. Temperature indicator for memory mode
10. Communication symbol

Replacing the Battery

The thermometer comes with two 1.5V AAA alkaline batteries. Replace it when “ ” appears. Please follow the steps to replace new batteries.

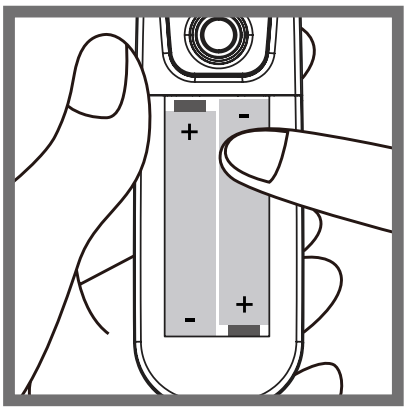
Step 1

Remove the battery cover.



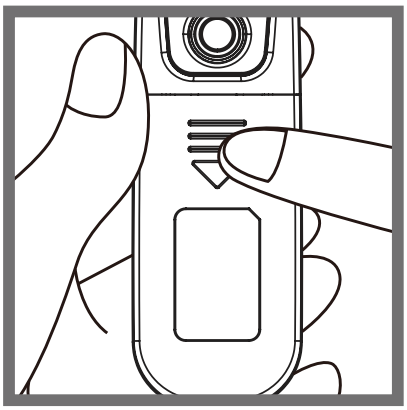
Step 2

Place the new battery in the battery compartment and press it in until the battery is firmly secured.



Step 3

Reattach the battery cover.



NOTE

- *Although the thermometer works when " " appears, we still recommend that you change the battery to obtain an accurate result.*
- *Remove the battery if stored for a long period of time.*
- *The battery should be kept out of reach of children. If they are swallowed, promptly see a doctor for help.*

About Normal Body Temperature & Fever

Body temperature can vary from one individual/person to next. It also varies by location on the body and different time of the day. Below shows the statistical normal ranges from different sites. Please keep in mind that temperatures measured from different sites, even at the same time, should not be directly compared.

Fever indicates that the body temperature is higher than normal. This symptom may be potentially caused by infection, overdressing or immunization. Some people may not experience fever even when they are ill. These include, but are not limited to, infants younger than 3 months old, persons with compromised immune systems, persons taking antibiotics, steroids or antipyretics (aspirin, ibuprofen, acetaminophen), or persons with certain chronic illnesses. ***Please consult your physician when you feel ill even if you do not have fever.***

Table 1[*1] Body Site Normal Temperature Range

Oral	0.6℃ (1℉) or more above or below 37℃ (98.6℉)
Rectal/ear	0.3℃ to 0.6℃ (0.5℉ to 1℉) higher than oral temperature
Axillary (underarm)	0.3℃ to 0.6℃ (0.5℉ to 1℉) lower than oral temperature

*1. Body Temperature at WebMD;
website: http://firstaid.webmd.com/body-temperature retrieved at 2010 Jan 7.

Using the Device

Replacing Probe Cover

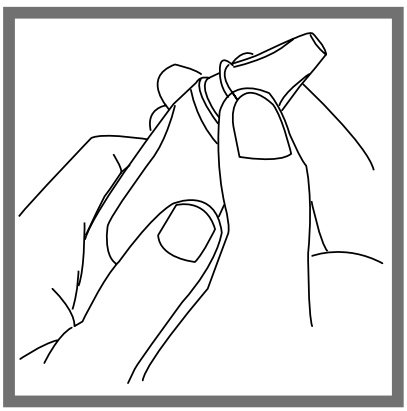
Step 1

Check the probe cover is clean and new.

Step 2

Attach new probe cover into the probe.

Now, you can start to test your ear temperature.



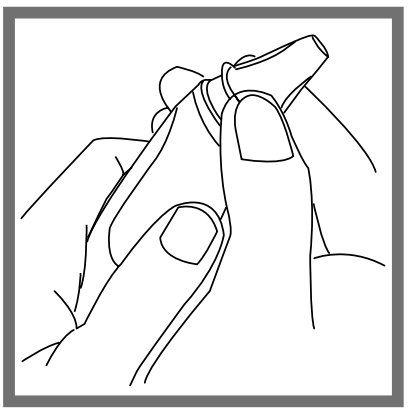
NOTE

- *If a probe cover is not attached on the probe, LCD will show " " until a new probe cover is firmly attached to the probe.*
- *The used probe cover should be removed after each measurement by a clean and new probe cover to ensure accuracy reading.*
- *For hygiene use, attach a new probe cover each time and do not touch its tip.*

Taking Ear Temperature

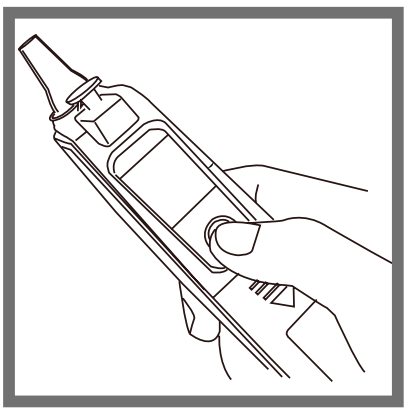
Step 1

Make sure probe cover is firmly attached to the probe.



