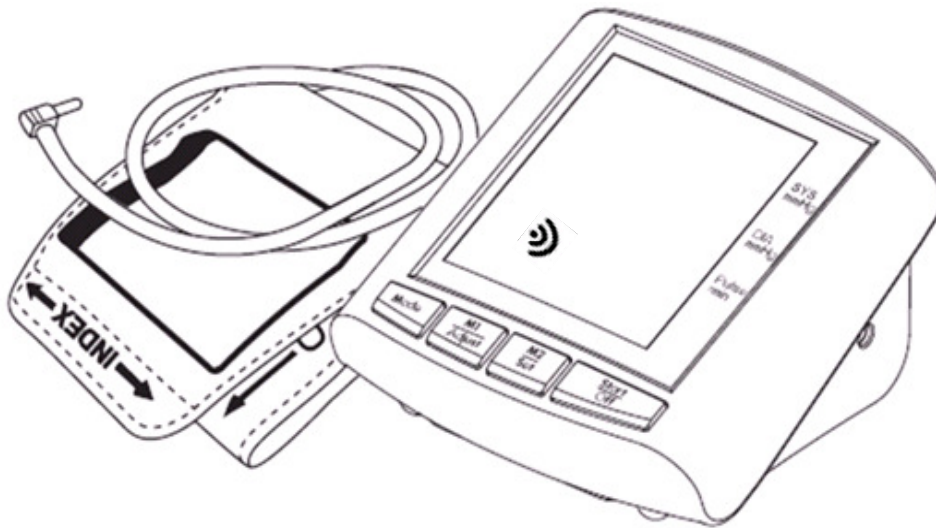


Blood Pressure Monitor

Bluetooth Transmission



***Quick Measuring System
Digital Upper Arm***

INSTRUCTION MANUAL BP-700W

Version 1.1
Sep.,2011

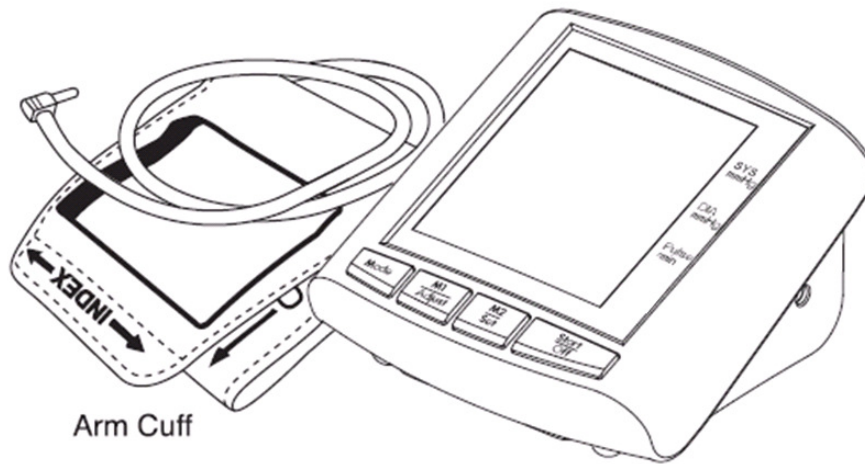
KNOW YOUR UNIT

Warranty

This blood pressure monitor is **warranted for 1 year** from date of purchase. This warranty includes the instrument and the cuff. The warranty does not apply to damage caused by improper handling, damage from leaking batteries, accidents, failure to follow the operating instructions or alterations made to the instrument by third parties.

Intended Use

This blood pressure monitor is designed for home use. It is non-invasive, meaning no part of the monitor enters your body. It provides systolic pressure, diastolic pressure and pulse measurements. This monitor is recommended for use by people over the age of 18. It is not suitable for clinical use and is intended for a single user (or at most two users living in the same household).



Blood Pressure Monitor

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- * COUNCIL DIRECTIVE 93/42/EEC of 14 June 1993 concerning medical devices.
- * IEC60601-1: 2005 + CORR. 1 (2006) + CORR. 2 (2007);
- * EN 60601-1: 2006 Medical electrical equipment - Part 1: General requirements for basic safety and essential performance
- * ANSI/AAMI ES60601-1: 2005:
Medical Electrical Equipment-Part1: General requirement for basic safety and essential performance
- * EN1060-1: 1995 with Amendment A2: 2009:Non-invasive sphygmomanometer
Part 1: General requirements
- * EN1060-3: 1997 with Amendment A2: 2009: Non-invasive sphygmomanometers,
Part 3: Supplementary requirements for electro-mechanical blood pressure measuring systems
- * EN55011: 2007 + A2: 2007;
- * EN60601-1-2: 2007 / AC 2010: Medical electrical equipment: Part 1-2:
General requirements for basic safety and essential performance
- * EN1060-4: 2004 Non-invasive sphygmomanometers. Test procedures to determine the overall system accuracy of automated non-invasive sphygmomanometers.
- * FCC 47 CFR PART 18: Electromagnetic Compatibility
- * EN ISO 13485:2003 /AC:2009 & ENISO1497:2009
- * EN ISO 10993-1:2009 Biological evaluation of medical devices
- * ANSI/AAMI SP10:2002/(R)2008 -Manual, electronic, or automated sphygmomanometers
- * **ANSI/AAMI/ISO 81060-2:2009 Non-invasive sphygmomanometers -**

