

BT Infrared Ear Thermometer

Instruction Manual

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## Foreword

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### Dear Customers

You have purchased a BT Infrared Ear Thermometer, one of the most technologically advanced yet easy to use products available in the marketplace today.

We strongly recommend you read this instruction manual carefully prior to using the thermometer the first time.

## Precautions

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1. Precision components were used in the construction of this device. Extremes in temperature, humidity, direct sunlight, shock or dust should be avoided.
2. Clean the device with a dry, soft cloth or cloth moistened in alcohol. Never use thinner, benzene or cleaner with abrasives.
3. This device is not water resistant. Protect it from liquid spills.
4. Measurements may be impaired if the device is used close to a television, microwave oven, cellular telephone, X-ray or other devices with strong electrical fields.
5. Keep this device out of the reach of children. A child may swallow the probe cover or the battery while playing with it. If a child should swallow them, seek medical treatment immediately.
6. Do not self-diagnose your condition using the measured result. Consult your doctor if your temperature is higher than the normal temperature or you feel unwell.
7. Used equipment, parts and batteries are not treated as ordinary household waste and must be disposed of according to the applicable regulations.

## Before Using the Thermometer

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### Caution

**Keep this device out of the reach of children. A child may swallow the probe cover while playing with it. If a child should swallow it, seek medical treatment immediately.**

### Use the thermometer at a room temperature between 10 and 40°C.

If the thermometer is stored in an environment with the temperature out of the above range or the temperature of the storage area differs greatly from that of the measuring area, allow the thermometer to equalize to the room temperature before use.

### DO NOT measure temperature if:

Your ear is cold, wet or blocked with ear wax.

It is within 30 minutes after eating, taking a bath or physical exercise.

You are suffering from an ear infection.

### Always use the thermometer with its probe tip clean. Do not touch the probe cover after cleaning.

A dirty probe tip may cause an inaccurate measurement.

Clean the probe tip with a dry, soft cloth or cloth moistened with alcohol before use. When cleaned, wait for a few minutes before measuring temperature.

## Inserting the Thermometer into the Ear

### ⚠ Caution

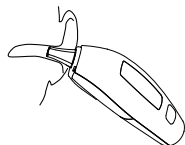
**Do not force the thermometer into your ear.**

### ■ Insert the thermometer straight into the ear canal.

Pull the ear lightly backward to straighten the ear canal.



While pulling on the ear, insert the probe tip gently into the ear canal. Never force the thermometer into the ear. If the ear canal is very small, as with a baby, lightly press the probe tip to the ear canal with just enough force to seal the opening around the probe.



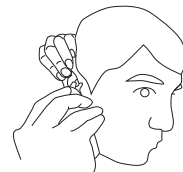
Hold the thermometer so that the probe faces straight in the direction of the eardrum.



### ■ Using proper posture

When measuring your own temperature:

1. Raise and hold your left hand as shown to the right to pull on your ear.
2. Hold the thermometer in your right hand and insert it into your right ear.  
(Reverse this when measuring your temperature in the left ear.)



When measuring a child's temperature:

1. Hold the child's head so that it will not move. To measure a baby's temperature, lay the baby down with his/her ear facing upward.
2. Hold the baby's head so that it will not move.



## 1.Introduction

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The BT Infrared Ear Thermometer is infrared thermometer intended for the intermittent measurement of human body temperature in people of all ages. The three color backlight alert allows users to make quick judgment. The 30-memory recall with date and time display easily manage your long-term body temperature records.

### 1.1 Features:

Suspended Tip -  
avoids surface contact

Hygienic -  
anti-bacterial probe design

Easy Reading -  
2 inches large screen

Quick Check -  
intuitive 3-color LCD backlight for temperature indication

Long-Term Tracking -  
30-memory recall with time and date display

Communicationable -  
Bluetooth 2.0 interface for data transmission

## 2.Important Safety Instructions

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1. Observe the operating conditions described in the Specifications.
2. Use of this instrument is not intended as a substitute for consultation with your physician.
3. Protect it from:
  - extreme temperatures
  - impact and dropping
  - contamination and dust
  - direct sunlight
  - heat and cold
4. Maintenance
  - Use an alcohol swab or cotton tissue moistened with alcohol to clean the thermometer casing and the measuring probe.
  - Ensure that no liquid enters the interior of the thermometer.

