

Fully Intelligent Electronic
Blood Pressure Monitor
OPERATING MANUAL

-  One key
-  Heart rate
-  Large Screen
-  Auto pressure



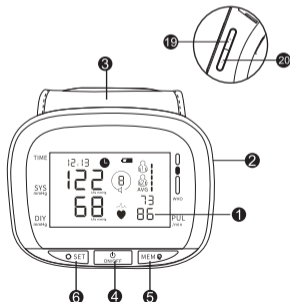
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Thank you for purchasing the intelligent electronic blood pressure monitor product produced by our company. This product is an intelligent electronic blood pressure monitor for professional measurement of human body blood pressure. It features simple operation with a high-definition super screen LCD display, and functions of memory reading, blood pressure warning and automatic shutdown. In order for you to use this product safely and correctly, please read the operating manual before use. The operating manual is applicable to the three-button wrist blood pressure monitor.

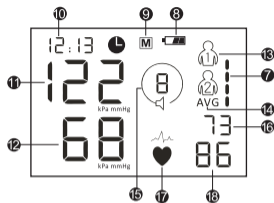
1.Name and function of each part

Ontology

- 1 Display screen
- 2 Battery cover
- 3 Wrist belt
- 4 on/off
- 5 Memory button
- 6 Setting button



Display screen



- 7 Blood pressure level indication
- 8 Low battery symbol
- 9 Memory icon
- 10 Time icon
- 11 High pressure value (systolic pressure)
- 12 Low pressure value (diastolic pressure)
- 13 Number of user groups
- 14 Average icon
- 15 Voice icon (No icon for the one-voice type)

- 16 Number of memory groups
- 17 Heartbeat icon
- 18 Pulse rate display
- 19 Volume Up
- 20 Volume Down

2.Technical parameters

1. Display mode: liquid crystal display screen
2. Measuring mode: depressurization type oscillometric method for measurement
3. Power supply: two AAA alkaline batteries (3V)
4. Measurement range: (20-280) mmHg/ (2.7-37) kPa (blood pressure) (40-160) times/min (pulse rate)
5. Accuracy: $\pm 3\text{mmHg}/\pm 0.4\text{ kPa}$ (blood pressure) $\pm 5\%$ (pulse rate)
6. Air charging mode: automatic charging
7. Air leakage device: air relief valve

- 8.Quick air leakage: electronic air release valve
- 9.Result display: high pressure/low pressure/pulse
- 10.Unit conversion: conversion of blood pressure value unit mmHg/kPa (default unit when start is mmHg)
- 11.Number of memory groups: Double 99 memory groups
- 12.Low battery inspection: LCD displays symbol '☐' to indicate low battery
- 13.WHO tip: blood pressure warning strip is used to indicate blood pressure and health status, see table 2 for details
- 14.Error tip: see table 1 for details
- 15.Arrhythmia tip: LCD displays '♥' flickering to indicate arrhythmia
- 16.Overpressure protective function: automatically releases air when air pressure exceeds 295mmHg (20MS)
- 17Automatic shutdown function: automatic shutdown in half minute when there is no operation
- 18.Current: dynamic current less than 500mA, statistic current less than 30mA, shutdown current less than 20uA
- 19.Normal working conditions:
 - a) Environment temperature: 5-40 degrees Celsius;

3. Install and change battery

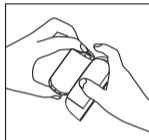
1.Open battery cover:

- 1) Hold the product firmly in hand
- 2) Pry open the battery cover using a fingernail and open it outwards

2.Insert two AAA alkaline batteries with 1.5V into the battery slot in accordance with electrode indication in the battery slot, and then put the battery cover back on.

Notes:

- When the battery level is low and symbol '☐' is displayed, please stop measuring. Replace the old batteries with new batteries.
- Even if the batteries are changed, the previously measured blood pressure value will still be stored.
- Please handle the used batteries in accordance with national relevant regulations.



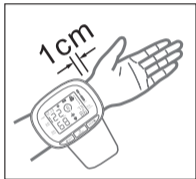
Operation of blood pressure monitor

1. Correct wearing of wrist belt

1) The wrist belt is placed on the wrist after removal of any cloth or jewellery; and the display screen should be placed to the positive side of the wrist.



