

AND

Electrical Thermometer

Model UT-201BLE-A

– Oral type –

Instruction manual

Original

ENGLISH

– Type oral –

Manuel d'instructions

Traduction

FRANÇAIS

– Tipo oral –

Manual de instrucciones

Traducción

ESPAÑOL

– Tipo orale –

Manuale di istruzioni

Traduzione

ITALIANO

– Oraler typ –

Bedienungsanleitung

Übersetzung

DEUTSCH

– 口溫計 –

使用手冊

翻譯

中文



1WMPD4003378

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Dear Customers

Congratulations on purchasing a state-of-the-art A&D thermometer, one of the most advanced thermometers available today. Designed for ease of use and accuracy. This thermometer will facilitate your thermometer regimen.

We recommend that you read through this manual carefully before using the device for the first time.

The *Bluetooth*® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by A&D is under license. Other trademarks and trade names are those of their respective owners.

Preliminary Remarks

- This device conforms to the European Directive 93/42 EEC for Medical Products. This is made evident by the **CE**₀₁₂₃ mark of conformity. (0123 : The reference number to the involved notified body.)
- This device fulfills the provisions of BS EN 12470 Clinical thermometers - Part 3: Performance of compact electrical thermometers (non-predictive and predictive) with maximum device.
- Hereby, A&D Company, Limited declares that the radio equipment type UT-201BLE is in compliance with Directive 1999/5/EC. The full text of the EU declaration is available at the following internet address :
http://www.aandd.jp/products/manual/manual_medical.html
- The device is a Continua certified, *Bluetooth*® wireless technology enabled medical device.
- The device is designed to be used in the medical facilities.
- This device is designed to measure body temperature.
- This device is designed to be operated by an adult (18 years old or older).
- This device intends to measure the body temperature of the patient (5 years old or older).

Precautions

- ❑ Precision components are used in the construction of this device. Extremes in temperature, humidity, direct sunlight, shock or dust should be avoided. It may be cause of losing performances of sensor, battery, electrical terminals and this device.
- ❑ This device is the thermometer to measure an oral temperature of bottom side of tunge. Do not measure a temperature of other position so it is incorrect.
- ❑ Clean the device with a dry, soft cloth or a cloth dampened with water and a neutral detergent. Never use alcohol, benzene, thinner or other harsh chemicals to clean the device.
- ❑ Clean the device before and after use. Keep cleanly to be able to insert into mouth. It may be the cause of occurring a cross-infection if not clean.
- ❑ Avoid excessive shock. It may be the cause of a malfunction.
- ❑ Do not put the device in the neighborhood of heater. Prevent the device from splashing of a hot water. It may be the cause of a malfunction.
- ❑ The device is not water resistant. Prevent rain, sweat and water from soiling the device.
- ❑ Measurements may be distorted if the device is used close to televisions, microwave ovens, X-ray or other devices with strong electrical fields.
- ❑ Wireless communication devices, such as a networking devices, mobile phones, cordless phones and their base stations, walkie-talkies can affect this thermometer. Therefore, a minimum distance of 3.3 meters should be kept from such devices.
- ❑ When reusing the device, confirm that the device is clean.
- ❑ Used equipment, parts and battery are not treated as ordinary household waste, and must be disposed of according to the applicable local regulations.
- ❑ Do not modify the device. It may cause accidents or damage to the device.
- ❑ Do not let children use the device by themselves and do not use the device in a place within the reach of infants.
- ❑ There are small parts that may cause a choking hazard if swallowed by mistake by infants.
- ❑ When the liquid inside of the battery invades into an eye, wash eye with large quantities of water as possible as quickly, consult the doctor for diagnose and treatment. It may be the cause of blindness and injury, if not perform.

- ❑ When your skin and cloth are touched to the liquid inside of the battery, wash them with large quantities of water.
- ❑ Replacement of battery by inadequately trained personnel could result in a HAZARD (such as excessive temperatures, fire or explosion).
- ❑ Use the battery, removable parts and materials that are described in this manual. It may be the cause of malfunction and injury, if not use.
- ❑ Insert the battery with proper polarities (+) and (-) into the compartment. It may be the cause of malfunction and injury, if not insert correctly.
- ❑ Do not short-circuit the battery. Failure to do so may lead to fluid leakage, heat generation or bursting, and resulting in injury.
- ❑ Do not heat the battery. Failure to do so may lead to fluid leakage, bursting, and resulting in injury.
- ❑ Prevent the device from chewing and bending. It may be the cause of malfunction and injury, if it is chewed and bended.
- ❑ We recommend that you read through this manual carefully before using the device for the first time.