General Communications Commission (FCC) Statement

15.21

You are cautioned that changes or modifications not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.

15.105(b)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:







- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1) this device may not cause harmful interference and
- 2) this device must accept any interference received, including interference that may cause undesired operation of the device.

FCC RF Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance.

<p>EU representative</p> <p> Kahl Handelsvertretung Address: Isarstr. 33 40699 Erkrath Germany Tel: 49-2104-47754</p> <p>  0434</p> <p> <i>Read this manual before use.</i></p>	<p>Customer company name</p> <p> YA HORNG (DONGGUAN) ELECTRONIC CO., LTD.</p> <p>PING SHAN 188 INDUSTRY ZONE, TANG XIA TOWN, DONG GUAN, GUANDONG, China Head office : YA HORNG ELECTRONIC CO.,LTD/ FACTORY: ATTEN ELEC- TRONIC (DONGGUAN) CO.,LTD.</p> <p> 2011</p>
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ABOUT BLOOD PRESSURE

What is blood pressure?

The heart creates a force as it pushes blood into the arteries and through the blood circulation system. The arteries create another force as they resist the blood flow. Blood pressure is the result of these two forces.

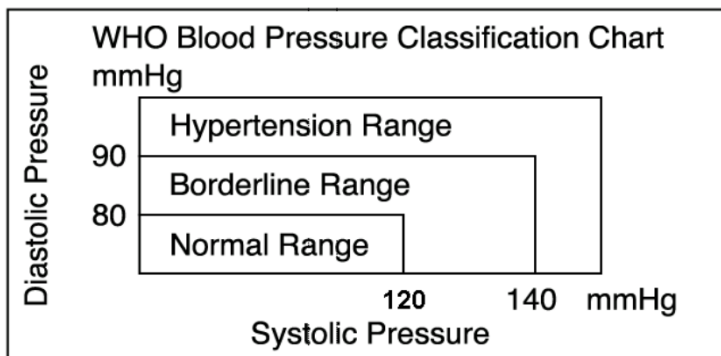
What constitutes high blood pressure?

According to the Joint National Committee 7 (JNC 7) definitions, when systolic blood pressure exceeds 140 mmHg or diastolic blood pressure exceeds 90 mmHg, this constitutes high blood pressure (see figure below)

JNC7 Classification Table

Range	Systolic	Diastolic
Stage 2 Hypertension	≥ 160 mmHg	≥ 100 mmHg
Stage 1 Hypertension	140-159 mmHg	90-99 mmHg
Prehypertension	120-139 mmHg	80-89 mmHg
Normal	< 120 mmHg	< 80 mmHg

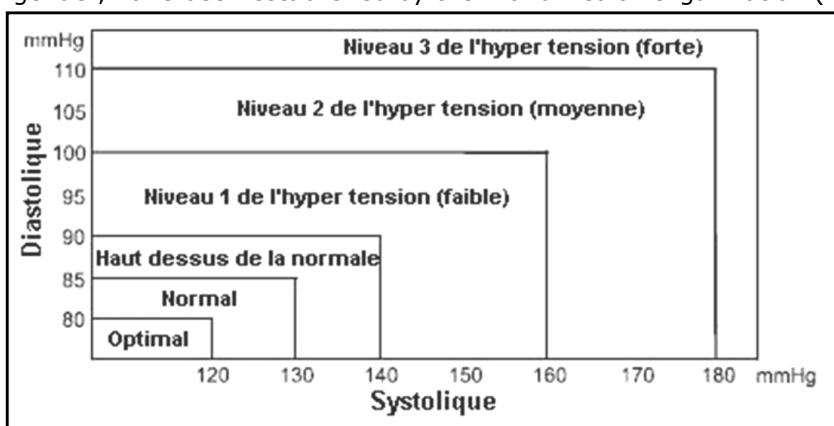
SOURCE: The Seventh Report of the Joint National Committee on Prevention, Evaluation and Treatment of High Blood Pressure for Adults. National Heart, Lung and Blood Institute - may 2003.