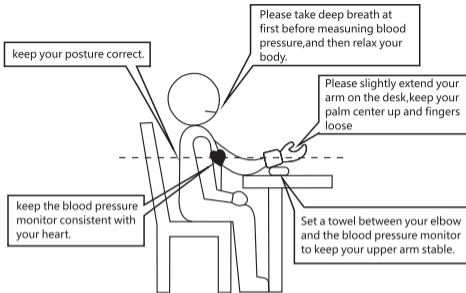
2) The wrist belt is placed on the wrist after removal of any cloth or jewellery



Correct measuring posture

1) Please sit in a room where the temperature is appropriate for measurement. Your body should be relaxed and posture should be natural. You should sit on a chair, set both of your feet on the ground, and keep your body sitting upright with your back straight.

2-2) Please level the blood pressure monitor with your heart position as shown in the following figure. Relax your mind and keep a relaxed and natural posture for measurement. Incorrect posture will affect measured blood pressure value. The blood pressure value will change depending on posture, time and other various factors; it is suggested to measure blood pressure with the same posture at the same time of every day.



Please avoid gesture as follows during measurement



Please do not clench the fist

Please do not place the blood pressure monitor to the outer arm

Please keep the blood pressure monitor stable during measurement

For obtaining accuracy of blood pressure, suggestions are given as follows:

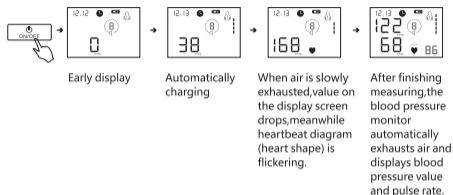
- 1) Strenuous exercise, smoking or drinking stimulants/depressants (for example, coffee or alcohol) is not allowed 30 minutes before measuring blood pressure.
- 2) Please rest in a comfortable and stable environment for at least five minutes before measuring.
- 3) Usually sitting posture is adopted for measurement.
- 4) One hand should be fixed for measurement. If it is the first time measuring your blood pressure, two hands should be fixed for measurement.
- 5) Blood pressure should be measured at least twice each time at an interval of not less than five minutes; longer time interval might be needed for different personal health statuses.
- 6) Arrhythmia and arteriosclerosis patients should be measured by medical staff for professional diagnosis.

Measurement of blood pressure

Automatic test

Press the on/off button and the blood pressure monitor will start to charge for measurement. During measurement, please do not move or talk.

(If mmHg appears on the screen, the measurement unit is mmHg; or else, kPa.)

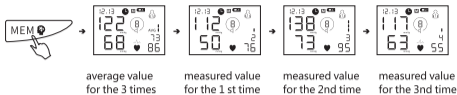


View and delete memory

The blood pressure monitor can store 99 groups of memory. After each measurement, the blood pressure monitor will automatically store measured data. When the memory capacity is full, old measured data will be covered by new data.

A. View result

The memory button is pressed down in sleep mode. The first display is average value of the last three times of measurement. The measured value of each time can be checked by pressing the button in sequence.



B.Delete memory

1)Delete single memory group

In memory mode, the setting button is pressed down until 'dEL' is displayed at the top of the screen; then the memory button is pressed down to delete the current memory group.

Settings

1) User selection and sound setting

The setting button is pressed down in sleep mode, Then the user icon " " or " " is displayed on the screen. setting button is pressed down to select user " " or " " .

Four modes are selected to adjust the value of sound setting. Press the " + " and " - " button on the side to increase and reduce the volume.

2) Time setting and blood pressure unit selection

After the user is selected, the setting button is pressed down until the icon " " is flickering in sleep mode. Then 'year, month, date, hour, minute' should be selected in sequence by pressing down the setting button every time. The memory button can be pressed to adjust, and the setting button is pressed to confirm. The time will be confirmed as system default time if it is not adjusted.