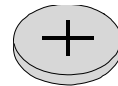
Contraindications

The following are precautions for proper use of the device.

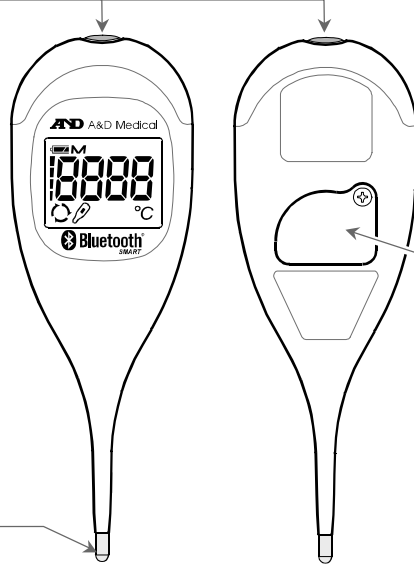
- ❑ Do not use the device where flammable gases such as anesthetic gases are present. It may cause an explosion.
- ❑ Do not use the device in highly concentrated oxygen environments, such as a high-pressure oxygen chamber or an oxygen tent. It may cause a fire or explosion.

Parts Identification

ON / Standby switch with LED.



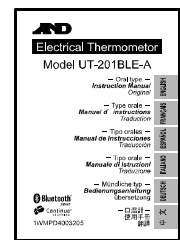
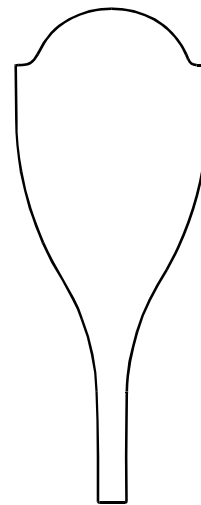
Battery : CR2032



Battery cover on the battery compartment

Case

Temperature sensor



This manual

Display

Communication mark

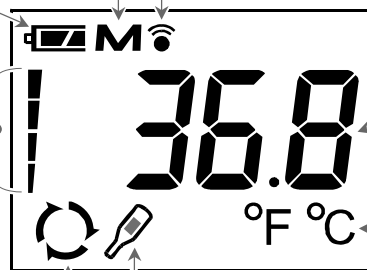
Memory mark

Battery indicator

Count down indicator for measurements

Prediction measurement mark

Real time measurement mark





















Temperature value

Units of temperature

Symbols

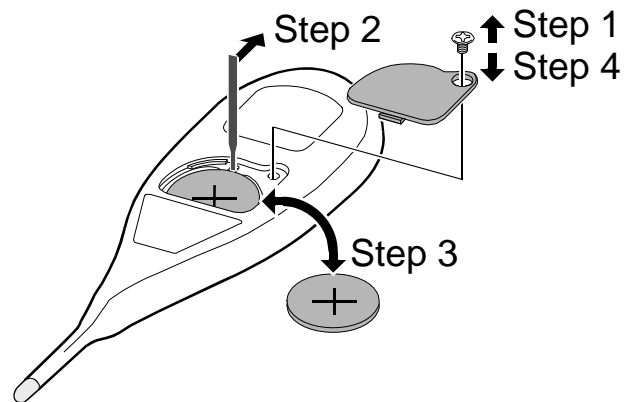
Symbols that are displayed on the device