### 3.Package content



User manual\*1



AAA battery\*2

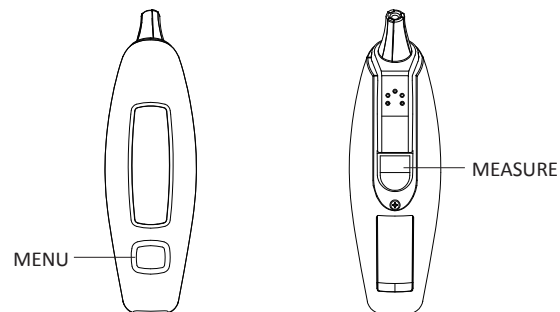
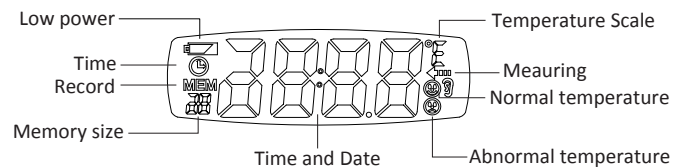


Thermometer\*1



Probe protective cover\*1

### 4.LCD display/Interface



## 5.Set up

After inserting the battery, you will see the screen as below, and the system will enter option mode automatically.

### 5.1. How to operate :

Set the year, date, time and temperature warning level according to the instructions.

5.1.1 “Year”(Default year 2011): Press “MEASURE” to change the number, and press “MENU” to finish the setting.



5.1.2 “Date”(Default Jan. 1st): Press “MEASURE” to change the date and press “MENU” to finish the setting.



5.1.3 “Time”: Press “MEASURE” to change the time and press “MENU” to finish the setting.



\* The set-up mode is optional, depending on models.

5.1.4 “Temperature ”:Press “MEASURE” to select “°C” or “°F” and press “MENU” to finish the setting.



5.1.5 Set “Higher warning level”, default 37.8°C (100°F)

: Press “MEASURE” to change the number and press “MENU” to finish the setting.



5.1.6 Set “Lower warning level”, default 36°C(96.8°F)

: Press “MEASURE” to change the number and press “MENU” to finish the setting.



### 5.2. Operation mode:

#### 5.2.1 Measure body temperature :

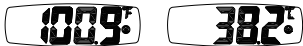
Insert the thermometer into ear smoothly and press “MEASURE” to start. The measurement shows on the screen after hearing a beep.



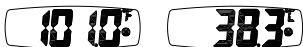
- If the measurement is below 97°F(36.1°C), the screen backlight shows Green and the device sounds 1 long and 2 short beeps.



- If the measurement is between the lower level (98.9°F (37.2°C)) and the higher warning level (100.9°F(38.2°C)), the screen backlight shows Yellow and the device sounds one short beep.



- If the measurement is greater than the higher warning level 101°F(38.3°C) , the screen backlight shows Red and the device sounds 1 long and 2 short beeps.



- If the measurement is below 100.4°F(38.0°C), the " 😊 " (happy face) logo will display.
- If the measurement is below 100.4°F(38.0°C), or above " 😞 " (sad face) logo will display.

#### 5.2.2 Check records :

Press "MENU" to enter record checking mode.

The latest record is shown at first and press "MENU" to check the other records by measurement time



#### 5.2.3 Delete records:

Remove the batteries. Press "MENU" and then insert batteries. Keep pressing "MENU" until batteries inserted and the backlight is on. All records will be deleted.

#### 5.2.4 Bluetooth transmission

The measurements data will be transferred automatically after the device display the results.



## 6. Trouble shooting

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### 6.1 The screen displays “LO”

The measured temperature is less than 34 °C (93.2 °F)




### 6.2 The screen displays “HI”

The measured temperature is greater than 43 °C (109.4 °F)



### 6.3 The screen displays the battery indicator "” and sounds

1 long and 2 short beeps 

Please insert a set of new batteries.



### 6.4 Blank screen when the power is turned on?

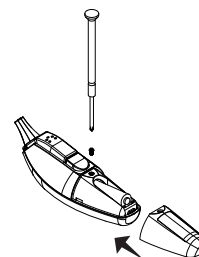
1. Please check battery position.
2. Please replace new batteries.