Blood pressure unit mode (that is 'PA' mode): the blood pressure unit in 'OFF' state is mmHg, and the blood pressure unit in 'ON' state is kPa. The memory button is pressed to select, and the setting button is pressed to confirm.

Cautions

General matters	Use of battery
<p>Measuring result is available for reference only, and can be dangerous for self-diagnosis and treatment. Please follow a doctor's guidance.</p> <ul style="list-style-type: none"> - Self-diagnosis may make conditions worse. - Diabetes, hyperlipidemia and hypertension may accelerate arteriosclerosis, and may also cause terminal circulatory disturbance. The pressure values measured at the wrist and upper arm of the patient might be different. 	<p>Please use AAA manganese or alkaline batteries (two batteries). Do not use other batteries or it may cause machine fault.</p>
	<p>Please do not mistake positive and negative polarities of the batteries.</p>
<p>Acute internal haemorrhage might be caused when a patient suffering from blood pressure or severe blood disease is extruded during measurement. Please use under guidance of a doctor.</p>	<p>Please immediately take the batteries out when they are used up, and replace with new batteries; or else, they might cause heating, liquid leakage or crack so as to cause damage to the machine.</p>
<p>Please keep infant or people who cannot express his mind away from the machine.</p>	<p>Please do not mix new batteries with old batteries or other batteries of different brands and types; or else, they may cause heating, liquid leakage or crack so as to cause damage to the machine.</p>
<p>Please do not use for purposes other than measurement of blood pressure.</p>	

<p>Please keep the product away from charged objects to avoid electric shock.</p>	<p>If the blood pressure monitor has not been used for a long time (over three months), please take the batteries out; or else, they may cause heating, liquid leakage or crack so as to cause damage to the machine.</p>
<p>Please keep the product away from high-pressure equipment and signal emission devices when in use so as to prevent danger of generating error action due to interference.</p>	<p>In case battery acid enters the eyes inadvertently, please wash with plenty of water immediately. It may cause blindness and other bodily harm. Please go to the nearest hospital for treatment immediately.</p>
<p>Please do not dismantle or attempt to repair the main machine and wrist belt of the blood pressure monitor by yourself.</p>	<p>In case battery acid inadvertently touches the skin, please wash with plenty of water; or else, it may damage the skin.</p>
<p>Please do not pressurize when the wrist belt is not wrapped around the wrist.</p>	
<p>Please do not wipe the main body of the blood pressure monitor with volatile solvents.</p>	
<p>Please do not drop the device, twist the body or bind the belt ring.</p>	
<p>Please clean the machine body with a wet cloth or neutral cleanser, and wipe dry.</p>	

Product troubleshooting

Abnormal phenomenon	Cause	Fault treatment method
Measured value is too high or too low	Position of wrist belt is not kept consistent with height of heart.	Keep correct posture during measurement.
	Moving or talking during measurement.	Keep silent and do not talk during measurement.
	Arm and shoulder muscles are tensed.	Stay relaxed and measure again.
	Wrist belt is too loose or too tight.	Wrap the wrist belt correctly.
The wrist belt cannot be charged.	Wrist belt has air leakage	Please consult the customer service centre.
Blood pressure value measured each time is different (reading too low or too high).	Measuring posture is wrong.	Blood pressure value will change at different measuring times, and with different postures and degrees of relaxation. Take a deep breath before measuring to keep your body relaxed.
Shutdown during measurement.	Running down of batteries.	Replace with new batteries.
No response when starting.	Running down of batteries.	Replace with new batteries.
	Incorrect battery installation.	Reset the batteries and align positive and negative polarities correctly

Appendix Illustration

LCD error tip and corresponding cause table

LCD error tip	Cause
"Er 1"	The sensor signal is abnormal
"Er 2"	The result can not be measured
"Er 3"	The measurement result is abnormal
"Er 4"	The wristband is too loose or leaks air.
"Er 5"	The wristband is too tight or the air line is blocked.
"Er 6"	Pressure interference is serious during measurement.
"Er 7"	The pressure is over 300.
"Er 8"	The calibration data or the storage IC is abnormal.
"Er 9"	"IC key" is a error.