Symbols	Function / Meaning
	Standby and turn on the thermometer.
M	Last reading is stored in memory when the mark is displayed.
	Full battery mark.
	Low battery mark : A half of the battery capacity was consumed.
	Battery is low when it blinks. Replace a battery with new one.
H	Temperature is above 42 °C during measurement.
L	Temperature is below 32 °C during measurement.
HH	Thermometer or room temperature is above 40 °C.
LL	Thermometer or room temperature is below 10 °C
Err 1	Measurement is not correct. Check the way of use.
Err 2	Malfuction of thermometer. Contact your dealer.
E-10	Time out of bluetooth communication.
E-11	Bluetooth communication error.
	Bluetooth communication mark.
P_r	Pair mark to construct bluetooth communication pair.
	Prediction measurement mark.
	Equilibrium measurement mark.
°C °F	Temperature units of Celsius and Fahrenheit.
	Count down indicator for measurements means a waiting time until displaying temperature. This indicator may includes few timing error in process.
	Direct current.
	Type BF : Device is designed to provide special protection against electrical shocks.
CE ₀₁₂₃	EC directive medical device label
	EU-representative
	Manufacturer
2016 	Date of manufacture
	Not waterproof
	Class II device
	WEEE label
SN	Serial number
BT	Bluetooth address
	Refer to instruction manual/booklet
	Negative electrode



Using the Thermometer

Installing / Changing the Battery

1. Remove the battery cover.
2. Remove the used battery with a stick.
3. Insert new one into the battery compartment as shown, taking care that the polarities (+) and (-) are correct.
4. Replace the battery cover.
Use only CR2032 battery.



Caution

- Insert the battery as shown in the battery compartment. If installed incorrectly, the device will not work.
- When  (Low battery mark) blinks in the display, replace battery with new one. Replace the battery after the device turns off and wait for two seconds or more.
-  (Low battery mark) does not appear when the battery is drained.
- Use the specified battery only. The battery provided with the device is for testing thermometer performance and may have a limited life.
- Remove the battery if the device is not to be used for a long time.
The battery may leak and cause a malfunction.
- 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.

Using the Thermometer

Wireless Function

Caution

- ❑ In the unlikely event that this thermometer causes radio wave interference to a different wireless station, change the location where this thermometer is used or stop use immediately.
- ❑ Be sure to use in a location where visibility between the two devices that you want to connect is good. The connection distance is reduced by the structure of buildings or other obstructions. In particular, connection may be impossible when devices are used on either side of reinforced concrete.
- ❑ Do not use *Bluetooth*® connection in the range of a wireless LAN or other wireless devices, near devices that emit radio waves such as microwaves, in locations where there are many obstructions, or in other locations where signal strength is weak. Doing so may result in frequent loss of connection, very slow communication speeds and errors.
- ❑ Using close to an IEEE802.11g/b/n wireless LAN device may cause mutual interference to occur, which may result in reduced communication speeds or which may prevent connection. In this case, switch off the power supply to the device that is not being used, or use the thermometer in a different location.
- ❑ If the thermometer does not connect normally when used near a wireless station or broadcast station, use the thermometer in a different location.
- ❑ A&D Company, Limited cannot accept liability for any damages incurred due to impaired operation or data loss, etc. that occur through the use of this device.
- ❑ This device is not guaranteed to connect to all *Bluetooth*® compatible devices.

Using the Thermometer

Bluetooth® Transmission

This device is equipped with a *Bluetooth®* wireless function and can connect to the following *Bluetooth®* devices.

- Continua certified devices
- iPhone, iPad, iPod (iPhone 4S or later)
- Applications and devices that are compatible with Bluetooth 4.0.

Each device needs an application to receive data.

For connection methods, refer to the manual for each device.



Bluetooth® Smart devices carry the *Bluetooth®* Smart logo mark.



Continua certified devices carry the Continua logo mark.

Using the Thermometer

Pairing



A *Bluetooth*® device needs to be paired with a different specific device in order to communicate with that device. If this thermometer is paired with a receiver device from the start, measurement data is transmitted automatically to the receiver device each time a measurement is made.

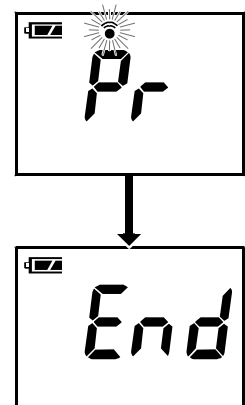
Cautions for Pairing

- ❑ Only one device can be paired with this thermometer at one time. If the receiver device cannot receive measurement data, try pairing again
- ❑ If another receiver device is paired, the first device will be unpaired to enable the new device to be paired.