WHO Classification Table - for adults outside of the U.S. (e.g. Canada, Mexico)

Range	Systolic	Diastolic
Stage 3 Hypertension	≥ 180 mmHg	≥ 110 mmHg
Stage 2 Hypertension	160-179 mmHg	100-109 mmHg
Stage 1 Hypertension	140-159 mmHg	90-99 mmHg
High-Normal	130-139 mmHg	85-89 mmHg
Normal	< 130 mmHg	< 85 mmHg
Optimal	< 120 mmHg	< 80 mmHg

SOURCE: Standards to assess high blood pressure, without regard to age or gender, have been established by the World Health Organization (WHO).



HIGH BLOOD PRESSURE

High Blood Pressure, or hypertension, is a medical condition in which the arterial blood pressure is elevated. High blood pressure can be classified as "primary", meaning that no medical cause can be found, or as "secondary", meaning that it is caused by other conditions that affect the kidneys, arteries, heart or endocrine system.

Persistent high blood pressure is a risk factor for conditions such as stroke, heart failure, arterial aneurysm and others. It is also a leading cause of chronic kidney failure. Even moderately elevated blood pressure for an extended period of time may shorten your life expectancy.

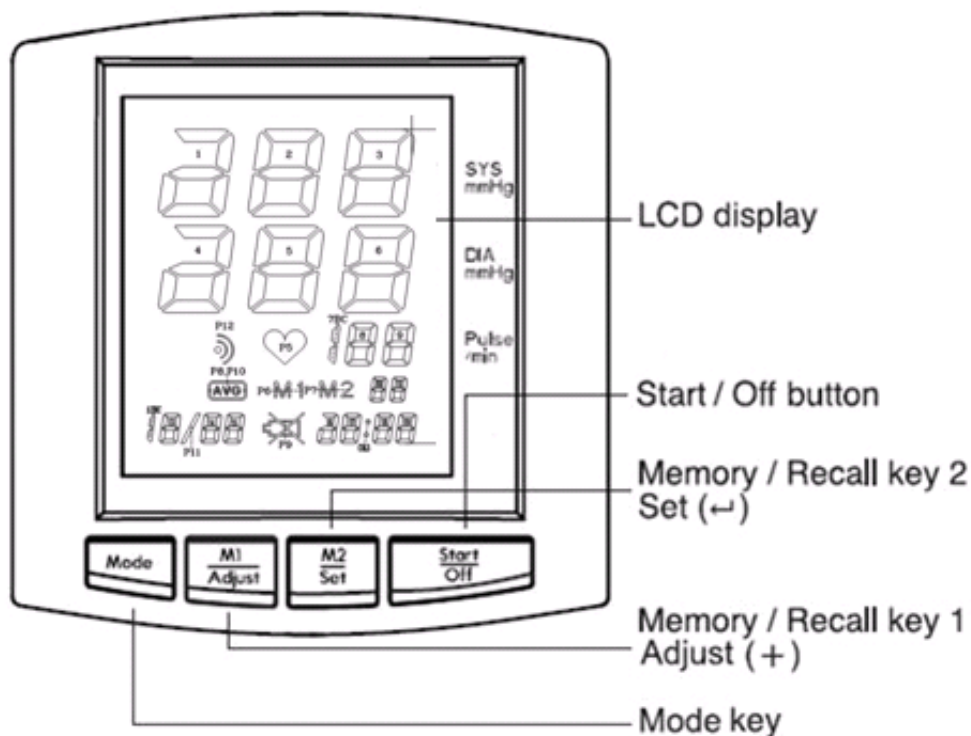
A person's blood pressure is constantly changing. Blood pressure can fluctuate considerably through the course of a single day, and it is also affected by the seasons and by the weather. One or two readings are not sufficient to get an accurate picture of your blood pressure.

Ideally, you should get into the habit of checking your blood pressure at fixed times several times a day, every day, and keep a detailed record of these readings.

