



Blood Pressure Monitor User Manual

EBP-020

Foreword

Dear user :

Thank you for choosing the easy@Home blood pressure monitor (EBP-020). Please read this manual carefully before use and keep for future reference. The blood pressure monitor is suitable for adults. People 12~18 years old should be accompanied by an adult when taking measurements.

Summary :

The blood pressure monitor consists of the main body and a large cuff. It is suitable for measurement of human systolic pressure, diastolic blood pressure and pulse. The blood pressure values obtained by this equipment are equivalent to those measured with the auscultatory method. (The auscultatory method is auscultatory method where a trained healthcare provider uses a blood pressure meter and listens for the blood flow sounds using a stethoscope.)

The blood pressure monitor includes intelligent pressurization, automatically pressurizing to an appropriate pressure value according to your blood pressure, effectively reducing the discomfort caused by incorrect pressure, shortening the measuring time, and prolonging the service life of the cuff.

The blood pressure monitor is equipped with the memory capacity of 99 measurements each for two users, and the data of the two users can be saved separately.

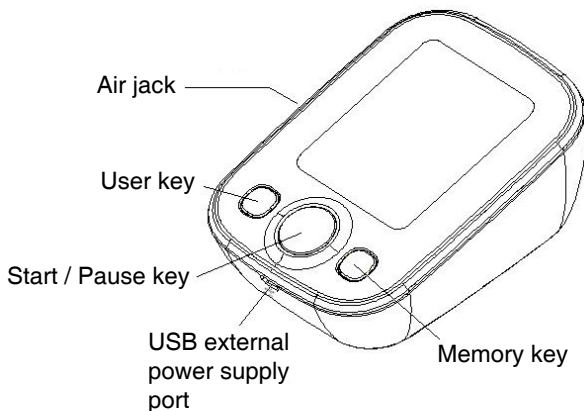
Contents

1. Indications for Use.....	1
2. Monitor Components	1
3. Before Use	3
4. Setting Up Your Device	4
5. Measurement	7
6. About Blood Pressure	11
7. Contraindications, Precautions, Warnings and Prompt Instructions	13
8. Q & A.	17
9. Troubleshooting.....	19
10. Cleaning and Disinfection	21
11. Storage	23
12. Product Specification	23
13. Precautions	25
14. Statement of Electromagnetic Compatibility	26

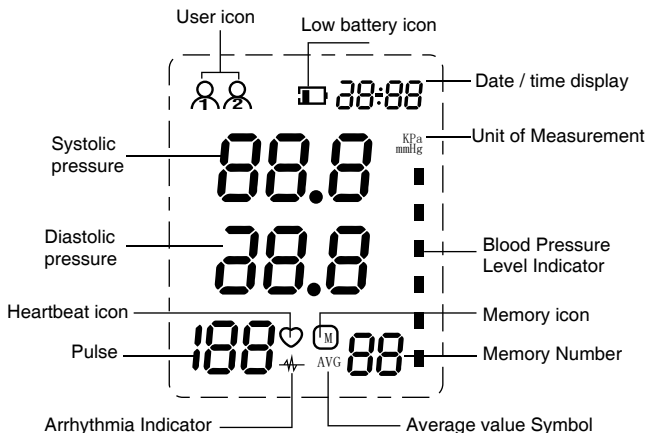
1. Indications for Use

The blood pressure monitor is intended to measure the systolic pressure and diastolic pressure, as well as the pulse rate of an adult via the non-invasive oscillometric method(Oscillometric Method is measured by establishing the relationship between systolic blood pressure, diastolic blood pressure, mean blood pressure and cuff pressure oscillation wave.) at medical facilities or at home.

2. Monitor Components



Display Screen



Note: Arrhythmia Indicator will be displayed when the user has tested for arrhythmia.

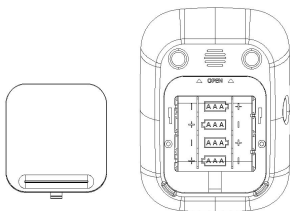
Average value Symbol appears when you view historical measurements. When you look at historical records, the first value that appears is the average of the latest three measurements.

