

Fully Automatic Upper Arm Style Blood Pressure Monitor



Instruction Manual

Table of Contents

Introduction	3
Safety Information	4
Product Structure	7
--Each part name	7
Battery installation	8
Setting mode	10
--How to set	10
Proper use of the unit	12
--Pre-measurement	12
--Common factors of wrong measurement	12
--Fitting the cuff	13
--Measuring procedure	14
--Discontinuing a measurement	14
--Memory-recall of measurements	14
--Read memory record	14
--Memory-clear of measurements	15
About blood pressure	15
Exceptional situations	17
Care and maintenance	18
Specification	19
Warranty information	20
EMC Declaration	21

2/25

Introduction

▲ Your new digital blood pressure monitor uses the oscillometric method of blood pressure measurement. This means the monitor detects your blood's movement through your brachial artery and converts the movements into a digital reading. An oscillometric monitor does not need a stethoscope, so the monitor is simple to use.

▲ This automatic blood pressure monitor could measure the systolic pressure, diastolic pressure and pulse, the components are included the body, cuff and printed instruction manual. Batteries and adapter are optional. This unit is intended for the adult using.

▲ Intelligent inflation will reduce the uncomfortable feeling by incorrect inflation, and shorten the measurement time, prolong the cuff's usage lifetime.

▲ 2x90 sets memory function, each measurement result will be displayed on the screen, and automatically stored. This unit has blood classification index, could easy to check your blood pressure.

Please read the manual carefully before you use the unit, and keep the manual well after using.

3/25

Safety Information

■ To assure the correct use of the product, basic safety measures should always be followed including the warning and the caution listed in the instruction manual :

- Symbol descriptions**
- The following symbols may appear in this manual, on the label, on the device, or on it's accessories. Some of the symbols represent standards and compliances associated with the device and its use.
- ▲ **WARNING:**This alert identifies hazards that may cause serious personal injury or death.
 - ▲ **CAUTION:** This alert identifies hazards that may cause minor personal injury, product damage, or property damage.
 - ▲ **Type B applied part**
 - ▲ **Manufacturer** SN Specifies serial number
 - ▲ **Authorized Representative in the European Community**
 - ▲ **CE Mark:** conforms to essential requirements of the Medical Device Directive 93/42/EEC.
 - ▲ **DISPOSAL:** Do not dispose this product as unsorted municipal waste. Collection of such waste separately for special treatment is necessary.
 - ▲ **Direct current** Operating instructions
 - ▲ **Follow instructions for use**
 - ▲ **CAUTION:** Consult accompanying documents

4/25

Safety Information

- ▲ Those who have arrhythmia, diabetes, blood circulation or apoplexy problem, please use under the physician's instruction.
- ▲ Contact your physician for specific information about your blood pressure. Self diagnosis and treatment which use measured results may be dangerous. Follow the instructions of your physician or licensed healthcare provider.
- ▲ Please place on a high place where children can't be touched.
- ▲ No modification of this equipment is allowed.
- ▲ Do not modify this equipment without authorization of the manufacturer.
- ▲ If this equipment is modified, appropriate inspection and testing must be conducted to ensure continued safe use of equipment.
- ▲ The cuff hose around neck may cause the suffocation.
- ▲ The swallowing of small part like packaging bag, battery, battery cover and so on may cause the suffocation.
- ▲ Please don't use a dilution agent, alcohol or petrol to clean the unit. Please don't hit heavily or fall down the product from a high place. Use the right cuff, otherwise it can not work.
- ▲ Never leave any low battery in the battery compartment since they may leak and cause damage to the unit.
- ▲ Please take off the battery if you won't use in 3 months.
- ▲ Replace the new batteries if the unit display a low battery symbol.