Follow the steps below to pair the thermometer with a *Bluetooth*® compatible receiver device. Also refer to the manual of the receiver device. Please use a pairing wizard if one is provided.

Pairing Procedure

1. Follow the instructions in the manual of the receiver device to switch it to the pair able status. When pairing this thermometer, place it as close as possible to the receiver device to be paired with.
2. Install the battery as described on page 7.
Press the  switch to turn the thermometer on.
Press the  switch while "L" is displayed.
The thermometer can be found by the receiver device while "Pr" is displayed for approx. one minute.
3. Find, select and build a pair with the receiver device in accordance with its manual. When the pairing of the receiver device is built, "End" of the decision of the pairing is displayed.
4. If "E-10" is displayed or pairing is failed, remove the battery and try steps 1 to 3 again.
5. Follow the manual of the pairing receiver device to search for, select and pair with this thermometer.



Communication Distance

The communication distance between this thermometer and the receiver device is approximately 5 m.

This distance is reduced by the conditions in the surrounding environment, so be sure to check that the distance is short enough for a connection to be made after measurement is complete.

Using the Thermometer

Measurement and Transmitting Data

The communication performs the following steps after building the pairing. Keep the condition of the receiver device so as to communicate.

1. Turn on the thermometer. Data is measured automatically.
2. Data is transmitted after finishing the measurement.

Transmitting Temporarily Stored Data

In cases when the receiver device cannot receive measurement data, the measurement data is temporarily stored in the thermometer memory. The data stored in the memory is transmitted the next time a connection is successfully made to the receiver device


A total of 90 sets of measurement data can be stored. When the amount of data exceeds 90 sets, the oldest data is deleted and the new data is stored. The amount of data that can be stored temporarily may vary with the application.

Time

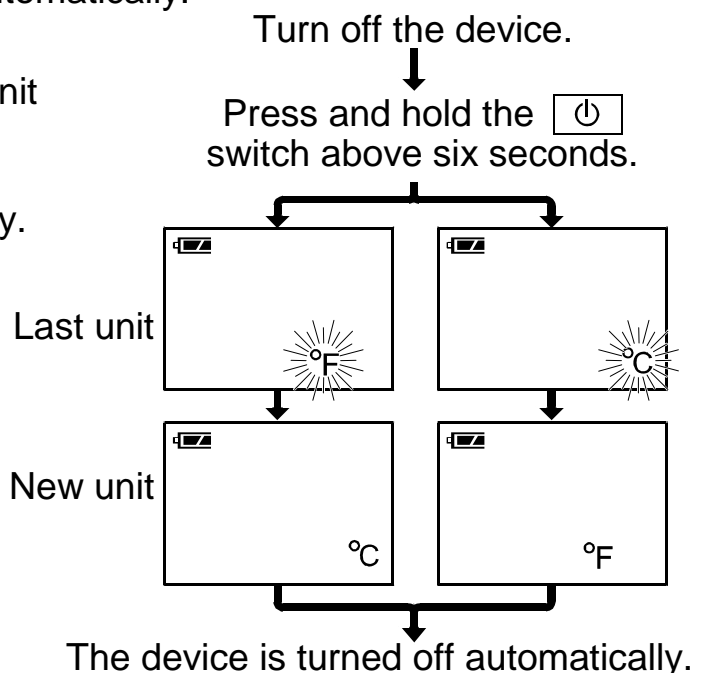
This thermometer has a built-in clock. The date and time that a measurement was taken is included in the measurement data.

The built-in clock is designed to be automatically adjusted by syncing with the clock of a receiver device. Refer to the specifications of the receiver device. This thermometer has no clock adjustment function.

Changing Units

1. Press and hold the  switch above 6 seconds when turning off the thermometer. New unit is displayed after blinking a last unit. The thermometer is turned off automatically.
2. When the same operation is performed again, an effective unit is exchanged.

