

# SHENZHEN URION TECHNOLOGY U80R BLOOD PRESSURE MONITOR INSTRUCTION MANUAL



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## UPPER ARM ELECTRONIC BLOOD PRESSURE MONITOR

**Model: U80R**



## Instruction Manual

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## Introduction

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▲ Your new digital blood pressure monitor uses the oscillometer method. This means the monitor detects your blood's movement through your brachial artery and converts the movement into a digital reading. An oscillometer monitor does not require a stethoscope.

▲ The unit has an intelligent inflation chip, which helps reduce the usual uncomfortable feeling caused by over inflation.

▲ The unit has 2x90 sets of memory functions. Each test result will be displayed on the screen and stored automatically.

Please read this manual before using the unit and keep the manual in a safe place for future reference.











### INTENDED USE

This automatic blood pressure monitor is intended to measure systolic pressure, diastolic pressure and pulse. The unit is intended to be used in hospitals and at home. Recommended for ages 12 and up.

## Safety Information

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▲ To assure correct usage of this product, important safety measures should be followed. Please familiarize yourself with the warning symbols below.

Symbol Descriptions	
The following symbols may appear in this manual, on the device's label, on the device itself, or on its accessories. Some of the symbols represent standards and compliances associated with the device and its usage.	
	Warning: This alert identifies hazards that may cause serious personal injury or death.
	Caution: This alert identifies hazards that may cause serious personal injury, product damage, or property damage.
	Type BF applied part
	Class II equipment
	Manufacturer
<b>SN</b>	Specifies serial number
	Authorized representative in the European Community
	CE Mark: conforms to essential requirements of the Medical Device Directive 93/42/EEC.
	Disposal: Dispose this product and its batteries according to your local municipal and state regulations.
	Direct current
	Follow instructions for use

## Safety Information

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- ⚠ People with arrhythmia, diabetes, apoplexy, or blood circulation problems should use this device in addition to physician's care.
- ⚠ Contact your physician for specific information about your blood pressure. Self-diagnosis and treatment may be dangerous. Always follow the instructions of your physician or a licensed healthcare provider.
- ⚠ Always keep this device out of children's reach.
- ⚠ This product contains small parts. Please keep away from children.
- ⚠ The cuff hose may pose a choking hazard.
- ⚠ Do not attempt to modify this unit.
- ⚠ Clean the unit with a damp rag when necessary.
- ⚠ Do not leave batteries in the unit for an extended period without use, as they may leak and damage the battery contacts.
- ⚠ Replace the batteries if the unit displays a low battery symbol.
- ⚠ Do not mix old batteries with new ones.

## Safety Information

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⚠ Do not use a cellular phone near the unit. It may cause a reading error.

⚠ Do not use near flammable gases (such as anaesthetic gas, oxygen or hydrogen) or flammable liquids (such as alcohol) near the unit.



⚠ **WARNING:**

Do not dispose of electrical appliances as unsorted municipal waste. Use separate collection facilities. Contact your local government for information regarding the collection systems available. If electrical appliances are disposed of in landfills or dumps, hazardous substances can leak into groundwater and can pose future health risks.

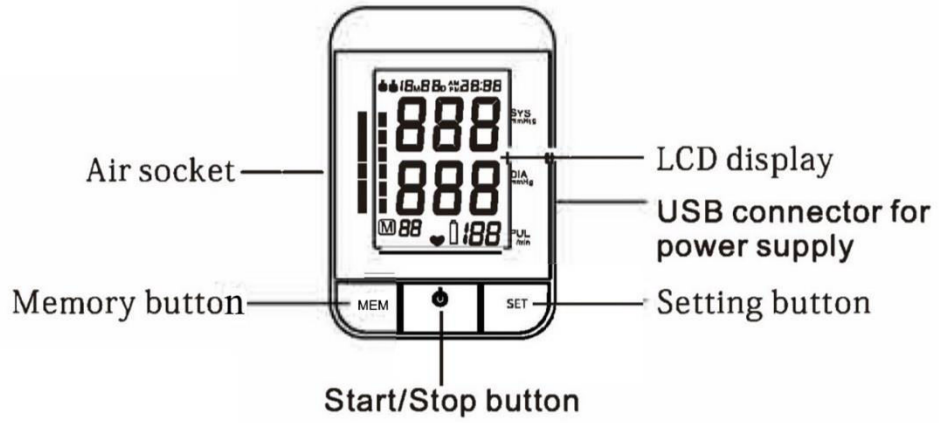
### Classification

1. Internally powered equipment.
2. Type BF applied part.
3. Protection against ingress of water or particulate matter: IP22.
4. Not category AP/APG equipment.
5. Mode of operation: continuous operation.