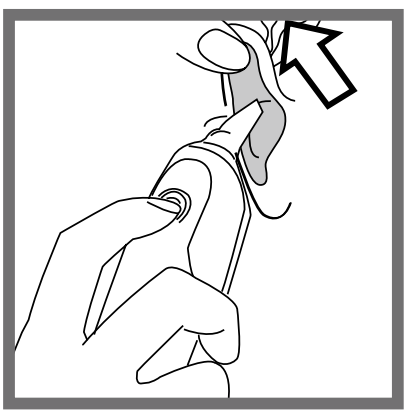
Step 2

Press and release the On / Memory button to turn on the thermometer. When ready, the thermometer displays the last measurement.



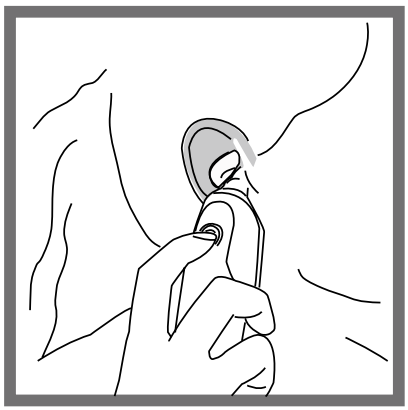
Step 3

Stretch your ear canal by pulling your ear backwards and upwards and carefully insert the thermometer into the ear.



Step 4

Press and release the Scan button.
Do not remove the thermometer until it beeps.

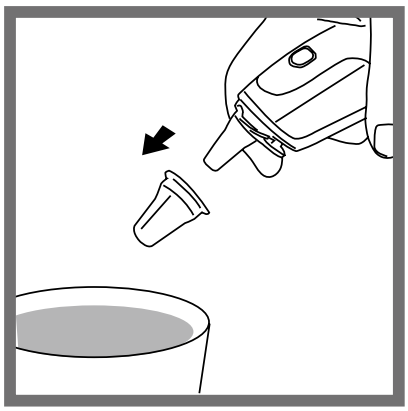


Step 5

Read the result.
" " is shown together with a temperature value.

Step 6

Discard used probe cover into trash by pressing probe cover ejection button.



NOTE

Turn off the thermometer by pressing On / Memory button twice. It will automatically turn off if left idle for 3 minutes.

Hints on Taking Ear Temperture

1. As with other of thermometer, you may observe slight variations in consecutive measurements. ***It is recommended that you take 3 temperature readings and use the highest one for the following situations:***

- Infants younger than 3 months old.
- Children younger than 3 years old and who have a compromised immune system and the presence / absence of fever is critical.
- When you are learning to use the thermometer.

2. Do not take a reading while eating and /or talking. Wait 30 minutes after any of the following situations before taking a measurement:

- When you have your ear covered.
- After exercising, swimming, or taking a bath. When expose to extreme temperature.

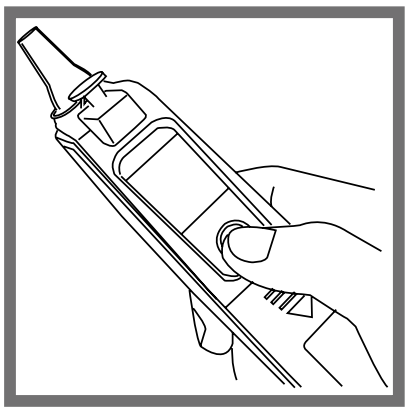
3. To take accurate readings, the ear must be free from excess earwax build-up.

Recalling the Memory

Your thermometer stores 10 recent readings in the memory.

Step 1

Be sure the thermometer is OFF before recalling this memory.

