

Instruction Manual

UPPER ARM BLOOD PRESSURE MONITOR



Model BPM701

Medical Disclaimer

This manual and product are not meant to be a substitute for advice provided by your doctor or other medical professional. You are not to use the information contained herein, or this product for diagnosing or treating a health problem or prescribing any medication. If you have or suspect that you have a medical problem, promptly consult your healthcare provider.

Blood Pressure Monitor Intended Use

The device is designed for non-invasive measurements and monitoring of adults' arterial blood pressure. It measures human's systolic blood pressure, diastolic blood pressure and heart rate on the arm by oscillometric measurement method. The device is recommended for use by people over the age of 18 and is for home use and not clinical use.

*Attention!

To operate the device properly and get the best result from it, please read the Instruction Manual thoroughly before you begin measuring and keep it carefully so that you can access and consult it at any time.

1. About Blood Pressure

1-1. What is blood pressure ?

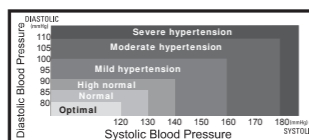
Blood pressure is a measurement of the force of blood flowing against the walls of the arteries. Arterial blood pressure is constantly changing during the course of the cardiac cycle. The highest pressure in the cycle is called the systolic blood pressure and the lowest is the diastolic blood pressure. Both of pressure readings, the systolic and the diastolic, are necessary to enable a physician to evaluate the status of a patient's blood pressure. Many factors such as physical activity, anxiety or the time of day can influence your blood pressure. Blood pressure is typically low in the morning and increases from the afternoon to the evening. It is lower in the summer and higher in the winter.

1-2. Why is it useful to measure blood pressure at home?

Having one's blood pressure measured by a doctor in a hospital or a clinic, and a group health checks, tends to stimulate nervousness in the subject and may even create high blood pressure, blood pressure also varies in accordance with a variety of conditions and so judgment is not possible on the basis of a single measurement. The blood pressure measured first thing in the morning after getting up, before taking any food and with the subject still, is known as the fundamental blood pressure. In practice it is rather difficult to record the fundamental blood pressure, but to come as near as possible to measuring the blood pressure in an environment that is close to this is why it is useful to take the measurement at home.

A. WHO blood pressure classifications

Standards for assessment of high or low blood pressure without regard to age, have been established by the World Health Organization (WHO), as shown in the chart.



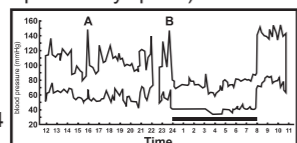
* Figure No.1

B. Variations in blood pressure

Individual blood pressures vary greatly both on a daily and a seasonal basis.

These variations are even more pronounced in hypertense patients. (Hypertense: means a person who has high blood pressure symptom.)

Normally the blood pressure rises while at work and is at its lowest during sleeping period. The graph below illustrated the variations in blood pressure over a whole day with measurement taken every five minutes. (The thick line represents sleep. The rise in blood pressure at 4 PM <A in the graph> and 12 PM <B in the graph> correspond to an attack of pain.)



* Figure No.2

2. Important information before use of the unit

- Please rest for at least 5 ~ 10 minutes before taking the measurement.
- To allow your blood vessels to return to the condition prior to taking the measurement, please wait at least 3 ~ 5 minutes between measurements. You may need to adjust the wait time according to your personal physiological situation.
- If you have one of the circulatory problems as arteriosclerosis, diabetes, liver disease, kidney disease, severe hypertension, peripheral circulation....., please consult your doctor or healthcare professional before using the devices.
- Blood pressure measurements should be interpreted by a physician or trained health professional who is familiar with one's medical history. By using the unit regularly and recording the results for the physician to interpret, one can keep physician informed of the continuing trends in one's blood pressure.
- Wrap the cuff snugly around your arm, the cuff must be at the same level as your heart.
- Do not move the unit during measurement, or accurate measurement can not be achieved.
- Take measurement in a relaxed position without talking.

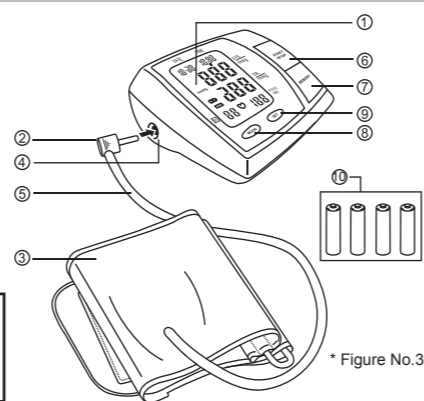
- Do not wrap the cuff over jacket / sweater sleeve, or measurement cannot be done.
- Keep in mind that blood pressure naturally varies from time to time throughout the day and is affected by lots of different factors such as smoking, alcohol consumption, medication, and physical activities.
- Blood pressure measurements taken with the unit are equivalent to those obtained by a trained observer using the cuff / stethoscope auscultation method and are within the accuracy limits prescribed by the American National Standard for Electronic or Automated Sphygmomanometers.
- Wait 30 ~ 45 minutes before measurement if you have just consumed caffeinated beverages or smoked cigarettes.