## 7. Replacing the Batteries

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### **Caution**

Keep the thermometer out of the reach of children. A child may swallow the battery while playing with it. If a child should swallow the battery, seek medical treatment immediately.



1. Using a screwdriver, loosen the screw holding the battery cover and remove the battery cover.
2. Replace the batteries with two new AAAbatteries, making sure to place the negative and positive terminals correctly.
3. Re-install the battery cover and secure it with the screw.

## 8.Specifications

Model Name	BT Infrared Ear Thermometer
Model Number	ETH-102
Accuracy	±0.2°C (0.4°F) : 36°C ~ 39°C (96.8°F ~ 102.2°F) ±0.3°C (0.5°F) : <36°C (96.8°F) or > 39°C (102.2°F)
Weight (g)	72.6
Dimension (mm)	125.7x35.7x38.5
Measuring Range	34°C ~ 43°C (93.2°F ~ 109.4°F)
Memory	Up to 30 readings with time / date display. Default value *
Warning Level	Yellow : < 36°C (96.8°F) (1 long + 2 short beeps)
(LCD Backlights and voices)	Red : > 37.8°C (100°F) (1 long + 2 short beeps) Green : 36°C (96.8°F) ~ 37.8°C (100°F) (1 short beep) * Values are adjustable
Battery	2 AAA batteries (Low Battery: 1 long + 2 short beeps)
Measuring Time	1 second
Standard	Complies with EN 12470-5 and ASTM E -1965-98
Operating Environment	10 ~ 40°C (50 ~ 104°F) , 10% to 95% RH
Atmospheric Pressure	700hPa~1013hPa
Storage	-20 ~ 50°C (-4 ~ 122°F) , 5% to 95% RH (non-condensing)
Transportation	-10~50°C (14~122°F), 20% to 80% RH
Data transmission	Bluetooth



Manufacturer: digiO2 International Co., Ltd  
3F., No. 582, Guohua Rd., Miaoli City, Miaoli County 360, Taiwan



Name: Niish Technologies Ltd.  
Address: Office 8, Marcus House, Park Hall Business Village,  
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ETH-102



Specifications are subject to change without prior notice  
All brand names and product names are trademarks or  
registered trademarks of their respective owners.



Always consult your doctor. Do not attempt self-diagnosis  
or self-treatment based on the measurement results and  
analysis. Self-diagnosis or self-treatment may lead to  
deterioration in your condition.



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Made in Taiwan



## Notes


1. When the LOW BATTERY mark appears in the display,  
replace all batteries with new ones. Do not mix old and new  
batteries. Doing so could shorten the battery life or cause the  
device to malfunction.
2. Battery life varies with the room temperature and may be  
shorter at low temperatures. Generally, more than 3000  
measurements can be performed using new batteries.

### Marks and Abbreviations

- CE -European Conformity. This device conforms to the standards for  
products sold in the European Economic Area.
- RoHS - This device conforms to the European Union Restriction of  
Hazardous Substances Directive.
- Warning: Do not allow to become damp or immerse in water.
- In accordance with Waste Electrical and Electronic Equipment  
Directive (WEEE) this unit contains electronic parts and must be disposed  
of in accordance with local laws regarding electronic waste products.
- Manufacturer
- Catalogue number
- Serial number
- Batch code
- Operator's manual
- Representative in the European Community
- Type BF Equipment
- IP22 Ingress protection class

Guidance and manufacturer's declaration-electromagnetic emissions		
The <u>ETH-102</u> is intended for use in the electromagnetic environment specified below. The customer or the user of the <u>ETH-102</u> should assure that it is used in such an environment.		
Emission test	Compliance	Electromagnetic environment-guidance
RF emissions CISPR 11	Group 1	The <u>ETH-102</u> 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 <u>ETH-102</u> 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.
Harmonic emissions IEC 61000-3-2	Not applicable	
Voltage fluctuations /flicker emissions IEC 61000-3-3	Not applicable	

