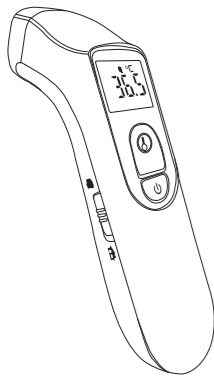




64700 Non-Contact Infrared Thermometer MODEL A200

User Manual



PLEASE NOTE: THIS MEDICAL INSTRUMENT MUST BE USED ACCORDING TO INSTRUCTIONS TO ENSURE ACCURATE READINGS.

File No.: V 1.2 2020/02

Turn ON/OFF the Led Light This meter provides Led Light to help users placing the thermometer at the correct position.

Be sure the thermometer is OFF before selecting the temperature unit.

- Long-press the Measurement Button for seconds until Signal -- C or F displayed on the LCD panel.
- Release the measurement button, then short-press the ON/OFF Button, the signal -- LED or OFF will displayed on the LCD panel as figure shown.
- Quick press the measurement button, and select LED or OFF to turn ON/OFF the Led Light.

REPLACING THE BATTERY The thermometer comes with two 1.5 V AAA alkaline batteries. The meter will display "Low Battery" to alert you when the meter power is getting low, please follow the steps below to replace new batteries immediately.

- Remove the battery cover as the arrow direction accordingly.
- Remove the old batteries and replace with two 1.5V AAA size alkaline batteries. Taking care to match the Positive (+) and Negative (-) indications

System Owner Thank you for purchasing the Infrared Thermometer. Please read this instruction manual first, so you can use this thermometer safely and correctly. Please keep this instruction manual for future reference.

This innovative medical device uses advanced infrared (IR) technology to measure temperature instantly and accurately on the forehead or object.

IMPORTANT SAFETY INSTRUCTIONS READ BEFORE USE

The following basic safety precautions should always be taken.

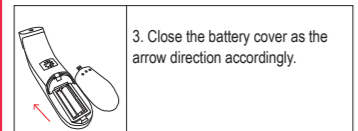
- Close supervision is necessary when the thermometer is used by, on, or near children, handicapped persons or invalids.
- Use the thermometer only for the intended use described in this manual.
- Do not use the thermometer if it is not working properly, or if it has suffered any damage.

KEEP THESE INSTRUCTIONS AT A SAFE PLACE

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NOTE:

- Although the thermometer works when "Low Battery" appearing, we still recommend that you change the batteries to obtain an accurate result.
- Remove the batteries if stored for a long period of time. The batteries should be kept away from children's reach.
- If they are swallowed, promptly see a doctor for help.

DETAILED INFORMATION

About Normal Body Temperature & Fever
The temperature in the forehead and temple area differs from the internal temperature, which is taken orally or rectally. Vasoconstriction, an effect which constricts the blood vessels and cools the skin, can occur during the early stages of a fever. In this case, the temperature measured by the 2 Infrared thermometer may be unusually low. If the measurement therefore does not match the patient's own perception or is unusually low, repeat the measurement every 15 minutes. As a reference, you can also measure the internal body temperature using a conventional oral or rectal thermometer. Body temperature can vary from one individual/person to next. It also varies by location on the body and time of 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 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

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PERFORM THE TEST Using the Device As a Body Measurement Thermometer As an Object Measurement Thermometer

MEMORY Recalling the Memory Clear the Memory

MAINTENANCE Care & Cleaning

FAULT INDICATION SYMBOL INFORMATION DISPOSAL OF DEVICE REFERENCE OF STANDARDS WARRANTY

BEFORE YOU BEGIN

Cautions and Warnings

- As with any thermometer, proper technique is crucial to obtaining accurate temperature readings. Please read this manual thoroughly and carefully before using.
- Always operate the thermometer in an operating temperature range 10°C to 40°C (50°F to 104°F), and relative humidity 15 to 95%.
- Always store the thermometer in a cool and dry place -25°C to 55°C (-13°F to 131°F) and relative humidity 15% to 95%.
- The device requires no calibration.
- The device contains no user serviceable parts.
- The user must check that the equipment functions safely and see that it is in proper working condition before being used.
- The manufacturer does not require such preventive inspections by other persons.
- No modification of this equipment is allowed.
- The device is not suitable for use in the presence of flammable anesthetic mixtures with air or with oxygen or nitrous oxide.