3. Before Use

(1) Install the Battery :

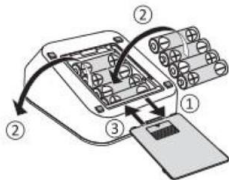
Open the battery cover and install the batteries in the battery compartment.

The battery compartment is positioned at the bottom of the electronic blood pressure monitor.




(a) Open the battery cover according to the method shown in the figure above.

(b) Place 4 AAA dry batteries in the battery compartment, and pay attention to the correct polarity of the batteries. Install the battery as indicated in the picture immediately below:





(2) Battery power indication and replacement

If the low battery symbol  appears on the screen after the product is turned on, the measurement cannot be performed, and the batteries must be replaced.



Please use 4 AAA alkaline dry batteries.

 Do not use any expired batteries.

 If the product is not used for a long time (over 3 months), please take out the batteries to avoid battery corrosion and danger to device.

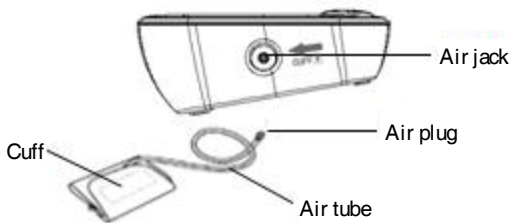
(3) USB connection for power supply

Optional (Not Included): The product's power can be supplied through a DC 5V external power supply through the USB port.

(4) Cuff






The arm circumference rang of the cuff is 22-42cm.

To connect: Insert the air plug on the cuff into the air jack on the left side of the electronic blood pressure monitor, as shown in the following figure:




4. Setting Up Your Device

(1) Selecting User







While the device is off, press the "User  " key for 3 seconds, the screen displays "User 1  " or "User 2  ", and flickers continuously. Press the "Memory  " key to switch to the other user. (System default user: User 1 )





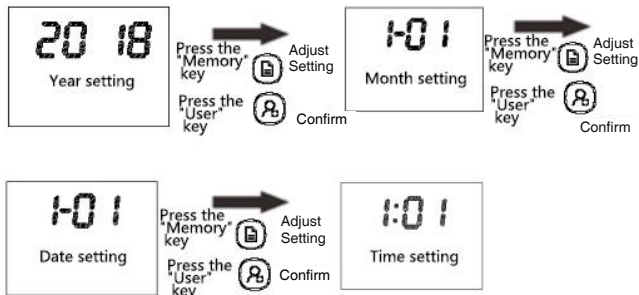
(Note: While the blood pressure monitor is off, press "User  " key to view the current time and the current user)

(2) Year & month / Date setting

While the device is off:

- Press the "User  " key for 3 seconds to enter the setting mode.
- Press the "User  " key to enter the year setting mode (or automatically enter the year setting mode after the batteries are reloaded and the product is powered on). The screen displays 20XX and flickers continuously.
- Press the "Memory  " key to increase the value, between 2019 and 2039. Press the "User  " key for confirmation and enter the month setting mode. After entering the month setting mode, the screen will display xx-xx and flash the month.
- Press the "Memory  " key to increase the value between 1 and 12. Press the "User  " key for confirmation and enter the date setting mode. After entering the date setting mode, XX-XX is displayed on the screen and flickers on the date display.

e. Press the "Memory"  key to increase the value, between 01 and 31. Press the "User"  key for confirmation and enter the time setting mode.



press the
"Memory"key  Adjust Setting

Press the
"User" key  Confirm

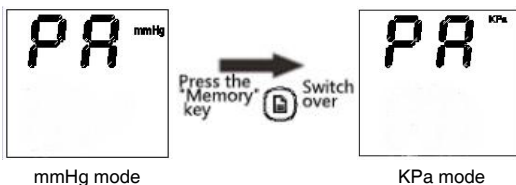
Note: When you change the battery, year/month/day/time may disappear to restore the factory settings. But the historical data measured will not be lost. If this happens, please follow the above steps to reset year/month/day/time.