5/25

Safety Information

- ▲ Do not mix the old and new batteries.
- ▲ Do not use a cellular phone near the unit. It may result in operational failure.
- ▲ Please avoid using in high radiant area in order to make your measuring data correctly.
- ▲ Do not use the equipment where flammable gas (such as anesthetic gas, oxygen or hydrogen) or flammable liquid (such as alcohol) are present.
- ▲ **WARNING:** Do not dispose of electrical appliances as unsorted municipal waste, use separate collection facilities. Contact you local government for information regarding the collection systems available. If electrical appliances are disposed of in landfills or dumps, hazardous substances can leak into the groundwater and get into the food chain, damaging your health and well-being.

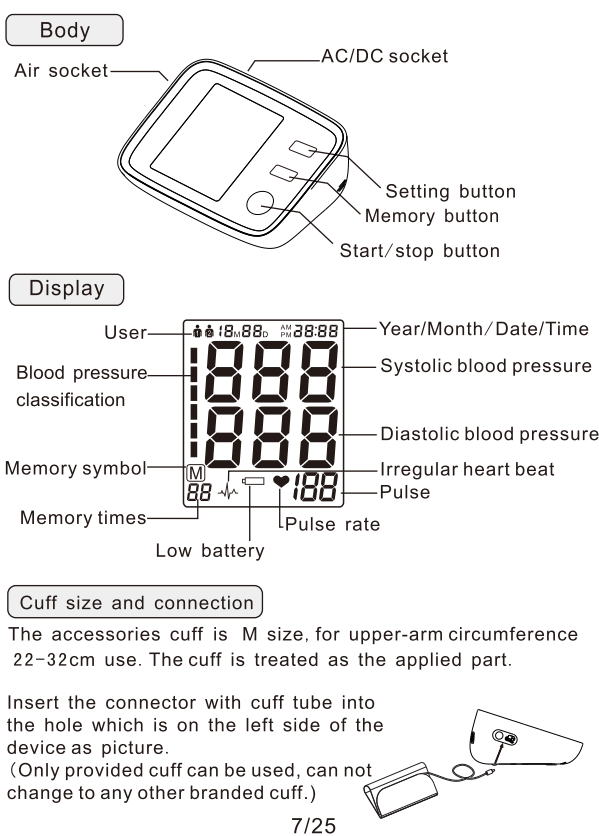
Classification

1. Internally powered equipment;
2. Type B applied part;
3. Protection against ingress of water: IPX0;
4. Not category AP / APG equipment;
5. Mode of operation: Continuous operation;

- ▲ The user must check that the equipment functions safely and see that it is in proper working condition before being used.

6/25

Product structure



7/25

Battery installation

- Battery installation**
- Remove the battery cover from the battery compartment, insert the battery.
- a) Remove the battery cover as picture showed.
 - b) Insert 4 AA powerful batteries into the compartment and ensure each battery is in the proper direction.

Low battery and replacement

When power on, the low battery symbol will display once the unit start to work, and you must replace with new batteries, otherwise the unit can't work.

Battery type and replacement

Please use 4pcs AA identical 1.5V alkaline batteries. Do not use the batteries beyond their expiry date. Please remove the batteries if you do not need to use for long time.

WARNING:

Dispose of the battery in accordance with all federal, state and local laws. To avoid fire and explosion hazard, do not burn or incinerate the battery.

8/25

Battery installation

Adapter usage (option)

1. When optional AC adapter should comply with the requirement of IEC 60601-1:2005. Furthermore all configurations shall comply with the requirements for medical electrical systems (see IEC 60601-1-1 or clause 16 of the 3Ed. of IEC 60601-1, respectively). Anybody connecting additional equipment to medical electrical equipment configures a medical system and is therefore responsible that the system complies with the requirements for medical electrical systems. Attention is drawn to the fact that local laws take priority over the above mentioned requirements. If in doubt, consult your local representative or the technical service department.
2. When using AC power, to avoid possible damage to the monitor, use only the exclusive AC adapter that can be purchased from authorized dealers. Other adapters may vary in output voltage and polarities.
3. Insert the adapter plug into the hole on the backside of the unit as picture.
4. Insert the other side of the adapter into the outlet with 100-240V.
5. To remove the AC adapter, disconnect the adapter plug from the outlet first and then disconnect the cord from the unit's socket.