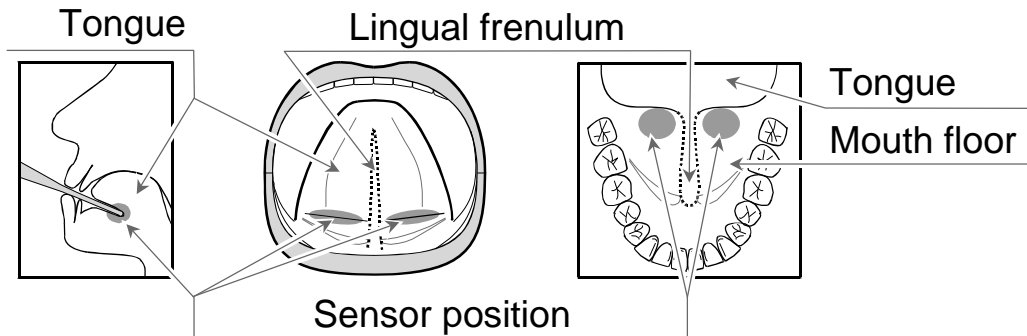
The unit is stored in the memory. The unit of the factory setting is °C (centigrade).



Using the Thermometer

Applying the Thermometer

- ❑ Put the thermometer sensor on the mouth floor under the tongue, at the root of the tongue and at the side of the lingual frenulum.
- ❑ Keep the position of the sensor during measurement




Measurement Time

- ❑ When the prediction measurement is used, keep the sensor position for approximately 30 seconds with placing the sensor at a correct position in the mouth.
- ❑ When the equilibrium measurement is used, keep the sensor position for approximately 5 minutes with placing the sensor at a correct position in the mouth.

We recommend to use the equilibrium measurement for a precision thermometry.




After Measurement

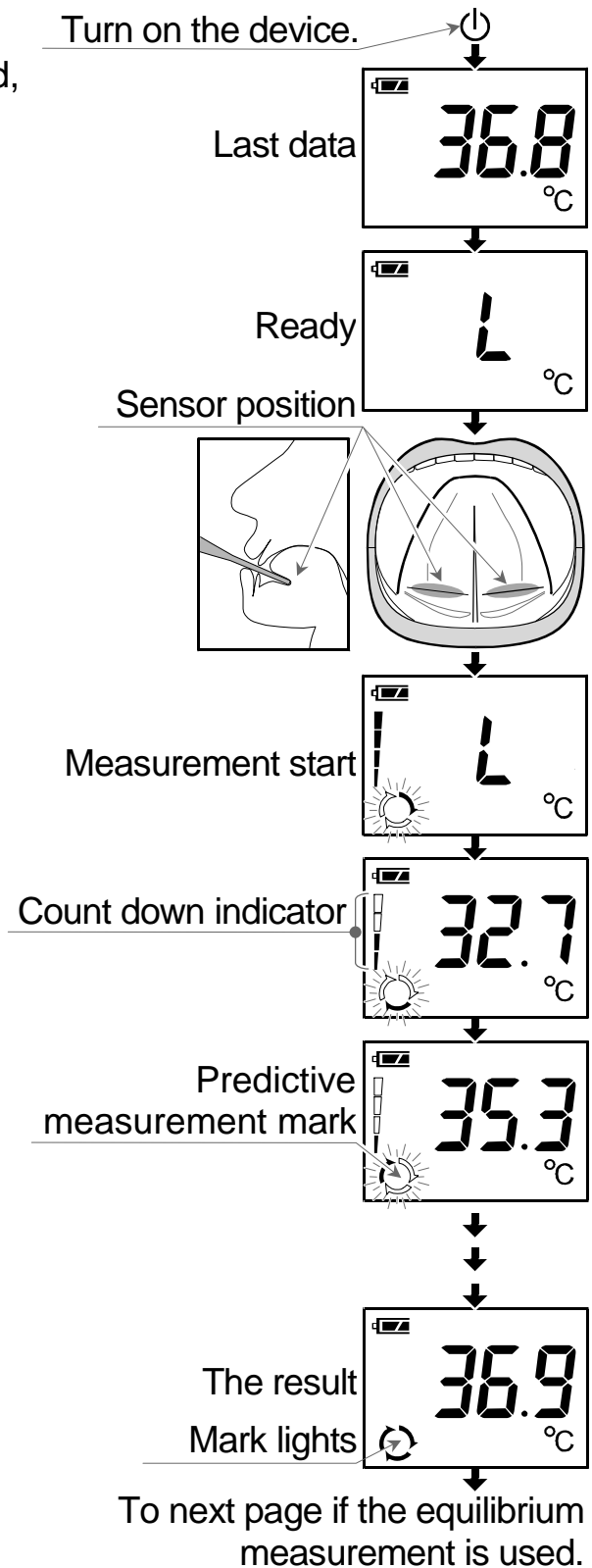
After measurement, press and hold the  switch for one or more seconds to turn off the device.