(3) Measurement Unit Setting

In this mode, the SYS area will display "P R", and the measurement unit area will display mmHg, meaning the unit mmHg is selected

(system default unit: mmHg).

At this time, pressing the "Memory" (M) key will switch the unit selection to the unit kPa. After selecting the unit, press the "User" (U) key again to confirm.



5. Measurement

Requirement: Please read the user manuals carefully before use.

(1)Before Measurement:

Avoid eating, smoking or any form of heavy physical labor, as it will affect the measurement result.

Sit on a chair to have a rest for about 10min in a quiet environment.

Clear the clothing from the arm for measurement.

Also, measure the same arm for consistency (generally the left arm, because the left arm is closer to the heart). Measure at approximately the same time each day because can change throughout the day.

(2)Precautions for most accurate results

--Keep the conditions of your measurements consistent.

--The measurement should be carried out in a quiet environment.

--Exerting your arm may increase your blood pressure, so make sure you are in a comfortable and relaxed state before measurement. Do not move or exercise the muscles of your arm during the measurement. If necessary, a cushion can be used to support your arm.

--Be sure the cuff is at the level of your heart. If the cuff is placed below or above the heart, the measurement results will be incorrect.

--Please use the original cuff that has passed the clinical test! If you use a component that is not supplied by the manufacturer, it may cause errors in measurement.

--A loose cuff or exposed inflatable air cuff bag will lead to wrong measurement values.

--Back-to-back measurements can cause an increased concentration of blood in the arm, which will affect the measurement results. Pause to rest for another 5 minutes between measurements or raise your arm for a minute or so, so that the blood concentration returns to normal, and then repeat the measurements.

(3)How to use the cuff

1. Lay the cuff flat on the table with the "φ" symbol toward the bottom of the cuff, and pass the end of the cuff through the metal ring to form a circle. At this time, the hook and loop of the cuff will face the outside. (Skip this step if the ring has already been formed by the cuff).

2. Place the cuff on the upper arm for measurement, match the " φ " symbol to the location of your artery, and make sure the cuff tube points downward toward lower arm.

3. Apply the cuff to the upper arm to ensure that the lower edge of the cuff is 2-3 cm from the elbow and the air tube is located on the inner

side of the arm.

4. Tighten the cuff and secure it with the Velcro.

5. The cuff should be comfortably wrapped around the upper arm, with the elasticity space of two fingers. Remove any clothing (e.g pullover) that restricts your arm before measurement.

6. Place the lower arm on the table with the palm facing upward. Sit with a straight back, and make the center of the cuff and the heart at the same height. Please note that the rubber tube on the cuff cannot be folded or bent.

Note: If your left arm cannot be used for measurement, please use your right arm. But in any case, all measurements must be made on the same arm for the convenience of measurement comparison.



(1) Winding the cuff



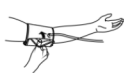
(1-1) Wound cuff



(2) Wear the cuff



(3) The cuff is 2-3cm away from the elbow



(4) Stick the hook & loop



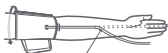
(5) Adjust the cuff



(6) Measuring posture



(7) Measure with the same arm



Left arm

Position the tube off-center towards the inner side






Right arm

Position the tube on the left side of you elbow

(4)Starting measurement

Start measurement after wearing the cuff already in position:

1. Press the "On / Off  " key. The machine will automatically return to zero. The air pump starts to inflate the cuff, and the change of air pressure in the cuff will be displayed on the screen.
2. When inflated to a stable pressure, it will stop inflating. The pressure in the cuff will decrease gradually and be displayed on the screen. When the air pressure is insufficient, the machine will automatically reinflate to a higher pressure.
3. When the pulse is detected, the screen will display the "heart  " symbol and start flashing.
4. At the end of the measurement, the systolic pressure, diastolic pressure, and pulse measurements will be displayed on the screen.
5. The screen will continue to display the measurement results, unless you press the "On / Off  " key to turn off the machine. When not in operation, the machine will be shutdown automatically after 30 seconds.




Note:After measurement, the measurement results (systolic pressure, diastolic pressure, pulse, measurement completion time, current user group, whether the heart rate is irregular) will automatically be saved to memory.