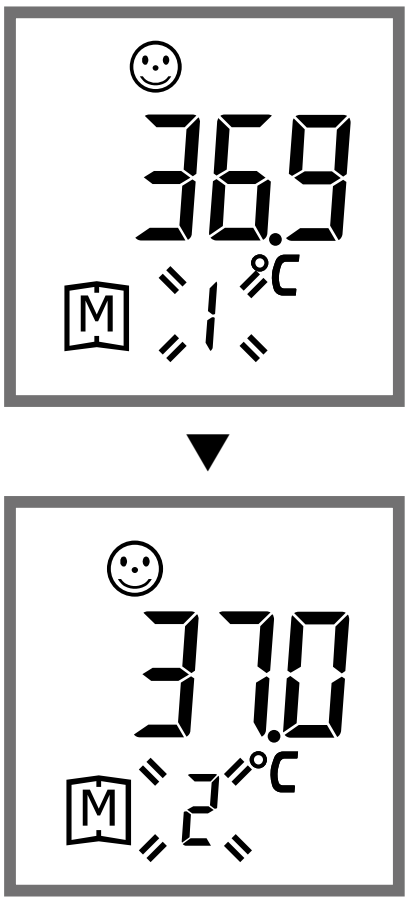


Step 2

Press the On / Memory button to turn on the thermometer.

Step 3

Press the On / Memory button for 3 seconds to enter memory mode.



Each time you press the On / Memory button, a result will be displayed in the order of dates (latest result shown first), together with " M " and number (from 1 to 10).

When the memory is full, the oldest result is deleted as the new one added. When the last record is displayed in the LCD, press On / Memory button again to return the first record.

Step 4

Exit the memory.

Press the Scan button and LCD will show latest results with flashing “ ➠ ” . Then press On/Memory button again and LCD will show “ OFF ” to exit memory.

NOTE

When using the thermometer for the first time, the first memory result will display 0.0°C. It indicates that there are no test results in memory.

Viewing Results on a Personal Computer

Results in memory can be transmitted to the personal computer by either cable or wireless connection for FORA IR20c, FORA IR20z and FORA IR20b, respectively. Accessories needed to activate this function are:

- Health Care Software System: a software downloaded from ForaCare's website (www.foracare.ch)
- Interface Cable: an optional accessory for FORA IR20c.
- ZigBee Gateway: an optional accessory for FORA IR20z.
- Bluetooth Adapter: an optional accessory for FORA IR20b.

Please contact your local customer service for above accessories.

Transmitting data via Cable (FORA IR20c)

Step 1 Install Software

Install Health Care System Software on your computer by following the instructions provides on ForaCare's website.

Step 2 Connect to Personal Computer

Connect the interface cable to a serial port on the back of your computer. With the thermometer turn off, connect the interface cable to the data port located at the bottom of the thermometer. Then " PCL " will appear in the display, indicating that the thermometer is ready to transmit data.

Step 3 Transmit Data

Follow the instructions provided in the software to transmit data. Results transmitted will include date and time. Remove the cable and the thermometer will automatically turn off.

Transmitting data via ZigBee Gateway Module (FORA IR20z)

Step 1 Install ZigBee Gateway and switch on the device.

(Please contact your agent to set up the device.)

Step 2 Transmit Data.

After finishing measurement, your results will be transmitted automatically; the communication symbol on the thermometer will flash and you will hear two beeps from the Gateway. It means your result is successfully transmitted to the server. The thermometer will turn off without pressing any button for 1 minute.

Transmitting data via Bluetooth Adapter (FORA IR20b)

Step 1

Install Health Care System Software on your computer by following the instructions provided on ForaCare's website.

Step 2

Install Bluetooth Adapter Software.

Step 3

Reset FORA IR20b thermometer.

Step 4

Pair FORA IR20b thermometer with your computer.
Select FORA IR20b thermometer device code:
“FORA-Device” and key in the Bluetooth passkey (PIN): 111111 for pairing.

Step 5

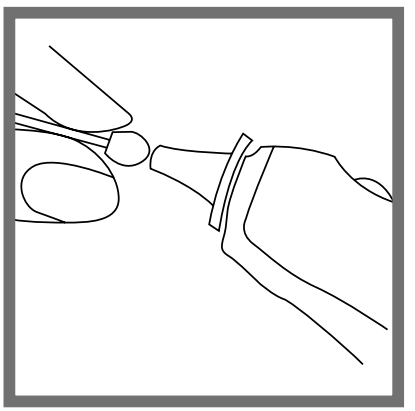
Connect Bluetooth Serial Port Service:
Right click on icon “FORA-Device” and select “connect” and “Bluetooth Serial Port Service” for connection. The results will be transmitted automatically to your computer once you finish taking the temperature. In the meanwhile, the communication symbol on the thermometer will flash.
If you are using the Bluetooth Adapter provided by ForaCare Suisse AG, please follow the installation guide “Bluetooth Easy Card” within the package.