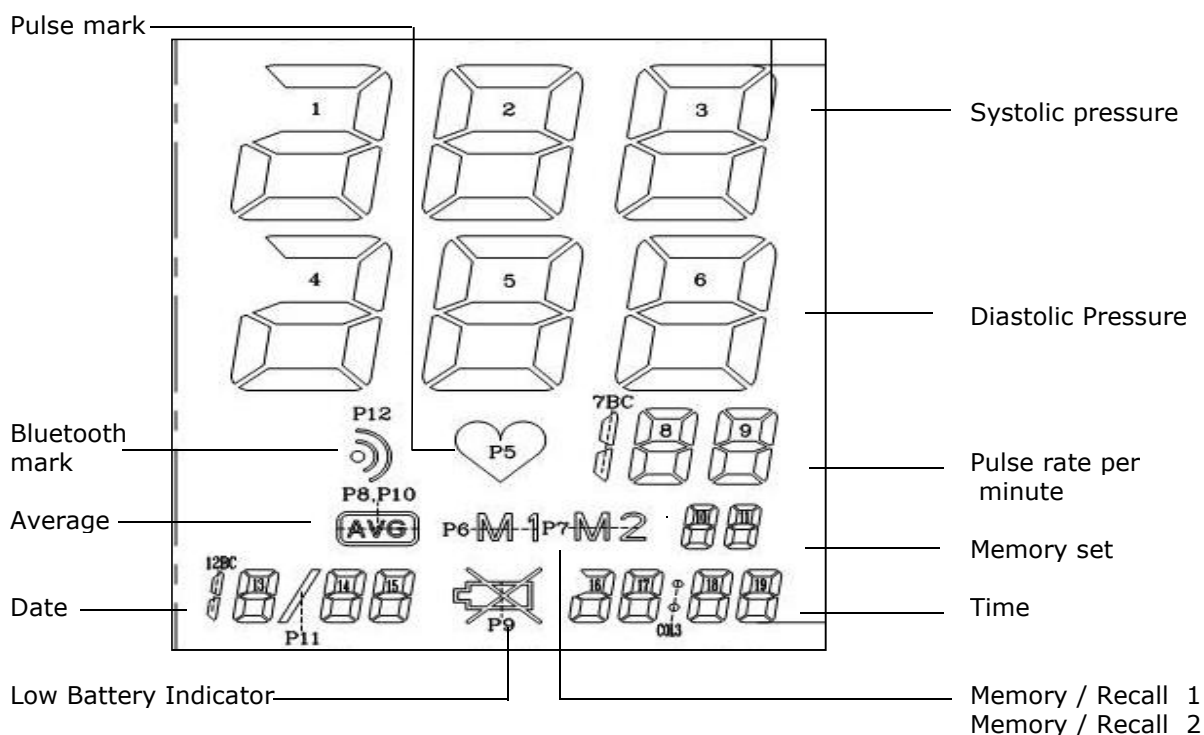
This record can then be reviewed by your doctor or other health care provider, helping you to monitor your health on an ongoing basis.

For a normal, healthy person blood pressure fluctuates within a range of approximately ± 10 mmHg.

NAME/ FUNCTION OF BLOOD PRESSURE MONITOR



Explanation of the Display



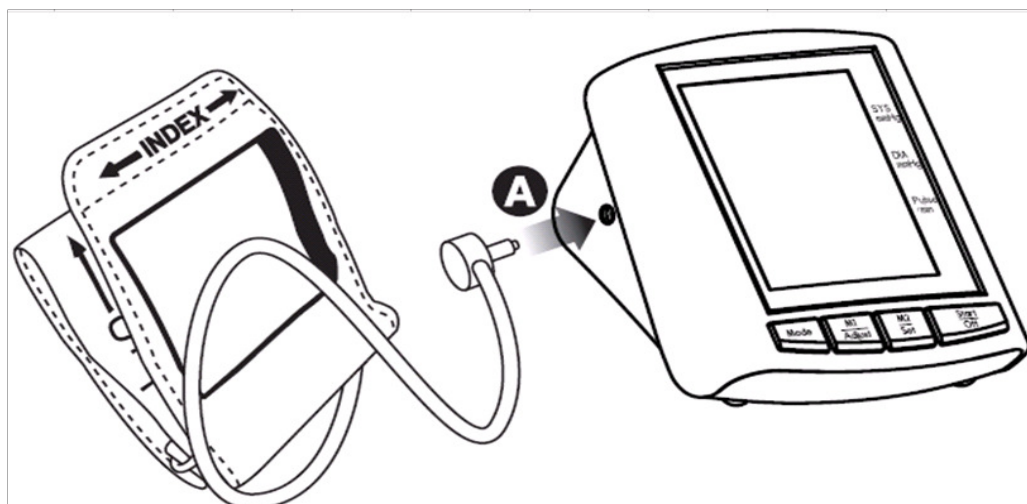
HOW TO MEASURE YOUR BLOOD PRESSURE

Sit quietly before measuring your blood pressure

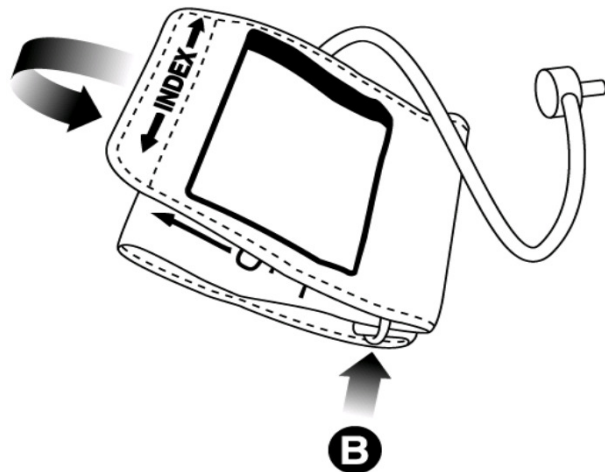
Before taking a reading, you should sit quietly for around 10 minutes, and there should be an interval of at least 5 minutes between readings. While taking a measurement you should stay calm and relaxed, and try not to talk. This will improve the accuracy of the readings.