※When the measurement results are wrong, Err is displayed in the SYS area and the numerical value is displayed in the DIA area.

※During the measurement process, press the "On / Off " key to turn off the machine. All other buttons will be unresponsive at this time.



※After the measurement is completed, press the "Memory " key to switch to the memory mode, and press the "User " key to switch to another user.

(5)The memory function

The blood pressure monitor can automatically store 99 measurements for each user, totaling 198 for 2 users, in each for two users, and automatically delete the oldest ones when the memory is full. After taking several measurements, press the "Memory  " key in the shutdown state to display the average blood pressure of the latest three readings that you have taken (indicated by the AVG symbol). Press the "Memory  " key again to display previous measurements, starting with your very first measurement. Continue to press the Memory Key to scroll through all of your measurements. Press the "User  " key to switch to look through the other user's data.

(6)Clearing Memory

Delete all memory values of the current user

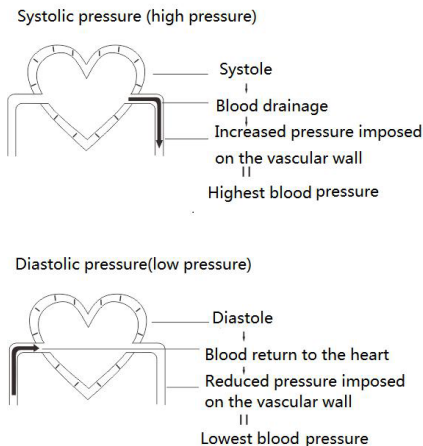
In the shutdown state, hold down the "Memory  " key for 3 seconds, and then hold down the "User  " key for 3 seconds until "AL L" is displayed in the high-voltage area and " E E " is displayed in the low-voltage area, confirming the memory values of the current user are deleted.

6. About Blood Pressure

(1)General knowledge of blood pressure-definition of blood pressure

In order to survive and function properly, your tissues and organs need the oxygenated blood that your circulatory system carries throughout

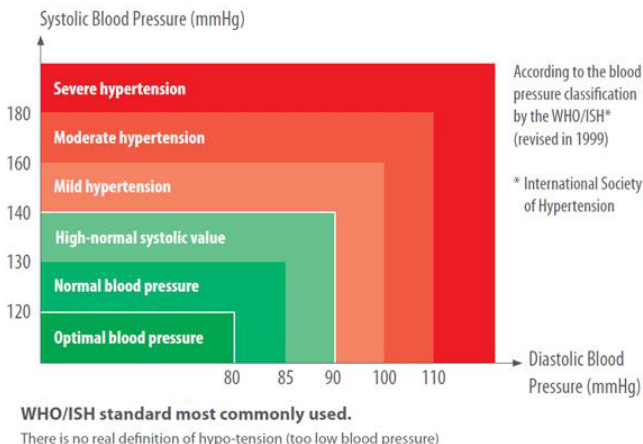
the body. When the heart beats, it creates pressure that pushes blood through a network of tube-shaped blood vessels, which include arteries, veins and capillaries. This pressure — blood pressure — is the result of two forces: The first force (systolic pressure) occurs as blood pumps out of the heart and into the arteries that are part of the circulatory system. The second force (diastolic pressure) is created as the heart rests between heart beats.



(2) Classification standard of blood pressure

WHO (World Health Organization) standard blood pressure values are shown below as a guideline for Hypertension (high blood pressure).

Hypotension (low blood pressure) has not been defined. It is generally considered that high pressure lower than 100mmHg (13.3kPa) is defined as hypotension.






















7. Contraindications, Precautions, Warnings and Prompt Instructions


(1)Warnings:




Do not let a child below 12 years old and the people who can't express their intention use the device. People of 12~18 years old should be accompanied by an adult when taking measurements. This device has not been tested for use by pregnant women.