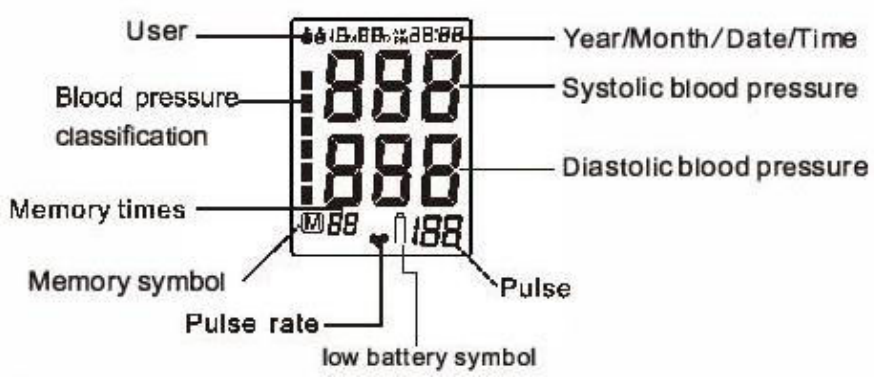
⚠ The user must ensure that the device is in proper working condition and functions safely prior to use.

# Product Layout

## Body



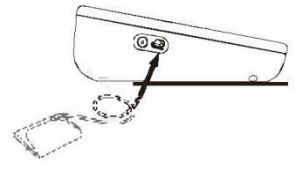
## Display



## Cuff size and connection

Insert cuff hose into the left side of the unit, as shown in the picture.  
(Only use the provided cuffs)

- This unit comes with two cuffs:
- Standard: 8" – 16"
- Extra Large: 12" – 21"

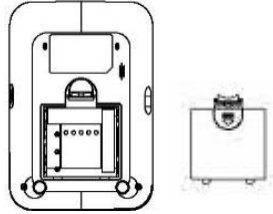


# Battery Installation

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## Battery Installation

- A) Remove battery cover as shown in the picture.
- B) Insert 4 AAA batteries into the compartment proper direction.



and ensure each battery is facing the

## Low Battery and Replacement

When you see this symbol, it's time to change the batteries: 

## Battery Type and Replacement

Please use 4 AAA 1.5V alkaline batteries.

### **WARNING:**



Dispose of the batteries in accordance with all federal, state and local laws.

# Settings

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## Initial Settings:

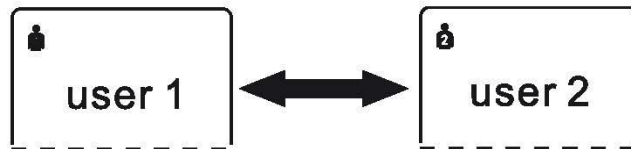
### 1. Choose between User A and User B

With unit OFF, press the SET button. The screen will display:  

Press the MEM button to switch between User A and User B.

Press the SET button to confirm your choice of user.

The unit will now ask you to set the year.



### 2. Year Setting:

The screen will display and flash 20XX.

Press the MEM button to advance to the current year.

Press the SET button to confirm your choice of year.

The unit will now ask you to set the month and day.



Year setting

# Settings

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### 3. Month and Day Setting

The screen will display xxMxxD and xxxx.

Press the MEM button to advance to the current month.

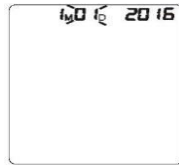
Press the SET button to confirm your choice of month.

The unit will now ask you to set the day.

Press the MEM button to advance to the current day.

Press the SET button to confirm your choice of day.

The unit will now ask you to set the time.



### 4. Time Setting:

The screen will display xxMxxD and xx:xx.

