Model: JPD-FR401
1byone Products Inc.
2313 E Philadelphia Street, Unit M, Ontario, CA 91761
www.1byone.com

Infrared Thermometer

Instruction Manual

Introduction

Thank you for choosing 1byone infrared thermometer. This infrared thermometer tests body temperature by measuring the ear and forehead, making it suitable for both adults and children (noting that ear test mode is only suitable for children over 3 months). Please read the instruction manual carefully and keep it for future reference.

1. Necessary Safety Instructions

- The device is not suitable for newborn babies.
- The device is not suitable for continuous monitoring.
- The device is not waterproof. Please do not douse with water or other liquids. Cleaning and disinfecting procedures should comply with the instructions specified in the Cleaning and Disinfection section.
- Please DO NOT use this device if the sensor or other product part has been damaged. DO NOT try repairing this device yourself. Please seek the help of a qualified professional.
- This device consists of precision, high-quality parts. Please do not drop this device. Protect the device against possible severe shocks or vibrations. DO NOT try forcing apart this device.

- **Operating Conditions:**
  Temperature: 10℃ to 40℃ (50℉ to 104℉)
  Humidity: ⩽80% RH, non-condensing
  Atmospheric pressure: 860hPa to 1060hPa
- **Storage and Shipping:**
  Temperature: 10℃ to 55℃ (50℉ to 131℉)
  Humidity: ⩽93% RH, non-condensing
  Atmospheric pressure: 860hPa to 1060hPa
- **Battery Installation:**
  Insert two AAA batteries into battery compartment using correct polarities and snap the battery cover back in place.
  Put back the battery cover.

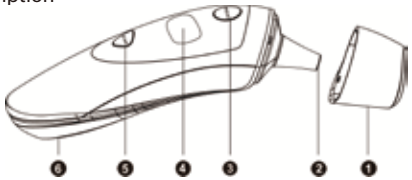
Notes:

1. Battery polarities should be correctly installed. Otherwise damage may be caused to the device.
2. Please remove the batteries if the thermometer will not be used for an extended period of time.

Warnings

- Please keep this infrared thermometer out of children's reach.
- This infrared thermometer should not replace professional medical assistance.
- The infrared thermometer is not waterproof, and should be kept away from water.

2. Product Description



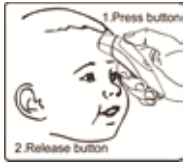
❶ Probe cover (put on when using HEAD mode)
❷ Probe (take off cover when using EAR mode)
❸ Head mode
❹ LCD display
❺ Ear mode
❻ Battery cover

Display Description

1. Ambient temperature
2. Ready for measurement
3. Ear mode
4. Head mode
5. ℃ / ℉
6. Low power indicator
7. Memory mode
8. Digits

3. Measuring Forehead Temperature

1. With the sensor/probe cover attached, position the thermometer at the center of the forehead, just above the eyebrow. Ensure that the thermometer is touching the forehead.
2. Press and release the HEAD button.The temperature will be instantly displayed on the screen.



4. Measuring Ear Temperature

1. Gently remove the probe cover to reveal the ear probe.
2. Insert the ear probe into the ear canal.
3. Press and release the EAR button. The temperature will be instantly displayed on the screen.

Note:

Children under 1 year: Pull the ear straight back when measuring as illustrated in pictures 3.
Children who are older than one year and adults: Pull the ear up and back when measuring as illustrated in picture 4.

To avoid inaccuracy:

1. Please make sure there is no dirt in and on the temperature sensor.
2. Do not use the thermometer in a windy environment.
3. Make sure the forehead is free of dirt, water, sweat, and obstructions/coverings when taking a temperature in HEAD mode.
4. Please clean the ear canal before taking a temperature in EAR mode.
5. Limit movement and stress before taking a temperature.
6. Wait 30 minutes to use the thermometer if it has been moved to a new location with a very different ambient temperature (such as from a hot environment outside to an air-conditioned environment inside).
7. Wait 10 minutes to take a person's temperature if he or she has just moved to a new location with a very different ambient temperature.
8. Do not hold the thermometer for a long time as it is highly sensitive to heat. It has undergone strict clinical testing, and is safe and accurate when used in accordance with this instruction manual.

5. Operation and Display Instructions

LCD display	Operation and Display Instructions	Sound and backlight
	1. Measurement of forehead temperature: Position the thermometer at the center of the forehead above the eyebrows. With the thermometer touching the forehead, press and release the HEAD button. The temperature will be displayed on the LCD screen. 2. Measurement of ear temperature: Insert the thermometer ear probe into the ear canal. Press and release the EAR button. The temperature will be displayed on the LCD screen.	When the temperature is between 0°C/32.0°F, and 37.5°C/99.5°F, there will be a long beep and a green backlight for 3 seconds. When the temperature is between 37.6°C/99.6°F, and 42.2°C/107.9°F, there

	3. Press the HEAD or EAR button again to make another temperature measurement.	will be 7 short beeps and the reading will blink with a red backlight for 3 seconds. This indicates the subject may have a fever. Please consult your doctor if you are not sure.
	Head measurement mode	
	Ear measurement mode	

	The measured temperature exceeds 100°C/212°F.	3 short beeps with a red backlight for 3 seconds.
	The measured temperature is below 0°C/32.0°F.	3 short beeps with a red backlight for 3 seconds.