-  Make sure there is no connection tube kinking before starting measurement to avoid potential injuries.
-  For any patient, do not measure more than 3 times continuously; there should be at least 5 minutes of interval rest between any two measurements, otherwise it may cause extravasated blood.
-  Do not apply the cuff over a wound, as this can cause further injury.
-  Do not use the cuff on an arm with an invasive treatment device or arteriovenous shunt.
-  Please use the cuff following the user manual, and pay special attention to the use of the hose, to avoid twisting or twining due to excessive length.
-  Do not use the cuff for a long period of time, to avoid a possible allergic reaction.
-  If an incorrect reading appears, check the instructions and check for equipment failure.
-  Do not make a self-diagnosis according to the measurement results. Please consult your doctor about the measurement result.
-  If you are taking medications, please follow the doctor's advice.
-  For those with a peripheral circulation disorder caused by certain diseases, there might be significant difference in the blood pressure value measured on the wrist and upper arm.


-  Do not make measurements 1h after meals or immediately after strenuous exercise, showering, smoking, drinking alcohol, or drinking coffee or black tea.
-  Do not use the blood pressure monitor for any purpose other than blood pressure measurement.
-  Please use the blood pressure monitor under the guidance of doctor.
-  This model of blood pressure monitor is suitable for the arm circumference range of 22-42cm. If your arm is beyond this range, you might not obtain an accurate measurement.
-  This model of blood pressure monitor is not suitable for newborns or young children.
-  The blood pressure is constantly changing. You cannot rely on only one blood pressure measurement result to judge the blood pressure condition. Repeated measurement data over a period of time will be more reliable.
-  Do not bind too tightly. For best measurement, put one finger in. If you do not bind correctly or put it in place, you might not obtain the correct blood pressure measurement.
-  Do not use the device if you have sickle cell disease or an area of with a wound.
-  Please do not use a mobile phone, computer, electric kettle or any other devices that may cause interference with the monitor while the devices is in use. Please do not use the device around a magnetic field.


 Please maintain the device regularly for a longer shelf-life.


(2)Precautions:


 Do not repair, disassemble or modify the Blood pressure monitor without permission.


 Do not drop or knock into the machine.


 Do not use the blood pressure monitor immediately after it has been in temperatures below 32°F. It should be in the environment at the temperature of 41°F-104°F and the humidity of $\leq 80\%$ for an hour before use.


 When the device has been in an environment of temperatures exceeding room temperature, up to 131°F, wait 1 hour with the device in a room temperature environment before use.


 Do not pull the cuff forcefully or use the cuff as a rag.

 Do not be contaminate with dust or any liquid.

 Do not touch the device while taking the measurement.

 Remove the battery when the product is left unused for a long time.

 Do not store the Blood pressure monitor in a place with high temperature, moisture or direct sunlight.

 Do not use old and new batteries or different brands of batteries at the same time.

(3) Indicative description



The patient is an intended operator.



During blood pressure measurement, make sure the measured arm is at the same level as the heart.



Indoor temperature, environment, noise, subject's body position, speech or exercise might have an effect on the blood pressure measurement.



We do not recommend that the following patients use this device: those with a weak pulse, severe upper gastrointestinal bleeding or severe arteriosclerosis or elderly with poor peripheral circulation, particularly patients with peripheral vascular lesion caused by complicated severe diabetes.



In case of rescue of seriously ill patients, diagnosis of hypertension and direction of hypertensive medication, use the blood pressure monitor with caution.

8. Q & A

Q1. Why is the blood pressure measured at home lower than that measured in hospitals?

1. Blood pressure measured at home is 20 mmHg-30 mmHg (2.7 kPa-4.0 kPa) lower than that measured in hospitals. It is because people are often nervous when measured in hospitals, while they tend to be in a stable mood when measured at home.
2. If the cuff is placed in a position above the heart, the measured blood pressure is low, so please measure in the correct posture.

Q2.Why do I feel pain or numbness due to tightening of the cuff during measurement?

During blood pressure measurement, the cuff shall tighten until the arterial blood flow is temporarily stopped. So, you might feel painful or numbness for a few seconds, which is not harmful for your body. And you can always stop the device from inflating the cuff by pressing the on/off button, or by manually removing the cuff from the arm and try again.

Q3.When is the best time to take measurements?