Press the MEM button to advance to the current hour in 24-hour time.

Press the SET button to confirm your choice of hour.

The unit will now ask you to set the minutes.

Press the MEM button to advance to the current minute.

Press the SET button to confirm your choice of minute.

hour setting



minute setting



## Preparing for a Test

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Relax for five minutes prior to taking a test.

- Avoid eating, drinking alcohol, smoking, exercising, and bathing 30 minutes prior to taking a test. Each of these activities can influence your test results.
- Roll up your sleeve to reveal your upper arm.
- Always test on the same arm (typically the left arm).
- Try to take your blood pressure regularly at the same time of day.

### **IMPORTANT:**

**Make sure you are sitting in an upright position.**

**Slip the arm cuff up your arm until it is about an inch above your elbow.**

**Make sure your feet are flat on the floor.**

**Your palm should be facing upwards.**

**Your stretched-out forearm should be at the same level as your heart.**

**The tube should be lined up with your middle finger, with your palm up.**

**Do not speak during the test.**

## Fitting the Cuff

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Place the cuff flat on a table.

The Velcro should be facing down.

Pass the end of the cuff through the loop to form a circle.

The Velcro will now be facing up.

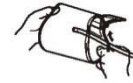
Pull the cuff over your left upper arm so that the tube points in the direction of your palm and is lined up with your middle finger.

Wrap the cuff on the arm as illustrated. Make sure that the lower edge of the cuff is about 1 inch above the elbow.

Tighten the free end of the cuff and close the cuff by affixing the Velcro.

The cuff should be very snug on your upper arm

Lay your arm on a table (palm upwards) so that the cuff is at the same height as your heart.



**THE CUFF SHOULD BE VERY TIGHT WHEN YOU WRAP IT.**

**MAKE SURE IT IS WRAPPED NICE AND EVENLY.**

**ALWAYS FIRST TRY TO USE THE SMALLER CUFF. IF IT IS TOO SMALL, THEN SWITCH TO THE LARGER CUFF.**

**IF YOU USE THE LARGER CUFF WHEN NOT NEEDED, YOU WILL GET AN E3 ERROR.**

## Proper use of the Unit

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### Measuring Procedure:

Once the cuff is properly fitted on your upper arm, you are ready to take a test.

Press the START/STOP button.

All symbols will appear briefly on the display.

The pump will begin to inflate.

After a suitable amount of pressure is achieved, the pump will stop, and the pressure will gradually decrease.

The heart symbol ♥ on the display will start to flash.

When the test is complete, your systolic pressure, diastolic pressure and pulse will appear on the display.

Your test results will remain on the display until you switch off the unit. If no button is pressed, the device will automatically turn off after 3 minutes.

### Discontinuing a Measurement

The START/STOP button can be pressed at any time to stop a measurement.

### Memory

This blood pressure monitor automatically stores 2x90 sets of results.

When the memory is full, the unit will overwrite the oldest results.

### Memory Recall

With the unit OFF, press the MEM button to bring up the last three test results.

Each subsequent press will recall the three previous results.

### Erase Memory

With the power OFF, Press the SET button six times. CL will appear.

Press the START/STOP button. CL will flash three times.

The memory is now erased.

## About Blood Pressure

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Blood pressure is the pressure exerted in the arteries.

The systolic blood pressure value represents the blood pressure produced by the contraction of the heart muscle.

The diastolic blood pressure value represents the blood pressure produced by the relaxation of the heart muscle.


### Blood Pressure Categories




BLOOD PRESSURE CATEGORY	SYSTOLIC mm Hg (upper number)		DIASTOLIC mm Hg (lower number)
NORMAL	LESS THAN 120	and	LESS THAN 80
ELEVATED	120 – 129	and	LESS THAN 80
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 1	130 – 139	or	80 – 89
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 2	140 OR HIGHER	or	90 OR HIGHER
HYPERTENSIVE CRISIS (consult your doctor immediately)	HIGHER THAN 180	and/or	HIGHER THAN 120