Note: The device has an automatic power shut-off function, which turns the power off approximately one minute after measurement.

Measurements



Predictive Measurement

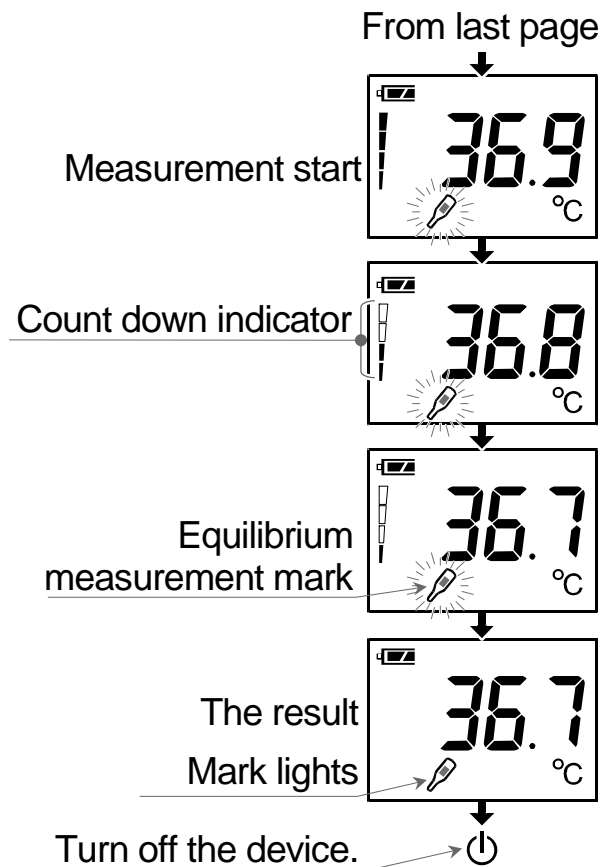
1. Press the  switch.
When the last measurement is stored, it is displayed approximately two seconds.
2. Wait until "L" is displayed.
3. Put the temperature sensor on the mouth floor (under the tongue, at the root of the tongue and at the side of the lingual frenulum).
Close the mouth gently.
4. keep the sensor position during measurement for approximately 30 seconds.
5. The count down indicator is displayed.
The predictive measurement mark blinks and rotates.
6. The result is displayed for approximately 15 seconds, the predictive measurement mark lights, the LED of the  switch blinks and buzzer sounds when the predictive measurement finishes.
7. Select an operation.
 - Press the  switch to turn off the thermometer.
 - Keep the sensor position to use the equilibrium measurement. Proceed to next page.




Measurements

Equilibrium Measurement

8. When the equilibrium measurement starts, the mark blinks. Keep the sensor position for approximately five minutes.
9. The result is displayed for approximately one minute, the equilibrium measurement mark lights, the LED of the  switch blinks and buzzer sounds when the equilibrium measurement finishes.
10. Press and hold the  switch to turn off the device.