It is recommended to take measurements in the morning after you get up to urinate or when your body and mood are in stable state. It is better to take measurements at the same time every day.

Q4.Why is the blood pressure different each time it's measured?

1.Because the blood pressure is constantly changing, it is difficult to obtain the correct blood pressure value by measuring only once. Please take the average measurement of the last three times for reference. The first measurement will generally be higher due to nervousness. With the second measurement, the nervousness emotion will be slightly alleviated, and generally 5mmHg-10mmHg (0.7kPa-1.3kPa) lower than the first time. This will be more obvious for those with higher blood pressure.

-- With many back-to-back measurements, please note: there might be extravasated blood because the arm is compressed, resulting in the fingertip blood not flowing smoothly, If you continue the measurement in case of extravasated blood, you cannot obtain the correct measured value. Loosen the arm band, raise your hand over the head, and tense and relax your left and right hands 15 times.

Then the extravasated blood can be dissolved, and you can continue

the blood pressure measurement.

2.Cuff position. The measured value varies with the cuff size. Particularly, if the cuff is twisted round the elbow, you cannot obtain the correct measured value.

--Please use the correct cuff and tube positioning for measurement. The arm circumference range of the enclosed cuff is 22~42cm (center of the upper arm).

9. Troubleshooting


* When the measurement is abnormal, the following symbols will appear.

LCD display information	Reason / Meaning
Err is displayed in the SYS area, 1 is displayed in the DIA area	The leakage is too fast or the pulse signal is too weak.Please check the cuff, tie it up and try again
Err is displayed in the high SYS area, 2 is displayed in the DIA area.	The blood pressure signal cannot be detected due to too much noise. Please remove the source of the noise and measure again
Err is displayed in the SYS area, 3 is displayed in the DIA area	The test result is abnormal. Please measure again
Err is displayed in the SYS area,	The inflation failed. Please check the cuff, tie it up and try again.

P is displayed in the DIA area.	
HI is displayed in the DIA area	The inflation pressure is greater than 307±8 mmHg (41 kPa ±1 kPa), Please measure again.

*Trouble shooting

Abnormal phenomenon	Item to be checked	Measure
No display by pressing the power switch	Check whether the battery level is low	Replace the batteries with new ones or plug the machine into a Micro USB for power supply.
	Are the positive and negative poles of the batteries reversed?	Install in accordance with the positive and negative poles of the batteries
No pressure	Is the tracheal plug tight?	Insert the tracheal plug into the bore tightly
	Is the trachea broken or leaking?	Buy a new cuff
Error display, unable to measure	Whether your arm is moved when you apply pressure	Keep your arms and body free from random movements
	Whether you talk in the course of measurement	Keep quiet when measure blood pressure

The cuff leaks	Is the cuff wrapped too loose?	Please tighten the cuff
	The inflatable air cuff bag of the cuff is broken	Replace with a new cuff
 If blood pressure still cannot be measured normally with the above methods, please contact the distributor and DO NOT disassemble it by yourself.		

10. Cleaning and Disinfection

(1) Cleaning:

Recommended cleaning agent:

- 1) Household neutral cleaning agent.

Cleaning steps:

- 1) Remove the batteries before cleaning.
- 2) The body of the blood pressure monitor can be cleaned with clean soft cloth.
- 3) The body can be wiped using a soft and clean cloth with a small amount of neutral cleaner or water.



Do not use corrosive detergents. During the cleaning, be careful not to immerse any part of the blood pressure monitor in the liquid to prevent liquid from flowing into the machine.



It is suggested to clean once every week. Complete the cleaning in 3min each time. The number of repeated cleaning each time shall not exceed 3 times.

(2) Disinfection:

Recommended disinfecting agent:

- 1) Isopropanol solution with 70% concentration

Disinfection steps:

- 1) Wipe the machine body with a clean soft cloth lightly dampened with a small amount of the above disinfectant, and dry it immediately.
- 2) The body of the Blood pressure monitor can be wiped with a clean cloth lightly dampened with a small amount of 75% medical alcohol for disinfection.



Do not disinfect by such methods steam or ultraviolet irradiation, which might damage the instrument or accelerate the aging!