Viewing stored temperature readings (20 total)

LCD display	Operation and Display Instructions	Sound and backlight

	When the thermometer is off, press and hold the EAR button for 3 seconds and the LCD will display "- - -" with a blinking "M."	None
	Press the EAR button again and the LCD will display the number "1" and letter "M." After 1 second, the most recent temperature measurement will appear. The Ambient, ear, or head icon will also be displayed to show the mode. To view the second most recent measurement, press the EAR button again. The number "2" and letter "M" will be displayed and the temperature measurement will appear after 1 second.	None

	Repeat the previous steps to view the remaining saved measurements (up to 20 total).	None
	The LCD will display "- - -" with a blinking "M" if there is no stored measurements.	None

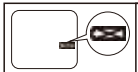
°C/°F conversion

LCD display	Operation and Display Instructions	Sound and backlight
	When the thermometer is off, press and hold the EAR button for 5 seconds.	None

	Release the EAR button when "°C" or "°F" appears on the LCD. Press the EAR button again within 5 seconds to change the temperature unit.	

Error messages

	LCD will display "Er1" when ambient temperature exceeds 40.0°C/104.0°F or drops below 10.0°C/50.0°F.	3 short beeps and red backlight for 3 seconds.
	LCD will display "ErC" if the thermometer has a malfunction and cannot take a temperature reading. If this error appears, please contact Customer Service.	3 short beeps and red backlight for 3 seconds.

	The voltage of the batteries has fallen below 2.51V±0.15V and should be replaced.	None

Power-off

The thermometer will power off automatically if no activity is detected for 10 seconds.

Attention:

- Electromagnetic interference: This product contains sensitive electromagnetic components and should not be stored or placed in areas of strong electromagnetic interference (such as near microwaves or mobile phones).
- Please take out the batteries if this product will not be used for an extended period of time.

6. Cleaning and Disinfecting

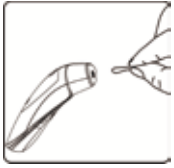
Cleaning

1. Clean the temperature probe with a soft cloth. Clean the lens of the temperature probe with a cotton swab.
2. Wipe the thermometer body with a slightly damp soft cloth, and gently dry the body with tissue.

⚠ Keep water off the lens during cleaning. Otherwise the lens may be damaged.

⚠ Using tissue to clean the lens may result in scratches and inaccurate temperature reading.

⚠ Do not clean the thermometer with corrosive cleansers. During the cleaning process, do not touch the lens using hard objects, immerse any part of the thermometer into liquid, or allow liquid to enter the thermometer.



Disinfecting

1. Disinfect the thermometer body and the area around the temperature probe with a cloth slightly moistened with 75% medical alcohol.

⚠ Do not disinfect using hot steam or ultraviolet radiation, as this may cause damage or wear to the thermometer.

7. Maintenance

1. After each use, clean the temperature probe as described in the "Cleaning and Disinfecting" section.
2. Store the thermometer in a dry, dust-free, and well-ventilated place. Ensure the thermometer is not exposed to sunlight. Ensure storage and transportation environments meet the requirements.

8. Replacing the batteries

Slide the battery cover off in the direction marked on the cover. Insert 2 AAA batteries into the compartment using the correct polarity.

9. Troubleshooting

Symptom	Possible Cause	Solution
The thermometer fails to power on.	The battery level is extremely low.	Replace with new batteries.
	Polarities of the batteries are reversed.	Ensure that the batteries are correctly installed according to the polarity symbols in the battery compartment.
	The thermometer is faulty.	If the warranty has not yet expired, contact Customer Service.
Only the battery symbol is displayed after the thermometer has powered on.	The battery level is low.	Replace with new batteries.
"Er1" is displayed.	The ambient temperature is lower than 10°C (50.0°F) or higher than 40°C (104°F).	Take the measurement in an environment with an ambient temperature between 10°C (50.0°F) and 40°C (104°F).

"ErC" is displayed.	An error occurred when writing measurement data to memory or the temperature measurement could not be taken.	Contact Customer Service.
The temperature reading is lower than the typical body temperature range.	The lens of the temperature probe is dirty.	Clean the lens using a cotton swab.
	The distance between the temperature probe and the target is too great.	Move the thermometer closer to the target.
	The thermometer has been used within 30 minutes after being moved from a cold to a warm environment.	Wait for at least 30 minutes to use the thermometer after it has moved from the cold to warm environment.

The temperature reading is higher than the typical body temperature range.	The temperature probe is faulty.	Contact Customer Service.