Adapter technical features:

Output voltage: 6V ± 5%
 Max. output current: At least 600 mA
 Output plug polarity: <-> inner
 External diameter: 5.5mm 0.1mm
 Internal diameter: 2.1mm 0.1mm

9/25

Setting mode

Note:

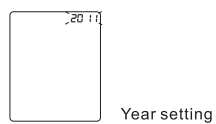
- When use AC adapter, the power of battery won't be consumed.
- When suddenly stop during measurement (like the plug off from the outlet by carelessness), it must be reinserted the plug into the unit, and restart the measurement.

How to set

1. **User setting:** Press button SET when power off, the screen will display user 1 or user 2, press button MEM, it will be changed between user 1 and user 2, press button SET when you confirm the user, then it will enter into the year setting mode.



2. **Year setting:** Continue to above step, the screen will display and flash 20XX, the last digit of the year will increase 1 when press button MEM each time, you could choose from 2001 to 2099. Press button SET when you confirm the year, then it will enter into the month and date setting mode.

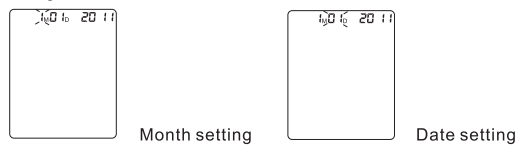


10/25

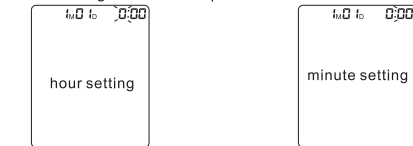
Setting mode

3 Month and date setting

Continue to above step, the screen will display xxMxxD and xxxx, and keep flashing on month, the digit will increase 1 when press button MEM each time, you could choose from 1 to 12. Press button SET when you confirm the month, then it will set the date. Same as the month setting, each time you press button MEM, the digit will keep changing from 01 to 31. Press button SET when you confirm the date, then it will enter into the time setting mode.



4. **Time setting:** Continue to above step, the screen will display xxMxxD and xx:xx, and keep flashing on the digits of hour, the digit will increase 1 when press button MEM each time, you could choose from 0 to 23. Press button SET when you confirm the hour, then the digits of minute start to flash, same as the hour setting, each time you press button MEM the digits will keep changing from 00 to 59. Press button SET when you confirm the minute, then the total setting mode is completed.



Measurement

Pre-measurement

11/25

Proper use of the unit

- Please keep quiet for 5-10 minutes, and avoid eating, drinking alcohol, smoking, exercising and bathing before taking measurement. All these factors will influence the measurement result.
- Remove any garment that fits closely to your upper arm.
- Always measure on the same arm (normally left).
- Take measurement regularly at the same time of every day, as blood pressure changes even during the day.

Common factors of wrong measurement

- All efforts by the patient to support their arm can increase blood pressure.
- Make sure you are in a comfortable, relax position and do not activate any of the muscles in the measurement arm during measurement. Use a cushion for support if necessary.
- If the arm artery lies lower or higher than the heart, a false reading will be obtained.

Note:

- Only use clinically approved cuffs!
- A loose cuff or a exposed bladder causes false reading.
- With repeated measurements, blood accumulates in the arm which can lead to false reading.

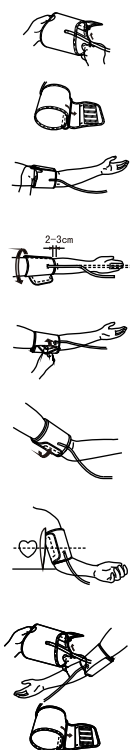
Consecutive blood pressure measurements should be repeated after 1 minute pause or after the arm has been held up in order to allow the accumulated blood to flow away.