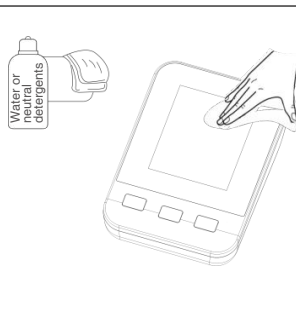
It is suggested to disinfect the Blood pressure monitor before and after use each time. Each disinfection shall be completed within 1min. The number of repeated disinfection each time shall not exceed 2 times




Cleaning and disinfection shall be carried out in the following environment: temperature: 50°F-104°F(5°C~+40°C), relative humidity: 15%~80%RH, non-condensing, atmospheric pressure: 70kPa~106 kPa

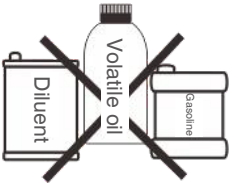

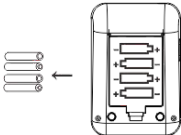
- Always keep the surface of the Blood pressure monitor clean and tidy, helpful in prolonging the service life of the Blood Pressure Monitor.

- If the unit is dirty, please wipe with a dry soft cloth. If the dirt cannot be eliminated easily, wipe with a soft cloth lightly dampened with water or neutral detergent, and then dry with a dry cloth.



-Do not clean while using the device.	
 Do not allow water or other liquids to enter the main body	

11、Storage

- Do not wipe the host and cuff with volatile oil, diluent or gasoline.	- Do not clean or moisten the cuff.
	
- Do not store the product at a place which has direct sunlight, high temperature, humidity, dust or corrosive gas.	- If the Blood pressure monitor is not in use for a long time (over 3 months), take out of the batteries from the host.
	
<p>If you fail to observe the above precautions and other proper usage methods that may cause machine failure, the company will not be responsible for this.</p>	



12. Product Specification



Product name	Blood Pressure Monitor	
Model	EBP-020	
Display mode	Digital display	
Measuring method	Oscillographic method	
Measuring part	Upper arm	
Measuring range	Blood Pressure value	30mmHg-255mmHg (5.3kPa-37.3kPa)
	Pulse rate	40-199 pulse rates / minute
Static measurement accuracy	Pressure value	$\pm 3\text{mmHg}(\pm 0.4\text{kPa})$
	Pulse rate	$\pm 5\%$ of the read value
LCD display	Pressure	Unit: mmHg / kPa.
	Pulse	Pulse rate per minute, showing three digits
Memory capacity	99 groups of measurement data for each of two users	
Power supply	4 AAA dry batteries or DC 5V USB external power supply	
Power off mode	Manual shutdown / 30s delayed automatic shutdown	
Body weight (excluding batteries)	About $195\text{g} \pm 5\text{g}$	
Dimension	120mm(length)* 90(width)* 43mm(height)	
Screen size	59mm(length)* 47mm(width)	
Cuff	Upper arm cuff (measuring arm circumference 22-42cm)	
Accessories	Cuff, User manual	
Battery life	High performance dry batteries can be used about 300 times under normal temperature conditions	

Service life	5 years		
Date of environment	See the label		
Working environment	Temperature condition	41°F-104°F	If the product is stored or used outside the specified temperature and humidity range, it will not work properly.
	Humidity condition	15%-90%RH	
	Atmospheric condition	70kPa-106kPa	
Storage and transportation environment	Strong impact, direct collision, exposure to the sunlight or rain should be avoided during transportation. The packaged blood pressure monitor should be stored in an environment with temperature ranging from – 68°F to 131°F, relative humidity ranging from 10% to 93%, and atmospheric pressure ranging from 70 kPa to 106 kPa, with no corrosive gas and positive ventilation.		

13. Precautions

The warnings and illustrations shown in the manual are intended to enable you to use the product safely and correctly, thus preventing harm to you and others, specific meanings of which are shown as follows:

Legend, mark and meaning	
	Warning information
	BF-type anti-shock degree for the application part

	When the product life expires and the product is to be discarded, it has to be taken to designated places for disposal, according to the requirements of the local environmental protection department.
	Consult the instructions for use.
IP21	Consult the instructions for use.