Applying the Arm Cuff

1. Plug the cuff connector tube (A) into the unit.



2. Unwrap the arm cuff, leaving the "Index" end of the cuff through the metal D-ring (B) of the cuff.



3. Sit in the correct position for making a blood pressure reading.

Correct posture

Rest your left arm on a table and relax your arm.

Correct cuff placement

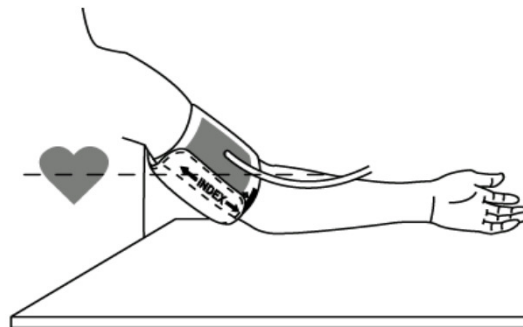
Wrap the arm cuff snugly. You should be able to fit one finger between the cuff and your arm.

Correct level

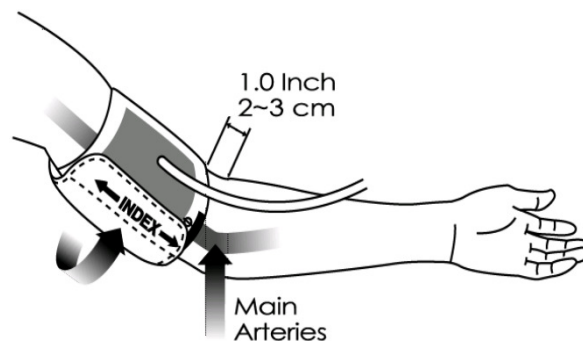
Make sure the cuff is at heart level.

* When measuring blood pressure, lightly bend your elbow while resting your arm on a table.

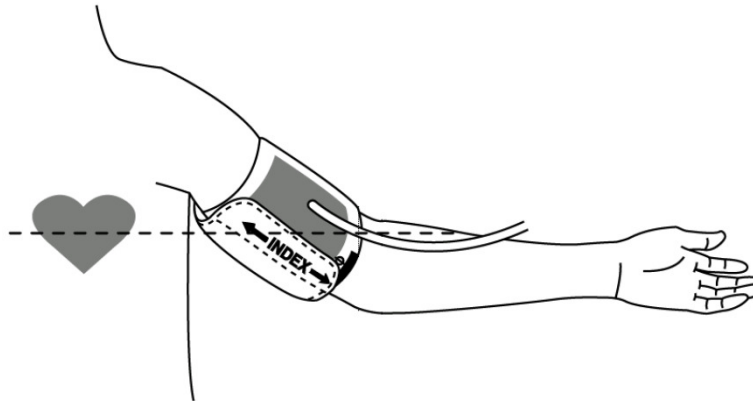
* If the level of the arm cuff is lower than the heart, adjust the height by using a pillow or a cushion.



4. Put your left arm through the cuff loop. The "OK" range indication should be positioned at the top with the rubber tube pointing downward in the direction of your forearm. Position the artery mark over the main arteries on the inside of your arm as shown in the figure below. The tube should be running down the center of your arm



- Turn your left palm upward and place the edge of the arm cuff at approximately 1 inch above your elbow. Tighten the cuff by pulling the "Index" end of the cuff. The cuff should be tensioned onto the arm to allow the insertion of one finger between the cuff and arm.

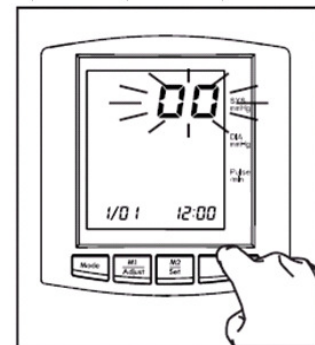


Remarks:

The following factors can affect the results of blood pressure readings: exercise, having a shower or bath, using the toilet, breathing, speaking, smoking, drinking alcohol, taking medication, vibration, eating, changes in temperature, stress, mood, etc.