12/25

Proper use of the unit

Fitting the cuff

- 1). Put the cuff on a table flatly with the velcro side down. Pass the end of the cuff through the metal loop so that a circle is formed. The velcro closer will now be facing outwards (ignore this step if the cuff has already been prepared).
- 2). Push the cuff over the left upper arm so that the tube points in the direction of the lower arm.
- 3). Wrap the cuff on the arm as illustrated. Make certain that the lower edge of the cuff lies approximately 2 to 3 cm above the elbow and the rubber tube leaves the cuff on the inner side of the arm.
- 4). Tighten the free end of the cuff and close the cuff by affixing the velcro.
- 5). The cuff should be snug on your upper arm so that you can fit 2 fingers between the cuff and your upper arm. Any piece of clothing restricts the arm which must be taken off.
- 6). Secure the cuff with the velcro closer in such a way that it lies comfortably and not too tight. Lay your arm on a table (palm upwards) so that the cuff is at the same height as the heart. Do not bend the tube.



Note:

If it is not possible to fit the cuff to your left arm, it can also be placed on the right. However, all measurements should be made using the same arm.

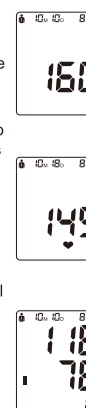
13/25

Proper use of the unit

Measuring procedure:

After the cuff has been appropriately positioned, the measurement can begin:

- 1). Press the START/STOP button, all symbols appear on the display, then the pump begins to inflate the cuff, the rising pressure in the cuff is shown on the display.
- 2). After the suitable pressure has been reached, the pump stops and the pressure gradually falls. The cuff pressure is displayed. In case that the inflation is not sufficient, the device automatically re-inflates to a higher pressure.
- 3). When the device detects the signal, the heart symbol will appear on the display.
- 4). In the meantime, the systolic, diastolic and pulse rate will appear on the display.
- 5). The measurement readings remain on the display until you switch off the device. If no button is pressed for a period of 3 minutes, the device switches off itself in order to save the power.



Note: The symbol will be displayed along with the reading if the irregular heartbeat is detected during the measurement.

Discontinuing a measurement

If it is necessary to interrupt a blood pressure measurement for any reason (eg. the patient feels unwell) the START/STOP button can be pressed at any time. The device immediately decrease the cuff pressure automatically.

Memory-recall of measurements

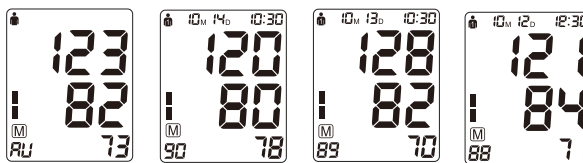
This blood pressure monitor automatically stores 2x90 sets measurements value, the oldest record will be replaced by the latest measurement value when more than 90 sets each user.

Read memory record

Press the button MEM when power off, the latest 3 times average value will be shown, press the button MEM again, the last measurement value will be shown, as well as subsequent measurements can be display one after the other by pressing the button MEM each time.

14/25

About blood pressure

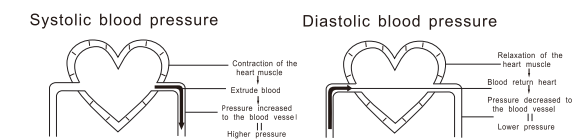


Memory -clear of measurements

If you are sure that you want to permanently remove all stored memories. Press the button SET for 6 times until CL appears when power off, press the START/STOP button, CL will flash for 3 times to clear all the memories. After this press button MEM, [M] and "no" will be shown on the display which mean that no memory in store.

About blood pressure

Blood pressure is the pressure exerted the arteries. The systolic blood pressure value represents the blood pressure produced by contraction of the heart muscle. The diastolic blood pressure value represents the blood pressure produced by relaxation of the heart muscle.



15/25