Guidance and manufacturer's declaration-electromagnetic immunity			
The <u>ETH-102</u> is intended for use in the electromagnetic environment specified below. The customer or the user of the <u>ETH-102</u> 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%
Electrical fast transient/burst IEC 61000-4-4	± 2kV for power supply lines ± 1kV for input/output lines	Not applicable Not applicable	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	± 1kV line(s) to line(s) ± 2kV line(s) to earth	Not applicable Not applicable	Mains power quality should be that of a typical commercial or hospital environment.
Voltage Dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	<5% UT(>95% dip in UT) for 0,5 cycle 40% UT(60% dip in UT) for 5 cycles 70% UT(30% dip in UT) for 25 cycles <5% UT(>95% dip in UT) for 5 s	Not applicable Not applicable Not applicable Not applicable	Mains power quality should be that of a typical commercial or hospital environment. If the user of the <u>ETH-102</u> requires continued operation during power mains interruptions, it is recommended that the <u>ETH-102</u> be powered from an uninterruptible power supply or a battery.
Power frequency(50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	The <u>ETH-102</u> power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
NOTE UT is the a.c. mains voltage prior to application of the test level.			

Guidance and manufacturer's declaration-electromagnetic immunity			
The <b>ETH-102</b> is intended for use in the electromagnetic environment specified below.			
The customer or the user of the <b>ETH-102</b> should assure that is used in such and environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment-guidance
Conducted RF IEC 61000-4-6	3 Vrms 150 KHz to 80 MHz	Not applicable	<b>Portable and mobile RF communications equipment should be used no closer to any part of the <b>ETH-102</b> including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.</b>  <b>Recommended separation distance:</b> $d = 1,2 \sqrt{P}$ $d = 1,2 \sqrt{P}$ 80MHz to 800 MHz $d = 2,3 \sqrt{P}$ 800MHz to 2,5 GHz  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).  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>  Interference may occur in the vicinity of equipment marked with the following symbol:  
Radiated RF IEC 61000-4-3	3 V/m 80MHz to 2,5 GHz	3 V/m	
NOTE1 At 80 MHz and 800 MHz, the higher frequency range applies.			
NOTE2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.			
<sup>a</sup> 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 <b>ETH-102</b> is used exceeds the applicable RF compliance level above, the <b>ETH-102</b> should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the <b>ETH-102</b> . <sup>b</sup> Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.			

Recommended separation distance between portable and mobile RF communications equipment and the <b>ETH-102</b>			
The <b>ETH-102</b> is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the <b>ETH-102</b> can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the <b>ETH-102</b> 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		
	150 kHz to 80 MHz $d = 1,2 \sqrt{P}$	80 MHz to 800 MHz $d = 1,2 \sqrt{P}$	800 MHz to 2,5 GHz $d = 2,3 \sqrt{P}$
0,01	N/A	0,12	0,23
0,1	N/A	0,38	0,73
1	N/A	1,2	2,3
10	N/A	3,8	7,3
100	N/A	12	23
For transmitters rated at a maximum output power not listed above, the recommended separation distance $d$ in meters (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.			
NOTE1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.			
NOTE2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.			

## **FCC Statement-Potential for Radio/Television Interference (for U.S.A. only)**

- This product has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential environment. The product generates, uses, and can radiate radio frequency energy and, if not used in accordance with the instructions, may cause harmful interference to radio communications.
- However, there is no guarantee that interference will not occur in a particular condition. If the product does cause harmful interference to radio or television reception, which can be determined by turning the product on and off, the user is encouraged to try to correct the interference by one or more of the following measures:
  - (a) Reorient or relocate the receiving antenna
  - (b) Increase the separation between the product and the receiver.
  - (c) Connect the product into an outlet on a circuit different from that to which the receiver is connected.
  - (d) Consult the dealer or an experienced radio/TV technician for help.

## **Federal Communications Commission (FCC) Statement 15.21**

You are cautioned that changes or modifications not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.

### **15.105(b)**

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.

These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1) this device may not cause interference and
- 2) this device must accept any interference, including interference that may cause undesired operation of the device.

### **FCC RF Radiation Exposure Statement:**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

End users must follow the specific operating instructions for satisfying RF exposure compliance.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

### **ETH-102 wireless system configuration and operation:**

1. Quality of service: BQB test
2. Security requirements: Key in Pin code "0000".
3. If users paired with PC was unsuccessful, the data was not shown it on the LCM. Users can repairing and upload the it again.