10. Technical Specifications

Items	Standards
Model	1byone Infrared Thermometer
Applicable laws and regulations	ASTM 1965/EN12470-5/GB/T 19146-2010
Temperature units	℃ / ℉
Measurement range	Head mode temperature: 0.0℃-100℃ / 32℉-212℉ Ear mode temperature: 0.0℃-100℃ / 32℉-212℉

Precision	±0.2 ℃ / ±0.4 ℉
Displayed measurement resolution	0.1 ℃ / 0.1 ℉
Latency Time	1 second
Low-voltage display function	The thermometer shall display the low-voltage signal if the voltage is elow 2.51V±0.15V.
Memory function	Stores 20 most recent temperature measurements.
Operational conditions	ASTM 10℃-40℃ (50℉-104℉)； ≤80% RH, non-condensing.
Measuring areas	Applicable for forehead and inner-ear temperatures
Batteries	2 x AAA

11. Security Type

The signal indicates that the thermometer is a BF-type device with internal power supply.

12. Authorized European Representative

EC REP Wellkang Ltd
Suite B, 29Harley Street, London, W1G9QR,UK.

13. Symbols

Symbol	Description
	BF-type applied part.
	Attention must be paid.
	Manufacturer information, such as name and address.
	Please read the instructions carefully.
	Electronic waste should be sent to a dedicated collection point for recycling.

⚠ Warning	Personal injury or thermometer damage may occur if the thermometer is not correctly used.
⚠ Attention	Inaccurate readings or thermometer damage may occur if the thermometer is not correctly used.

14.Declaration

EMC of this product complies with IEC60601-1-2 standard.
The materials which the user may come into contact have no toxicity and no action on tissues and comply with ISO10993-1, ISO10993-5, and ISO10993-10.

15. Appendix A: EMC Information-Guidance and Manufacture's Declaration

⚠ CAUTION:

- This infrared Thermometer needs special precautions regarding EMC and needs to be installed and put into service according to the EMC information provided for in the ACCOMPANYING DOCUMENTS.
- Portable and mobile RF communications equipment can affect the Infrared Thermometer.
- The Infrared Thermometer should not be used adjacent to or stacked with other equipment.

Guidance and manufacturer´s declaration – electromagnetic emission – for all EQUIPMENT AND SYSTEMS

Guidance and manufacturer´s declaration – electromagnetic emission
The Infrared Thermometer is intended for use in the electromagnetic environment specified on the following page. The customer or the user of the Infrared Thermometer should assure that it is used in such an environment.

Emissions test	Compliance	Electromagnetic environment - guidance
RF emissions CISPR 11	Group 1	The Infrared Thermometer 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 Infrared Thermometer 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.

Guidance and manufacturer's declaration – electromagnetic immunity – for all EQUIPMENT and SYSTEMS

Guidance and manufacturer´s declaration – electromagnetic immunity			
The Infrared Thermometer is intended for use in the electromagnetic environment specified below. The customer or the user of the Infrared Thermometer 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%.

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.

Guidance and manufacturer´s declaration – electromagnetic immunity – for EQUIPMENT and SYSTEM that are not LIFE-SUPPORTING

Guidance and manufacturer´s declaration – electromagnetic immunity
The Infrared Thermometer is intended for use in the electromagnetic environment specified on the following page. The customer or the user of this Infrared Thermometer should assure that it is used in such an environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment guidance
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	3 V/m	Portable and mobile RF communications equipment should be used no closer to any part of the Infrared Thermometer, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance $d = [\frac{3.5}{V_1}]\sqrt{P}$ $d = [\frac{3.5}{E_1}]\sqrt{P}$ 80 MHz to 800 MHz $d = [\frac{7}{E_1}]\sqrt{P}$ 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 metres (m). Field strengths from fixed RF transmitters, as determined by an Electromagnetic site survey, should be less than the compliance level in each frequency range. 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. Its electromagnetic ability 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 Infrared Thermometer is used exceeds the applicable RF compliance level above, the Infrared Thermometer should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating it.

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

Recommended separation distances between portable and mobile RF communications equipment and the EQUIPMENT or SYSTEM -for EQUIPMENT and SYSTEMS that are not LIFE-SUPPORTING

Recommended separation distances between portable and mobile RF communication equipment and the Infrared Thermometer.

The Infrared Thermometer is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of it can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the Infrared Thermometer as recommended on the following page, 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 $d=[\frac{3.5}{V_1}]\sqrt{P}$	80 MHz to 800 MHz $d=[\frac{3.5}{E_1}]\sqrt{P}$	800 MHz to 2,5 GHz $d=[\frac{7}{E_1}]\sqrt{P}$
0.01	/	0.12	0.23
0.1	/	0.38	0.73
1	/	1.2	2.3
10	/	3.8	7.3
100	/	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in metres (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.

Disposal

Disposal of the appliance

Under no circumstances should you dispose of the appliance in normal domestic waste. This product is subject to the provisions of European Directive 2012/19/EU.

Dispose of the appliance via an approved disposal company or your municipal waste facility. Please observe currently applicable regulations. Please contact your waste disposal center if you need any further information.

Disposal of batteries

Used batteries may not be disposed of in household waste.

All consumers are statutorily required to dispose of batteries at a collection point provided by their local municipality or retail store. The purpose of this obligation is to ensure batteries are disposed of in a non-polluting manner. Only dispose of batteries when they are fully discharged.

The appliance's packaging is made from environmentally friendly material and can be disposed of at your local recycling plant.