NOTE

- *While the thermometer is connected to the PC or the server, it is unable to perform a test.*
  When the ZigBee Gateway device is normal, the indicator on the device appears green light. If you find the indicator showing red light, please contact your agent for help.
- *If you hear a long “beep” produced from the gateway, that means an error occurs, please try the connection again. If the problem still exists, please contact your agent for help.*
  We recommend that you use bluetooth adaptor provided by ForaCare Suisse AG

Care & Cleaning

- If you would like to clean the probe lens, wipe it gently with an 70% alcohol swab or soft cloth moistened with 70% alcohol. Do not attach a new probe cover within 30 minutes.



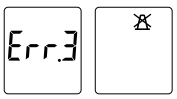
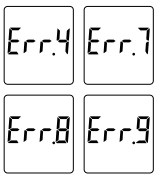
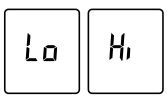
- The probe is not waterproof. Please wipe with a clean cloth which is dry or damped with 70% alcohol.
- The body of the thermometer is not water-resistant. Never put the thermometer under a running tap or submerge it into water. Use a soft and dry cloth to clean it. Do not use abrasive cleaners.
- Store the thermometer in a cool and dry location. Free from dust and away from direct sunlight.

Fever Indicator

When the measurement is equal or over 38℃ (100.4℉), red backlight is shown together with the result. The red backlight will last for 3 seconds and turn off.

Troubleshooting

The table below shows problems you may encounter. All error messages below would be shown together with orange backlight. Please follow “what to do” to resolve problems. If the problem still exists, please call your local dealer for help.

Message	What it means	What to do
	Room temperature is below 10℃.	Put the thermometer under operating temperature range of 10℃ to 40℃ (50℉ to 104℉).
	Room temperature is above 40℃.	Put the thermometer under operating temperature range of 10℃ to 40℃ (50℉ to 104℉).
	You don’t use probe cover while measuring ear temperature.	Please place probe cover into probe again.
	Problem with the thermometer.	Review the instructions and re-start the measurement procedure. If the above steps do not work. Please contact the dealer.
	Battery is low and “ ” appears on LCD.	Please replace batteries as soon as possible.
	Appears when the batteries can’t provide enough power for a test.	Please replace new batteries.
	Temperature measurement falls outside the displayed temperature range: (ear temperature range from 32℃ to 43℃)	Please follow this manual to take a reading again.

Specifications

Dimensions	160.5mm(W) x 45.9mm(H) x 32.5mm(D)
Weight	98.33g (include 2 x1.5V AAA batteries)
Battery	2 x 1.5V AAA alkaline batteries
External output	UART (USB& RS232) /ZigBee /Bluetooth
Displayed temperature range	32℃ to 43℃ (89.6℉ to 109.4℉)
Display resolution	0.1℃
Accuracy	Meet the accuracy requirement specified in ASTM E1965-98 ◢ ±0.2℃ (±0.4℉) for the range of 36.0℃ to 39.0℃ (96.8℉ to 102.2℉) ◢ ±0.3℃ (±0.5℉) from 34.0℃ to 35.9℃ (93.2℉ to 96.6℉) and from 39.1℃ to 42.2℃ (102.4℉ to 108.0℉)
Temperature unit	℃
Operating temperature range	10℃ to 40℃ (50℉ to 104℉)
Operating humidity	95% RH or less
Storage temperature range	-20℃ to 60℃ (-4℉ to 140℉)
Storage humidity	95% RH or less
Memory capacity	10 measurements

The specifications may be changed without prior notice.

Symbol Information

Symbol	Referent
	Consult instructions for use
	Manufacturer
SN	Serial number
	Caution, consult accompanying documents
	Type BF Equipment
	Do not use if package is damaged
CE 0459	CE Mark

Warranty

- ForaCare Suisse AG (“ForeCare”) warrants this product to be free of defects in workmanship and materials for a period on ***TWO years*** from the date of purchase.
- During the warranty period, if this product is found to be defective, you may bring it together with the purchase receipt and Warranty Certificate on a carry-in basis to ForaCare's office during normal business hours for warranty service. We will then repair or replace defective parts or exchange the whole product as we select, at no charge to the original owner. After such repair, replacement or exchange, the product will be warranted from the date of purchase.
- This warranty is valid only if the Warranty Certificate and Warranty Registration Card are duly complete with date of purchase, serial number and dealer’s stamp, and if the Warranty Registration Card is sent to local distributor office not later than 14 days from the date of purchase.
- This warranty is void if this product has been repaired or serviced by unauthorized person. This warranty does not cover defects caused by misuse, abuse, accident, tampering, poor maintenance, fire or any other acts beyond human control.
- Except as stated in the above paragraphs, ForaCare disclaims all other warranties, implied or expressed, including the warranties of merchantability of fitness for a particular purpose with respect to the use of this product. ForaCare shall not be liable for any direct, consequential or incidental damages arising out of the use or inability to use product.

NOTE

NOTE