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Oral	0.6°C (1°F) or more above or below 37°C (98.6°F)
Rectal/ear	0.3°C to 0.6°C (0.5°F to 1°F) higher than oral temperature
Axillary (armpit)	0.3°C to 0.6°C (0.5°F to 1°F) lower than oral temperature

NOTE:

- Long-press the Measurement Button for seconds until Signal -- C or F displayed on the LCD panel.
- Release the measurement button, then short-press the ON/OFF Button, the signal -- LED or OFF will displayed on the LCD panel as figure shown.
- Quick press the measurement button, and select LED or OFF to turn ON/OFF the Led Light.

Press "ON/OFF" Button to turn on the thermometer first.

Push the Mode switch to select Body mode. The device sounds one short beep when it is turned on and the temperature unit(°C or °F) flashes to confirms the readiness to perform the measurement.

Move the probe close to the forehead and take measurements. Make sure the probe is flat and close to the forehead, not at an angle. Perform a forehead measurement with a distance within 3 cm.

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- Manufacturer will provide circuit diagrams, component part lists, descriptions, calibration instructions to assist to SERVICE PERSONNEL in parts repair.
- Do not clean or maintenance the device is in use.
- Avoid direct sunlight.
- Avoid dropping the thermometer, if it happens and you think the thermometer may be damaged, please contact customer services immediately.
- Do not touch the lens.
- 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 substitute for a consultation with your physician.
- This thermometer and the subject must remain in a stable environment for at least 30 minutes before measuring the temperature.

Restrictions of Use
This thermometer is clinically proven to produce accurate temperature measurements. However, please be advised that the accuracy cannot be ensured when the thermometer is not clean. Check that the probe is clean before taking a measurement.

Intended Use
The Infrared Thermometer is intended for the intermittent measurement and monitoring of human body temperature from forehead measurement at home, clinics and hospital. A control measurement using a conventional thermometer is recommended in the following cases:

- If the reading is surprisingly low.
- For new-born infants up to 100 days old.
- For children under three years of age who have a weakened immune system or who react unusually in the presence of fever.

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Read the result. The measurement result will be done in 1 second. The reading is shown together with LED lighting and one long beep informs about the temperature measurement, and after a while another, short, confirming the saving of the result to the memory and readiness for the next measurement.

Press the "ON/OFF" button to turn off the unit, Or leave it idle for 30 seconds, the unit will switch off automatically.

NOTE:

- As the forehead measurement temperature is likely to be affected by sweat, oil and the surroundings, the reading shall be taken as a reference only.
- If the probe is placed at an angle close to the measurement, the reading will be affected by surrounding temperature. Babies' skin reacts very quickly to the ambient temperature. Therefore, do not take their temperature with the Infrared Forehead thermometer during or after breastfeeding, because the skin temperature may then be lower than the internal body temperature.
- If the measured temperature is < 32°C (89.6°F), the display will show with LO symbol.
- If the reading is ≥38°C(100.4°F) and < 42.9°C (109.22°F), the display will show together with red LCD and six short beeps.
- The thermometer will automatically turn off if left idle for 30 seconds.

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presence or absence of fever. How does it work The thermometer measures the infrared heat generated by the surface of the skin over the vessel and its surrounding tissue. The thermometer then converts it into a temperature value.