BEGIN TO MEASURE

- Push the START button.
- The LCD will display the date, time and 0 digit. The "0" will blink on the LCD.
- About 2-3 seconds later, the pressure will be reset. Then the cuff will begin to inflate and the pressure value will be displayed.
- This cuff will inflate automatically as the monitor detects that your body requires more pressure for measurement.



Note: The blood pressure monitor is a sensitive instrument. Measurements can be disturbed if you move or talk while your monitor is measuring your blood pressure. Remain quite and relaxed with your arm still during a measurement.

TAKING AND STORING A READING

- After finishing a measurement, values for systolic pressure, diastolic pressure, pulse rate, and time will be displayed on the LCD as shown in the diagram.
- BP700W will automatically transfer your measurement to Host control side via bluetooth transmitting (End user's computer or any Health Monitoring system equipped with bluetooth receiver)
- After Data transmitting, BP700W will automatically return to "Clock" mode in 2 minutes or when you press the START button.
- When the result was shown, press "M1" or "M2" key, and the "M1" or "M2" symbol will display on the LCD. The recorded data will be saved in the database.
- This monitor has average function. It will average the latest three measurements, which can help you to get your blood pressure values more correctly. Never rely on single blood pressure readings.



Recommendation:

If measuring for the first time, please take 5-10 minutes rest before measuring. Keep the habit of measuring at regular time.

HOW TO TRANSMIT DATA VIA BLUETOOTH

Requirement system for Host monitoring system

- 1 Host side Operation system:
Microsoft Windows Win7/ VISTA/ XP(32 /64-bit) / XP Professional service Pack3
- 2 Transmitting software : BPLogInstaller (Yahorng)
- 3 Bluetooth driver: Microsoft bluetooth driver
- 4 Bluetooth Dongle or Receiver

REMARK:

- 1) The Transmitting system of Host side is not compatible for mac or iOS system
- 2) If the user has already installed the software of bluetooth driver, we request user to remove the program first. Now the transmitting interface should go through via Windows system

STEPS FOR DATA TRANSMITTING

Activative BP700W BI- Direction Bluetooth Transmission

[Sleep mode] A mode

Without touching any button of BP700W as long as 2 minutes, the device will automatically switch into " sleep mode " for the purpose of power saving.

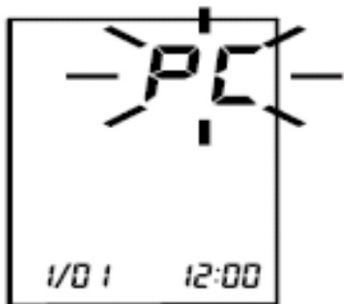
[Bluetooth mode] B mode

BP700W will always keep the bluetooth transmitting on (BI-Direction) and the function of sleep mode is inactive

- 1 Press the button of "Mode" and choose " PC " mode.
The letters of "PC" will blink on the LCD
 - 2 Press the button of "Adjust" to select "A" or "B" mode. Then you can press " start / off " button back to main display
- [A mode]
- 3 The symbol of **wireless icon** blinking in LCD means the automatic Sleep mode is " ON " When BP700W is idle for more than 2 minutes, the **wireless icon** will disappear so the device is entering sleep mode for saving power

[B mode]

The symbol of **wireless icon** displaying in LCD means the function of Bluetooth is **initiated**. If you are ready to search BP700W's Comport or send any command to BP700W , you had better activate this icon first



Once the device is idle more than 2 minutes, it will enter sleep mode



If you active the bluetooth, the wireless icon will always stay in the LCD

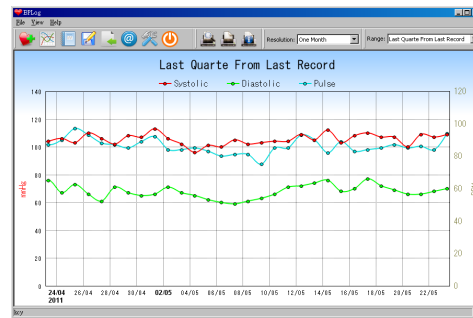
Remark:

Normally, " sleep mode " will automatically turn on if BP700W is idle more than 2 minutes. If you see the wireless mark Disappear on the monitor, it means the function of bluetooth transmitting is "OFF" On the contrary, if you see the wireless mark is shown on the monitor, the bluetooth transmitting is "ON"

Start the measurement

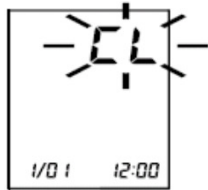
- 1 After finishing a measurement, values for systolic pressure, diastolic pressure, pulse rate, and time will be displayed on the LCD
- 2 Pls refer to the transmitting manual downloaded together with software
- 3 Your measurement data will be automatically transferred to Host Controlling Device or PC if your bluetooth linking is ON.
- 4 Once if BP700W is idle more than 2 minutes, the device will stay in sleep mode until you press any button to activate the bluetooth

Any updated information or software download will be posted in our web site.
Please link with www.yahorng.com for any latest news released by us.