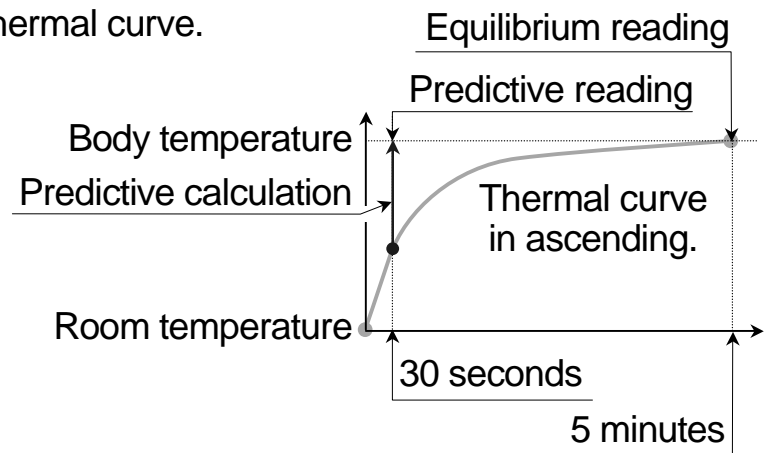
Notes for Accurate Measurement

- The **M** mark lights when the data is stored in memory.
- The equilibrium measurement is performed after the predictive measurement is finished.
- The device is provided with an automatic power shut-off function with the buzzer that the device is turned off at approximately one minute later from removing it or displaying data. The device can be turned off when pressing and holding the  switch.
- In measurement, breathe with using nose and closing mouth.
- Should the device detect a condition that is abnormal, it will stop the measurement and display an error symbol. See page 6 for the description of the symbols.
- This thermometer is intended for use by adults only. Consult with your physician before using this device on a child. A child should not use this device unattended.

Features

Predictive Measurement


- The predictive measurement calculates the equilibrium temperature after five minutes when the body temperature is measured for 30 seconds. It is based on an ascending thermal curve. If you need a precision data, we recommend to use the equilibrium measurement for a precision thermometry.



Equilibrium Measurement

- The body temperature can be measured using for five minutes.

Switch with Flash Action

- When pressing the  switch, this switch flashes. When finishing the measurement, this switch flashes.

Last Reading Display and Memory

- The previous reading stored in memory is automatically displayed when turning on the thermometer. The new reading is stored in memory when measuring the temperature.

Temperature Unit

- Temperature unit of Celsius or Fahrenheit can be selected.

Bluetooth®

- Temperature data can be transmitted to the receiver that is paired with the thermometer.

Troubleshooting

Problem	Possible Reason	Recommended Action
Nothing appears in the display, even when the power is turned on.	Battery is drained.	Replace a battery with new one.
	Battery terminals are not in the correct position.	Reinstall the battery with negative and positive terminals matching those indicated on the battery compartment.
No measurement	Battery power is low. If the battery is drained completely, the mark does not appear.	Replace a battery with new one.
Normal body temperature includes error.	Temperature will change at awaking, in activity, after eating.	Measure the same temperature condition.
Body temperature is displayed low.	Incorrect sensor position	Check the sensor position.
Body temperature is displayed high.	The device calculates a equilibrium temperature after five minutes. Therefore, it includes error.	Measure after several minutes again or use the equilibrium measurement.
Data transmission error	The pairing is not established.	Place the device in proximity of the receiver. Make a pairing.
	Battery is not enough.	Replace battery to new one.

Note: If the actions described above do not solve the problem, contact the dealer. Do not attempt to open or repair this device, as any attempt to do so will make your warranty invalid.

Maintenance

Maintenance

- ❑ Do not open the device. It uses delicate electrical components and an intricate air unit that could be damaged. If you cannot fix the problem using the troubleshooting instructions, request service from your dealer or from the A&D service group. The A&D service group will provide technical information, spare parts and units to authorized dealers.
- ❑ The device was designed and manufactured for a long service life. However it is generally recommended to have the device inspected every two years, to ensure proper functioning and accuracy. Please contact the authorized dealer in your area or A&D for maintenance.

Cleaning

- ❑ Clean the device with a dry, soft cloth or a cloth dampened with water and a neutral detergent and wrung tightly.
- ❑ Wipe the temperature sensor of the device with a cloth to soak disinfectant ethanol (76.9 to 81.4 v/v%).

Storage

- ❑ Store the device with avoiding extremes in temperature, humidity, direct sunlight, vibration, shock, dust or fire. Keep it put into the case with dry air and room temperature.


Cautions

- ❑ The device is not waterproof device. Do not splash water on it and avoid exposure to moisture.
- ❑ Do not use a organic solvent such as thinner or benzene.
- ❑ The device can not be sterilized by autoclave, EOG or formaldehyde etc.

Regular Inspection

- ❑ The thermometer is a precision device. Therefore, inspect in regularly. Request an inspection to the dealer where you have purchased the device when the device is in needs of an inspection.