NOTE: The thermometer does not emit any infrared energy. Highlighted Features

- Measurement that does not require probe cover, thereby saving cost of replacement.
- Automatically power off if left idle for 30 seconds.
- Memory function allows you to recall previous results up to 25 previous results.
- Easy to read LCD with green backlight in a dark environment.
- Color visible of fever (red or yellow) and measurement in progress (green).

Display Mode Two modes can be selected.

°C	1.Body Mode This mode is used to measure the forehead temperature
°F	2.Object Mode This mode is used to measure the object temperature.

Meter Overview

- Infrared Sensor
- Led Light
- Display Screen
- Measurement / Memory Button
- ON/OFF Button
- Mode Switch
- Battery Cover

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AS AN OBJECT MEASUREMENT THERMOMETER

Press "ON/OFF" Button to turn on the thermometer first.

Push the Mode switch to select Object mode. The machine emits two short beeps indicating that the object mode is turned on and the temperature unit flashes.

Move the probe close to the object and take measurements. Make sure the probe is flat and close to the object, not at an angle. Perform a measurement with a distance within 3 cm. When ready, push measurement button to take measurements.

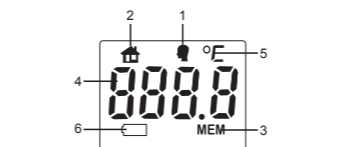
Read the result. The measurement result will be done in 1 second. The reading is shown together with LED lighting and one long beep informs about the temperature measurement, and after a while another, short, confirming the saving of the result to the memory and readiness for the next measurement.

Exit the memory. Press ON/OFF Button to exit the memory or keep the meter in idle for 10 seconds to switch off automatically.

Press the "ON/OFF" button to turn off the unit, Or leave it idle for 30 seconds, the unit will switch off automatically.

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DISPLAY SCREEN



- Body mode indication
- Object mode indication
- Memory indication
- Temperature reading
- Temperature unit
- Battery indication

Select the Temperature Unit This meter provides two measurement units used for indicating the body/object temperature, C or F, for your preferred selection.

°C	Be sure the thermometer is OFF before selecting the temperature unit.
°F	Long-press the Measurement Button for 5 seconds until the signal -- C or F displayed on the LCD panel as figure shown. Re-press the Measurement Button to select C or F unit.

FAULT INDICATION

FAULT OR FAULT SYMBOL	FAULT DESCRIPTION	CORRECTIVE MEASURE
No display On the LCD panel	The battery has run out/incorrect battery polarity.	Replace the battery. Please note: The (+) side of the battery must face upwards.
Measurement not possible (or an abnormal value is displayed)	The thermometer is not ready.	Wait until the "C" symbol is displayed
An abnormal temperature value is displayed.	The probe tip is dirty or damaged. Did you hear the beep after pressing the ON button	Clean the probe tip or get it repaired. Wait until you hear the beep before removing the thermometer from the forehead

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Long-press the ON/OFF Button for 3 seconds, release the button after the signal -- dEL displayed on the LCD panel as figure shown. Then long-press the ON/OFF Button for 3 seconds, release the button after the signal -- Cl displayed on the LCD panel as figure shown. All the memories would be deleted after that.

MAINTENANCE Care & Cleaning

- The probe is not waterproof. Please wipe with a clean and dry cotton swab to clean the probe on the inside.
- 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.

FAULT OR FAULT SYMBOL

FAULT DESCRIPTION	CORRECTIVE MEASURE
No display On the LCD panel	The battery has run out/incorrect battery polarity.
Measurement not possible (or an abnormal value is displayed)	The thermometer is not ready.
An abnormal temperature value is displayed.	The probe tip is dirty or damaged. Did you hear the beep after pressing the ON button

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Electro-static discharge (ESD) IEC 61000-4-2	±8 kV contact ±15 kV air	±8 kV contact ±15 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 %.
Electro-static 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	0 % UT, 0.5 cycle g) At 0°, 45°, 90°, 135°, 180°, 225°, 270° and 315° 0 % UT, 1 cycle and 70 % UT, 25/30 cycles at 0 % UT, 250/300 cycle	N/A	Mains power quality should be that of a typical commercial or hospital environment. If the user of the Infrared Thermometer requires continued operation during power mains interruptions, it is recommended that the Infrared Thermometer be powered from an uninterruptible power supply or a battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	30 A/m	30 A/m	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.