SETTING THE CLOCK

- 1 Press the "Mode" key several times until the letters "CL" blink on the LCD.



- 2 Press the "Set" key and the monitor will enter the Clock mode.
- 3 Use the "Set" and "Adjust" keys to set the correct date and time. The date and time values appear on the display in the order "year", "month", "day", "hour" and "minute". Press the "Set" key until the number that you want to adjust blinks on the LCD, then press the "Adjust" key to increase the number. For example, if you want to set the "hour" press the "Set" key repeatedly until the "hour" blinks and then press the "Adjust" key to increase the hour. Set the other values in the same way.

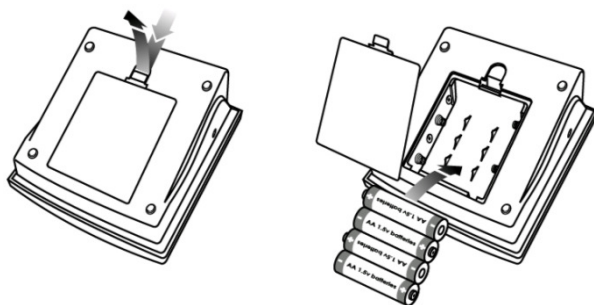


- 4 After setting the date and time, press the "Off" key complete setting the Clock.

INSTALLING AND REPLACING BATTERIES

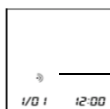
Installing Batteries

1. Press down and lift the battery cover in the direction of the arrow as shown in the illustration to open the battery compartment.
2. Install or replace 4 AA 1.5 Volt batteries in the battery compartment according to the battery direction indicator molded on the inside of the compartment.
3. Replace the battery cover by inserting the bottom tabs first, then pushing in the top clip of the battery door until it engages.



Battery Replacement

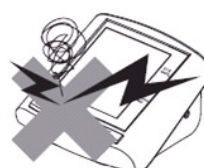
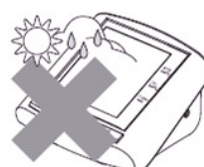
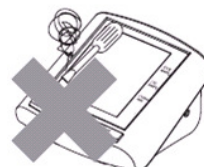
1. Make sure BP700W has entered into sleep mode (Bluetooth icon disappear) You can directly enter into sleep model :
1- Press the button of "Mode" and choose " PC " mode.
The letters of "PC" will blink on the LCD
2- Press the button of "Adjust" for few seconds then the Bluetooth icon will disappear
2. It will allow you to replace the batteries in 18 seconds and the measurement you saved in the device will not be vanished. This function provide user enough time to install new batteries.



Bluetooth icon will **disappear** once you enter sleep mode

AFTER USE CLEANING

1. Do not use an alcohol-based solvent or cleaing agent to clean the device.
2. Clean the device with a soft, dry cloth.
3. The cuff can be cleaned using a moist cloth and soap.
4. Do not immerse the device or cuff in water.
5. Do not bend the cuff or sleeve, and do not wrap the sleeve inside-out.
6. Do not dismantle the device, disconnect the cuff or try to repair the unit by yourself. If you have a problem, contact the distributor.
7. Do not operate the unit under conditions of extreme temperature or humidity, or direct sunshine.
8. Do not shake the unit violently.



Storage

1. If you do not plan to use the device for an extended period, remove the batteries from the battery housing for storage.

SAFETY STATEMENTS



Cautions:

1. This unit will not serve as a cure for any symptoms of heart disease. The measuring data is only for reference. Always consult your physician for interpreting measurement results.
2. Always follow the operating procedures described in this manual to measure your blood pressure accurately.
3. Do not inflate the arm cuff without having the cuff wrapped on your arm.
4. Do not drop this unit. Protect it from strong impacts.
5. Be sure to keep this manual in a safe place for future reference.
6. Blood pressure measurement may be inaccurate if the device is used close to a television, microwave oven, mobile phone, X-ray or other device with a strong electrical field.
7. Do not use this unit on infants or on persons who cannot communicate.
8. Please use only authorized parts and accessories from authorized sources with this unit.
9. Batteries may leak and damage the main unit. Please observe the following precautions.
 - * When you are not going to use the unit for a long period of time (approximately three months or more), take out the batteries.
 - * Replace worn batteries with new ones immediately.
 - * Do not use worn and new batteries together.
 - * Do not insert the batteries with their polarities in wrong direction.