Technical Data

Name	UT-201BLE-A
Measurement method	Prediction measurement using thermistor, Equilibrium measurement using thermistor
Region for measurement	Oral, under tongue
Temperature sensor	Thermistor
Measurement range	32.0 to 42.0 °C (89.6 to 107.6 °F)
Measurement accuracy	±0.1 °C
Measurement time	Prediction measurement : Approx. 30 seconds Equilibrium measurement : Approx. 5 minutes
Display	3 digits, resolution 0.1 °C 4 digits, resolution 0.1 °F
Power supply	CR2032 x1 (3V Lithium battery) Use only battery that conforms to the IEC 60086-4.
Battery life	Prediction measurement : Approx. 350 times Equilibrium measurement : Approx. 120 times
Useful life	5 years
Wireless communication	Bluetooth® Ver.4.0, low energy, HTP
EMC	IEC 60601-1-2 : 2007
Memory	Last measurement
Classification	Internally powered ME equipment Continuous operation mode
Applied part	Type BF 
Operating conditions	+10 °C to +40 °C / 15 %RH to 85 %RH 800 kPa to 1060 kPa
Transport / Storage conditions	-20 °C to +60 °C / 15 %RH to 95 %RH 700 kPa to 1060 kPa
Dimensions	Approx. 40 [W] x 117 [H] x 15 [D] mm
Weight	Approx. 25 g including battery
Accessory	Case, a temporary battery, this instruction manual

Note: Specifications are subject to change for improvement without prior notice.

Medical Electrical Equipment needs special precautions regarding EMC and needs to be installed and put into service according to the EMC information provided in the following. Portable and mobile RF communication equipment (e.g. cell phones) can affect Medical Electrical Equipment.


The use of accessories and cables other than those specified may result in increased emissions or decreased immunity of the unit.

Guidance and manufacturer's declaration – electromagnetic emissions		
The A&D unit is intended for use in the electromagnetic environment specified below. The customer or the user of the A&D unit should assure that it is used in such an environment.		
Emissions test	Compliance	Electromagnetic environment – guidance
RF emissions CISPR 11	Group 1	The A&D unit 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 A&D unit 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	Class A	
Voltage fluctuations / flicker emissions IEC 61000-3-3	N.A.	

Recommended separation distances between portable and mobile RF communications equipment and the A&D unit			
The A&D unit is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the A&D unit can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the A&D unit 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	0.12	0.12	0.23
0.1	0.38	0.38	0.73
1	1.2	1.2	2.3
10	3.8	3.8	7.3
100	12	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.			
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.			

Guidance and manufacturer's declaration – electromagnetic immunity

The A&D unit is intended for use in the electromagnetic environment specified below. The customer or the user of the A&D unit should assure that it is used in such an environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment – guidance
Conducted RF IEC 61000-4-6 Radiated RF IEC 61000-4-3	3 V _{rms} 150 kHz to 80 MHz 3 V/m 80 MHz to 2,5 GHz	3 V _{rms} 3 V/m	Portable and mobile RF communications equipment should be used no closer to any part of the A&D unit, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance: $d = 1.2\sqrt{P}$ $d = 1.2\sqrt{P}$ 80 MHz to 800 MHz $d = 2.3\sqrt{P}$ 800 MHz 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 meters (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, ^a should be less than the compliance level in each frequency range. ^b Interference may occur in the vicinity of equipment marked with the following symbol: 

NOTE 1 At 80 MHz and 800 MHz, 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.

^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 A&D unit is used exceeds the applicable RF compliance level above, the A&D unit should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the A&D unit.

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

Guidance and manufacturer's declaration – electromagnetic immunity

The A&D unit is intended for use in the electromagnetic environment specified below.
The customer or the user of the A&D unit 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	± 2 kV for power supply lines ± 1 kV for input/output lines	N.A.	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	± 1 kV differential mode ±2 kV common mode	N.A.	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% U_T (> 95% dip in U_T) for 0.5 cycle 40% U_T (60% dip in U_T) for 5 cycles 70% U_T (30% dip in U_T) for 25 cycles < 5% U_T (> 95% dip in U_T) for 5 s	N.A.	Mains power quality should be that of a typical commercial or hospital environment. If the user of the A&D unit requires continued operation during power mains interruptions, it is recommended that the A&D unit 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	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.

NOTE : U_T is the AC mains voltage prior to application of the test level.

AND

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