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FAULT OR FAULT SYMBOL	FAULT DESCRIPTION	CORRECTIVE MEASURE
LO or HI symbol is displayed	The temperature measured is outside the measuring Range. LO-temperature < 32 °C (89.6 °F) ; HI-temperature> 42.9 °C (109.22 °F) .	Check that the probe tip is clean and that the thermometer is properly placed on the forehead.
Battery symbol is displayed	The battery has run out.	Replace the battery.
Temperature symbol is displayed	The ambient temperature is outside the operating temperature range or is changing too fast.	To ensure accurate measurement, let the thermometer rest at operating temperature for 30 minutes prior to use.

SYMBOL	REFERENT	SYMBOL	REFERENT
SN	Serial number	Type BF	Type BF applied part
Caution!	Read the instruction manual.	Keep dry	Keep dry
For use	Follow instructions	LOT 1601	Batch code
Manufacturer	Manufacturer	Date of manufacture	Date of manufacture

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Immunity test IEC 60601-1-2	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz 6Vrms in ISM banda	N/A	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
Radiated RF IEC 61000-4-3	between 150 kHz to 80 MHz 80 MHz to 2.7GHz	10 V/m	separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance $d = \sqrt{\frac{P}{f}}$ 80 MHz to 800 MHz $d = \sqrt{\frac{P}{f}}$ 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).
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	30 A/m	30 A/m	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.

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SPECIFICATIONS	
Model	The
Measurement range	Body/Forehead: 32.0-42.9 °C (89.6 °F -109.22 °F) Object: 0°C to 99.9°C (32°F to 211.8°F)
Display resolution	0.1°C / 0.1°F
Accuracy	±0.2°C (±0.4°F) from 36.0°C (96.8°F) to 39.0°C (102.2°F) ±0.3°C (±0.5°F) from 32.0°C (89.6°F) to 35.9°C (96.6°F) And from 39.1°C (102.4°F) to 42.9°C (109.22°F)
Forehead indicator light	Green light for temperature <37.5°C(99.5°F) Yellow light for temperature ≥37.5 - <37.9°C(99.5-100.2°F) Red light for temperature >37.9°C(100.2°F)
Voice	Power on and ready for working: a short beep. Measurement finished: 1 long beep ≤ 37.9°C(100.2°F) 6 short beep > 37.9°C(100.2°F)
Memory	25 groups
Operating conditions	10°C to 40 °C (50 °F to 104 °F), Humidity: 15 to 95 % R.H.
Air pressure	86Kpa-106Kpa
Storage environment	Temperature: -25°C to 55°C (-13°F to 131°F) Storage humidity: 15% to 95% RH
Auto shut-off	About 30 seconds after no using
Battery	2pcs 1.5V AAA Alkaline Battery
Size	168 x 54 x 44 mm
Weight	75g

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Conduct ed RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz 6Vrms in ISM banda	10 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
Radiate d RF IEC 61000-4-3	between 150 kHz to 80 MHz 80 MHz to 2.7GHz	10 V/m	separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance $d = \sqrt{\frac{P}{f}}$ 80 MHz to 800 MHz $d = \sqrt{\frac{P}{f}}$ 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).

NOTE: UT is the a. c. mains voltage prior to application of the test level.

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DISPOSAL OF DEVICE Adhere to the applicable regulations when disposing of the device. This product must not be disposed of together with domestic waste. All users are obliged to hand in all electrical or electronic devices, regardless of whether or not they contain toxic substances, at a municipal or commercial collection point so that they can be disposed of in an environmentally acceptable manner. Please remove the batteries before disposing of the device! Do not dispose of old batteries with your household waste, but at a battery collection station at a recycling site or in a shop.