Using the AC adapter (optional AC 120V / 230V)

1. Connect the AC adapter with AC adapter jack in the back of the unit.
2. Plug the AC adapter into the socket. Please use authorized AC adapter. (AC adapters with required voltage and current indicated near the AC adapter jack.)

Caution:






1. Please unload the batteries when operating with AC mode for a longer period of time. Leaving the batteries in the compartment for a long time may cause leakage, which may lead to damage of the unit.
2. No batteries are needed when operating in the AC mode. There is no damage or danger caused even if batteries and AC adapter are installed together.
3. AC adapters are optional. Please contact the distributor for the compatible AC adapters.

CUFF SIZES

Cuff sizes indicate the diameter of the upper arm.
Medium and Large cuff sizes are available.

	Metric	English
Medium Cuff Size	23 to 33 cm	9" to 13"
Large Cuff Size	33 to 43 cm	13" to 17"

ERROR MESSAGES

Error Message	Cause	Remedy
	Low voltage or internal circuit problem	Remove and re-install the batteries. Measure again. If the monitor still does not work, return the unit for repair.
	Abnormal situation during inflation	<ol style="list-style-type: none"> 1. Cuff is not fastened well, please re-fasten again according to the instructions. 2. Cuff broken. 3. Pump or venting valve failure, replace the device.
	Artificial interference and noise	<ol style="list-style-type: none"> 1. User moved during the measurement. 2. Incorrect measurement procedure and/or posture. 3. User is too tense and not relaxed.
	Abnormal measurement	<p>When measuring, the value will increase and be shown on the LCD.</p> <ol style="list-style-type: none"> 1. If the value is not over 300mmHg, measure again. If it still does not work, and user has severe heart beat problem or other medical condition, please contact a physician. 2. If the value is over 300mmHg, send the device for replacement.
	Over safety pressure	<ol style="list-style-type: none"> 1. Air pipe blocked. 2. Inflation controller failure. 3. Pressure sensor fault. <p>Re-measure, otherwise contact manufacturer for replacement.</p>
	Hardware broken	Consult with Service center for repair
	Low battery	Replace the batteries.

TROUBLESHOOTING

Fault	Remedy
Even though the batteries are installed, there is either no indication or an incorrect indication on the LCD.	<ol style="list-style-type: none"> 1. Check and correct the battery polarities. 2. Remove the batteries and wait for one minute. Then install the batteries or replace the batteries.
The cuff does not inflate or the air pressure cannot rise.	<ol style="list-style-type: none"> 1. Check the cuff position, re-fasten the cuff correctly and measure the pressure again. 2. Check the cuff connection to the monitor.
The low battery indication is shown on the LCD.	<ol style="list-style-type: none"> 1. Replace the batteries. 2. Once BP700W enter sleep mode (Bluetooth icon disappear), the measurement you saved in the device will not be vanished if you replace the batteries in 18 seconds. This function provide user enough time to install new batteries.
The unit cannot take your blood pressure, and the LCD shows an error message or a wrong result.	<ol style="list-style-type: none"> 1. Re-fasten the cuff. 2. Relax yourself and sit down. 3. Keep the cuff and heart at the same level during the measurement period. 4. Keep silent and still during measurement. 5. If the patient has a severe heart beat problem, then the blood pressure may not be read correctly. 6.
Under normal measuring circumstances a reading at home is different from one taken at a clinic or two readings at home have different values.	<ol style="list-style-type: none"> 1. The variation is due to the different environments. 2. Your blood pressure is changing according to the physiological or psychological status of the human body. 3. Record your blood pressure each day and consult with your physician.

If you have taken all of the above countermeasures, and blood pressure still cannot be read, then the unit should be replaced.

SPECIFICATIONS

Model	Yahorng BP-700W Blood Pressure Monitor
Display	LCD digital display
Measuring method	Quick Measuring System
Measuring range	Pressure: 40-280 mmHg
Accuracy	Pulse rate: 40-200 pulses/min
	Pressure: ± 3 mmHg for pressures of 200mmHg or less, $\pm 2\%$ of pressures above 200mmHg
	Pulse rate: $\pm 5\%$ of reading value
Memory capacity	Twin 60 sets memories
Pressure inflation	Automatic pump actuated device
Pressure release device	Automatic solenoid venting valve
Sensor	Semiconductor pressure sensor
Electric power	DC6V (4 type AA 1.5volt alkaline batteries) [OPTION] 120V / 230V AC adaptor
Operating temperature / humidity	10-40°C (50-104F) 15-90% R.H.
Storage temperature / humidity	-5-50°C (23-122F) 15-90% R.H.
Weight	Approx. 400 grams (net)
Arm type	Circumference 23-33 cm (9"-13")
Dimensions	131(L) x 128(W) x 86(H) mm