Blood pressure warning strip illustration (table 2)

LCD	Highpressure	Low pressure
Severe	≥180	≥110
Moderate	160~179	100~109
Mild	140~159	90~99
Normal or High	130~139	85~89
Normal	120~129	80~84
Best	≤119	≤79

Important information about blood pressure

What is blood pressure?

Blood pressure indicates the pressure borne by arterial vascular walls when the blood flows through the arterial vascular walls. During cardiac cycle, the blood pressure of the arterial vascular walls changes constantly.

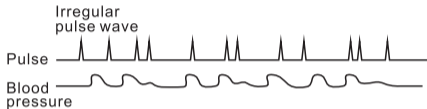
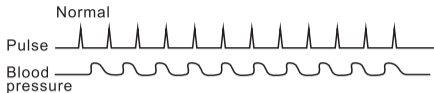
The highest pressure during cardiac cycle is called high pressure value (systolic pressure); the lowest pressure is called low pressure value (diastolic pressure).

The high and low pressure values are a necessary basis for diagnosis of blood pressure conditions of patients by doctors.

What is irregular pulse wave?

Irregular pulse wave indicates instantaneous heartbeat rhythm is detected to exceed 25% out of the range of average heartbeat rhythm when the blood pressure monitor is used for measuring high and low pressure values.

If there is irregular pulse wave, please consult a doctor.



What is arrhythmia?

Arrhythmia is a result-driven electrical system of the heart as a result of abnormal heart rhythm conditions. The typical symptoms are

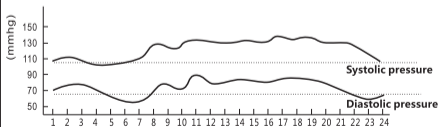
- Palpitations (a feeling of skipped heart beats, fluttering or "flip-flops," or feeling that your heart is "running away").
- Pounding in your chest.
- Dizziness or feeling light-headed.
- Fainting.
- Shortness of breath.
- Chest discomfort.
- Weakness or fatigue (feeling very tired).

Why it is good to measure blood pressure at home?

Your blood pressure will be affected by body movement, anxious motion and different time periods in the day. You should measure at least two times and get an average value measurement for accuracy. Therefore, it is the best to measure blood pressure at the same time of each day to obtain accurate signs of blood pressure change. Usually blood pressure measured in the morning is relatively low, and gradually rises from afternoon to the night. Additionally, blood pressure is relatively low in summer, and relatively high in winter.

At different times of a day, blood pressure change of the same people is also relatively large, only the blood pressure measured at the same time of a day can be compared, and more rational monitored blood pressure value can be obtained.

Change of blood pressure of adult in a day



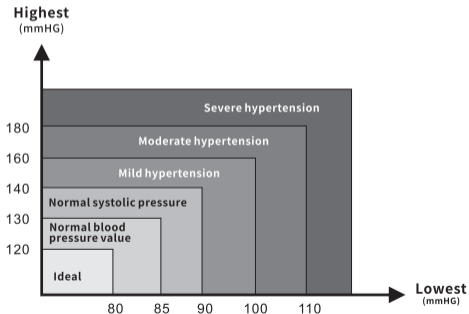
Classification of blood pressure by World Health Organisation

The World Health Organisation (WHO) made classifications of blood pressure as shown in the following diagram.

This table displays blood pressure measurements of different people at different postures in hospital outpatient departments as the standard.

Notes:

Low blood pressure has no definition. Generally people whose high pressure value is not up to 100mmHg (13.3kPa) are called hypotensive.



Warranty Card

1. This product is within one year's warranty under normal use of non-human factors of quality problems. (Gifts do not belong to the warranty.)
2. The warranty date is subject to the invoice of the product, please show the invoices when maintained.
3. During the warranty period, the repair isn't free under the following circumstances:
 - Do not follow the instructions for use caused by the fault.
 - Due to self-repair or modifying that resulting in failure.
 - Due to natural disasters, dropping, hitting or improper voltage.
 - Appearance is naturally polluted due to use.



Certificate

Product Name: _____

Type: _____

Inspection date: _____

Examiner: _____

The product has been tested and proved
to be qualified for delivery