REFERENCE OF STANDARDS Device Standards: Device Corresponds to the requirements of the standard for infrared thermometers ASTM E1965-98/2009 EN 12470-5:2003 IEC 60601-1-2:2014 IEC 60601-1-6:2010 ISO 80601-2-56 : 2009

Applied part : Type BF Mode of operation : Continuous Operation EMC: type B class I

Electromagnetic Compatibility: Device fulfills the stipulations of the standard IEC 60601-1-2. The stipulations of EU-Directive 93/42/EEC for Medical Devices Class Ila have been fulfilled. * Technical alterations reserved! Software identify no.: The V1.1.0

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NOTE 1 At 80 MHz and 800 MHz, the higher frequency range applies. NOTE 2 These guidelines may not apply in all situations. Electromagnetic is affected by absorption and reflection from structures, objects and people. 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.

Immunit y test IEC 60601-1-2
 Compl iance level | Electromagnetic environment - guidance || Conduct ed RF IEC 61000-4-6 | 3 Vrms 150 kHz to 80 MHz 6Vrms in ISM banda | 10 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 |
| Radiate d RF IEC 61000-4-3 | between 150 kHz to 80 MHz 80 MHz to 2.7GHz | 10 V/m | separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance $d = \sqrt{\frac{P}{f}}$ 80 MHz to 800 MHz $d = \sqrt{\frac{P}{f}}$ 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). |

NOTE: UT is the a. c. mains voltage prior to application of the test level.

Rated maximum output of transmitter W	150 kHz to 80 MHz $d = \sqrt{\frac{P}{f}}$	80 MHz to 800 MHz $d = \sqrt{\frac{P}{f}}$	800 MHz to 2.7 GHz $d = \sqrt{\frac{P}{f}}$
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

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Manufacturer's Declaration of the EMC
Guidance and manufacturer's declaration - electromagnetic emission -for all EQUIPMENT AND SYSTEMS

1	Guidance and manufacturer's declaration - electromagnetic emission		
2	The Infrared Thermometer is intended for use in the electromagnetic environment specified below. The customer or the user of Infrared Thermometers should assure that it is used in such an environment.		
3	Emissions test	Compliance	Electromagnetic environment - guidance
4	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.
5	RF emissions CISPR 11	Class B	
6	Harmonic emissions IEC 61000-3-2	N/A	The Infrared Thermometer is suitable for use in all establishments, including domestic establishments a not those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
7	Voltage fluctuations /emission IEC 61000-3-3	N/A	Classification: Anti-electric Shock Type: Internally powered equipment Applied part : Type BF Mode of operation : Continuous Operation EMC: type B class I

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

Guidance and manufacturer's declaration - electromagnetic immunity

Immunity test IEC 60601-1-2	Compliance level	Electromagnetic environment - guidance
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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. 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.

Immunit y test IEC 60601-1-2
 Compl iance level | Electromagnetic environment - guidance || Conduct ed RF IEC 61000-4-6 | 3 Vrms 150 kHz to 80 MHz 6Vrms in ISM banda | 10 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 |
| Radiate d RF IEC 61000-4-3 | between 150 kHz to 80 MHz 80 MHz to 2.7GHz | 10 V/m | separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance $d = \sqrt{\frac{P}{f}}$ 80 MHz to 800 MHz $d = \sqrt{\frac{P}{f}}$ 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). |

NOTE: UT is the a. c. mains voltage prior to application of the test level.

Rated maximum output of transmitter W	150 kHz to 80 MHz $d = \sqrt{\frac{P}{f}}$	80 MHz to 800 MHz $d = \sqrt{\frac{P}{f}}$	800 MHz to 2.7 GHz $d = \sqrt{\frac{P}{f}}$
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

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