# Errors

## Error Indicators

Symbol	Cause	Correction
<b>E - 1</b>	Weak signal or sudden pressure change.	Wrap the cuff properly.
		Remeasure.
<b>E - 2</b>	Strong external disturbance.	The device will fail to record an accurate measurement when near a cell phone or other radio-wave device.
		Keep quiet and don't speak during measurement.
<b>E - 3</b>	There was a problem with the inflation process.	<b>WRAP THE CUFF TIGHT AND STRAIGHT. TRY TO USE THE SMALLER CUFF.</b>
		Make sure the air plug is properly inserted in the unit.
		Remeasure.
<b>E - 5</b>	Abnormal blood pressure,	Repeat the measurement after relaxing for 30 minutes. If you get unusual readings three times, please contact your doctor.
	Low battery	Replace all old batteries with new ones. <b>We recommend Duracell QUANTUM batteries</b>

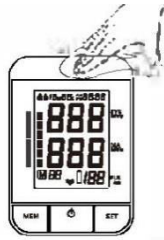
Problem	Check	Cause and Solutions
No power.	Check the batteries.	Replace with new ones.
	Make sure the batteries are facing the correct direction.	Follow the diagram in the battery compartment.
No inflation.	Make sure the hose is properly inserted.	Insert tightly into the air socket.
	Check if the hose is leaking.	Change to a new cuff.
Device shows an error and stops working.	Be sure not to move your arm during inflation.	Stay still during the measurement process.
	Were you speaking?	Be sure to remain quiet during the measurement process, as speaking can cause inaccurate results.
Cuff leaks.	Check if the cuff is loose.	Wrap the cuff tighter.
	Check if the cuff is torn.	Change to a new cuff.
 Please contact us for further help		

## Care and Maintenance

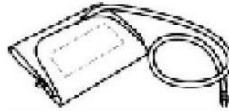
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### Care for the Main Unit and Blood Pressure Monitor Cuff

- Store the unit in its case when not in use.
- Clean the unit with soft dry cloth.
- Do not use abrasive or volatile cleaners.
- Never immerse the unit or any of its components in water.



- Wipe the surfaces of the blood pressure monitor cuff thoroughly, making sure to clean the inside and outside of the cuff. Be careful not to get any moisture on the main unit.
- Using a dry cloth, gently wipe away any excess moisture that may remain on the blood pressure cuff. Lay the cuff flat in an unrolled position and allow it to air dry.



## Specifications

Description	Automatic upper arm blood pressure monitor	
Display	LCD digital display	
Measuring principle	Oscillometric method	
Measuring localization	Upper arm	
Measurement range	Pressure	0~299 mmHg
	Pulse	40~199 pulses/min
Accuracy	Pressure	± 3mmHg
	Pulse	± 5% of reading
LCD indication	Pressure	3 digits display of mmHg
	Pulse	3 digits display
	Symbol	Memory/Heartbeat/Low Battery
Memory function	2x90 sets memory of measurement values	
Power source	4 AAA alkaline batteries	
Automatic power off	Approximately three minutes	
Main unit weight	Approximately 208g (batteries not included)	
Main unit size	139mm x 95mm x 34mm	
Main unit lifetime	10,000 uses under normal conditions	
Battery life	Approximately 300 uses under normal conditions	
Accessories	Cuff, instruction manual	
Operating environment	Temperature	5~4 <sup>o</sup> c
	Humidity	15%-85%RH
	Air pressure	86kPa-106kPa
Storage environment	Air pressure 86kPa~106kPa Temperature -20 <sup>o</sup> c~55 <sup>o</sup> c. Humidity: 10%-85%RH avoid impacts, sun exposure, or contact with moisture during transportation.	
Note: The product cannot be operated in altitudes greater than 2000m.		

## Warranty Information

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### Statement

- The unit is intended to be used by adults at home, or by a medical center, to measure blood pressure and pulse via the upper arm.
- The unit satisfies the requirements of EN 1060-1: 1995+A2: 2009 Non-invasive sphygmomanometers, and EN 1060-3: 1997+A2: 2009 Non-invasive sphygmomanometers.
- The blood pressure measurements recorded with this device are equivalent to those obtained by a trained observer using the cuff/stethoscope auscultatory method, within the limits prescribed by the American National Standard for manual, electronic or automated sphygmomanometers.
- The risk of patient and user can be lowered to acceptable level.