14. Statement of Electromagnetic Compatibility

Guidance and manufacturer's declaration – Electromagnetic emission		
The Model EBP-020 Blood pressure monitor is intended for use in the electromagnetic environment specified below. The customer or the user of the Model EBP-020 Blood pressure monitor should assure that it is used in such an environment.		
Emissions	Compliance	Electromagnetic environment-guidance
RF emissions CISPR 11	Group 1	The Model EBP-020 Blood pressure monitor 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 Model EBP-020 Blood pressure monitor is suitable for use in all Aestabishments, 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	N.A.	
Voltage fluctuations/flicker emissions IEC61000-3-3	N.A.	

Guidance and manufacturer's declaration – Electromagnetic immunity

The Model EBP-020 Blood pressure monitor is intended for use in the electromagnetic environment specified below. The customer or the user of The Model EBP-020 Blood pressure monitor 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	±8kV contact ±2 kV, ±4kV, ±8 kV, ±15KV air	±8 kV contact ±2 kV, ±4 kV, ±8 kV, ±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 %.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	30A/m, 50/60Hz	30A/m, 50/60Hz	ower frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.

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

Guidance and manufacturer's declaration – Electromagnetic immunity

The Model EBP-020 Blood pressure monitor is intended for use in the electromagnetic environment specified below. The customer or the user of The Model EBP-020 Blood pressure monitor 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 Vrms150 kHz to 80 MHz 6 Vrms 150 kHz to 80 MHz outside ISM bandsa	N/A	Portable and mobile RF communications equipment should be used no closer to any part of the EBP-020 Blood pressure monitor ,including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance $d = \left[\frac{3.5}{f} \right] \sqrt{P}$

Radiated RF IEC 61000-4-3	10 V/m 80 MHz to 2.7 GHz	10 V/m	$d = \left[\frac{3.5}{E1} \right] \sqrt{P}$ <p>80MHz to 800MHz</p> $d = \left[\frac{7}{E1} \right] \sqrt{P}$ <p>800MHz to 2.7GHz</p> <p>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:</p> 
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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. Electromagnetism is affected by absorption and reflection from structures, objects and people.

a The ISM (industrial, scientific and medical) bands between 0,15 MHz and 80 MHz are 6,765 MHz to 6,795 MHz; 13,553 MHz to 13,567 MHz; 26,957 MHz to 27,283MHz; and 40,66 MHz to 40,70 MHz. The amateur radio bands between 0,15 MHz and 80 MHz are 1,8 MHz to 2,0 MHz, 3,5 MHz to 4,0 MHz, 5,3 MHz to 5,4 MHz, 7MHz to 7,3 MHz, 10,1 MHz to 10,15 MHz, 14 MHz to 14,2 MHz, 18,07 MHz to 18,17MHz, 21,0 MHz to 21,4 MHz, 24,89 MHz to 24,99 MHz, 28,0 MHz to 29,7 MHz and 50,0 MHz to 54,0 MHz.

b The compliance levels in the ISM frequency bands between 150 kHz and 80 MHz and in the frequency range 80 MHz to 2,7 GHz are intended to decrease the likelihood that mobile/portable communications equipment could cause interference if it is inadvertently brought into patient areas. For this reason, an additional factor of 10/3 has been incorporated into the formulae used in calculating the recommended separation distance for transmitters in these frequency ranges.

Recommended separation distances between portable and mobile RF communications equipment and Model EBP-020 Electronic Blood Pressure Monitor

The Model EBP-020 Series 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 Model EBP-020 Series Blood pressure monitor can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the Model EBP-020 Series Blood pressure monitor 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		
	150 kHz to 80 MHz	80 MHz to 800 MHz	800 MHz to 2.7 GHz
	$d = \left[\frac{3.5}{E1} \right] \sqrt{P}$	$d = \left[\frac{3.5}{E1} \right] \sqrt{P}$	$d = \left[\frac{7}{E1} \right] \sqrt{P}$
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	73
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.

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