### Warranty

- The unit is guaranteed to be free of defects in workmanship and materials under normal use for a period of two years from the date of purchase.
- Devices subjected to misuse, abuse, neglect of this manual's contents, and unauthorized repair or modifications will be excluded from this warranty.
- ⚠ The device does not require calibration.
- ⚠ The device is not repairable and contains no user-serviceable parts.


# EMC Declaration

## Guidance and Manufacturer's Declaration – Electromagnetic Immunity

This blood pressure monitor is intended for use in the electromagnetic environments specified below. The customer or the user of this device should ensure 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	±2 kV for power supply lines ±1 kV for input/output lines	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	±1 kV differential mode ±2 kV common mode	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 IEC61000-4-11	<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 seconds	<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 seconds	Mains power quality should be that of a typical commercial or hospital environment. If the user of the blood pressure monitor requires continued operation during power mains interruptions, it is recommended that the device be powered from an uninterruptible power supply or 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: UT is the A.C. mains voltage prior to application of the test level.			

# EMC Declaration

Immunity Test	IEC 60601 Test Level	Compliance Level	Electromagnetic Environment – Guidance
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	3 V	<p>Portable and mobile RF communications equipment should be used no closer to any part of the blood pressure monitor, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.</p> <p>Recommended separation distance:</p> $d=1.2 \sqrt{P}$ $d=1.2 \sqrt{P} \text{ 80MHz to 800MHz}$ $d=2.3 \sqrt{P} \text{ 800MHz to 2.5Ghz}$
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 Ghz	3 V/m	<p>where <math>P</math> is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and <math>d</math> 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:</p> 
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.			
<p>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 broadcasts and TV broadcasts 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 blood pressure monitor is used exceeds the applicable RF compliance level above, the blood pressure monitor should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the blood pressure monitor.</p> <p>b. Over the frequency range of 150 kHz to 80 MHz, field strengths should be less than [V1] V/m.</p>			

# EMC Declaration

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## Guidance and Manufacturer's Declaration – Electromagnetic Emissions

The blood pressure monitor is intended for use in the electromagnetic environments specified below. The customer or the user of the device should ensure that it is used in such an environment.

<b>Emissions Test</b>	<b>Compliance</b>	<b>Electromagnetic Environment – Guidance</b>
RF emissions CISPR 11	Group 1	The blood pressure monitor uses RF energy for only its internal functions. 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 blood pressure monitor 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 IEC61000-3-2	Class A	
Voltage fluctuations/ flicker emissions IEC61000-3-3	Complies	

# EMC Declaration

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## Recommended Separation Distances Between Portable and Mobile RF Communications Equipment and the Blood Pressure Monitor

The blood pressure monitor is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the blood pressure monitor can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the device as recommended below, and according to the maximum output power of the communications equipment.

Rated Maximum Output of Power Transmitter W	Separation Distance According to Frequency of Transmitter m		
	150 kHz to 80 MHz $d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	80 MHz to 800 MHz $d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$	800 MHz to 2,5 Ghz $d = \left[\frac{7}{E_1}\right]\sqrt{P}$
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.

## Technical Indicators

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Type of protection against electric shock	Class II
Degree of protection against electric shock	Type BF applied part
Mode of operation	Continuous operation
Grade of waterproof	IP22
Product life	Two years
Sterilized	No
For use in an oxygen-rich environment	No

# UPPER ARM ELECTRONIC BLOOD PRESSURE MONITOR

 Shenzhen Urion Technology Co., Ltd.

Floor 4-6 of Building D, Jiale Science & Technology Industrial Zone

No. 3, ChuangWei Road, Heshuikou Community, MaTian Street,

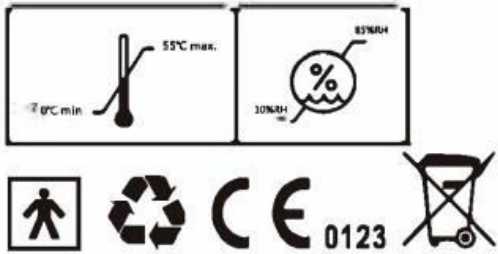
GuangMing New District, 518106 ShenZhen

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