3. Device Description

3-1. Name of the parts

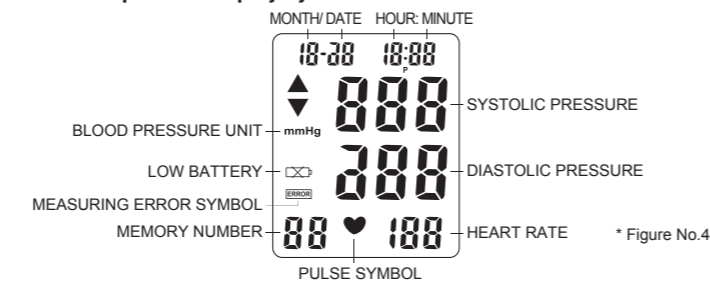
1. LCD DISPLAY
2. AIR PLUG
3. ARM CUFF
4. AIR JACK
5. CUFF TUBE
6. START/STOP BUTTON
7. RECALL MEMORY BUTTON
8. MODE BUTTON
9. SET BUTTON
10. UM-4(AA)1.5 V x 4 ALKALINE BATTERIES

*Caution!
Substitution of a component different from that supplied might result in measurement error.



* Figure No.3

3-2. Description of display symbols



* Figure No.4

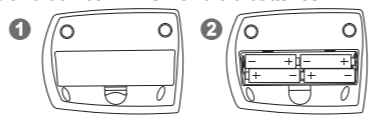
4. Inserting/ Changing Batteries

When the low battery symbol appears on the display, please change the batteries.

Replace all the batteries with new ones and do not mix new and old batteries.

Do not mix alkaline, standard (carbon-zinc) or rechargeable (cadmium) batteries either. It may shorten the battery life or cause the device to malfunction.

Remove the battery cover at the back of the unit and insert 4 pieces AA alkaline batteries into battery compartment. Make sure the polarities "+" and "-" ends are properly positioned.



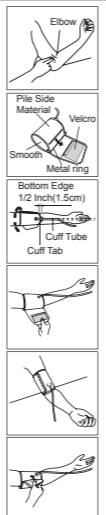
* Figure No.5

*Attention!

- Batteries are hazardous waste. Do not dispose them together with the household garbage. Please take the used batteries to the recycling collection point according to your local regulations.
- Keep the battery away from small children.
- To prolong the battery life and prevent damage caused by leakage, remove the batteries from the device if the device is not to be used for a long period.
- Memories (if any) will not be deleted during battery replacement.
- After replacing the batteries, reset the date and time.

5. Attaching arm cuff

- 5-1. Press your brachial artery by two fingers approximately 1 inch above the elbow on the inside of your left arm.
- 5-2. Determine where your strongest pulse is. Slide the end of arm cuff furthest from the tube through the metal ring to a loop. The smooth cloth should be on the inside of the cuff.
- 5-3. If the cuff is located correctly, the Velcro will be on the outside of the cuff and metal ring will not touch your skin.
- 5-4. Put left arm through the cuff loop. The bottom of the cuff should be approx. 0.5 inch above elbow. The cuff should lie over the brachial artery on the inside of the arm.
- 5-5. Pull the cuff so that the top and bottom edges are tightened around your arm.
- 5-6. When the cuff is positioned properly, press the Velcro firmly against the pile side of the cuff.
- 5-7. Sit on a chair and place your arm on the table so that the cuff is at the same level as your heart.
- 5-8. Relax your arm and turn your arm upward.
- 5-9. Make sure there are no kinks in the air tube.



6. How to Measure

6-1. Insert batteries in position:

- A. Open battery cover.
- B. Refer to the picture in positioning batteries.
- C. All segments will appear on the display in 3 seconds.

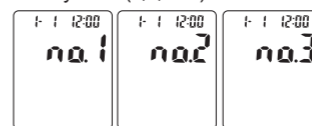


6-2. Setting Date and Time:

- A. Press "MODE" button ("month" starts flashing). Press "SET" button to set the current month.
- B. Press "MODE" button ("date" starts flashing). Press "SET" button to set current date.
- C. Press "MODE" button ("hour" starts flashing). Press "SET" button to set current hour.
- D. Press "MODE" button ("minute" starts flashing). Press "SET" button to set current minute.
- E. Press "MODE" button to save the settings.

6-3. Steps to take blood pressure measurement:

- A. Press "SET" button to select a particular memory zone (1, 2, or 3).
- B. Press "START/STOP" button to start measurement.
The monitor will automatically inflate to the level that is right for you.



*Note!

When taking repeat measurements, make sure to select the same memory zone so that the measurements are recorded in the appropriate memory.

- C. After inflation of the cuff, the pressure will slowly decrease and when a pulse is detected, the HEART RATE SYMBOL will start flashing.

*Note!

If the cuff does not stop inflating, remove the cuff at once.

- D. When the measurement is finished, the systolic pressure, diastolic pressure, heart rate will be displayed for 1 minute.
- E. The monitor will automatically shut off after 1 minute if without any operation.

6-4. Storing, recalling and erasing measurement data:

A. Storing data:

After each measurement, the systolic and diastolic pressure, heart rate with the time and date will be automatically stored. The monitor features a 3 zone memory capability. Each memory zone holds the last 40 measurements, replacing the oldest data with new one.

B. Recalling data:

- a. Press "SET" button to select memory zone.
- b. Press "MEMORY" button to enter Memory Mode. The average of last 3 measurement data will first appear on the display.

*Note!

- If there is no data in the selected memory zone, nothing (except month, date, time and memory zone) will appear on the display.
- If there is 1 data in the selected memory zone, the measurement data will appear on the display.
- If there are 2 data in the selected memory zone, the average of the 2 data will appear on the display.

- c. Press "MEMORY" button. The latest measurement data will appear with the number as well as the recording date and time. Data are recalled from the latest measurement to the oldest.
- d. Press "MEMORY" button to read the next measurement data.
- e. To stop reading stored data, press "START/STOP" button.

C. Erasing data:

- a. Press "SET" button to select the memory zone (1, 2 or 3), then press "MEMORY" button.
- b. Press and hold "MODE" and "SET" buttons simultaneously, all stored data, including the average reading, in the selected memory zone will be erased.
- c. To confirm the data has been erased, press "MEMORY" button, no data (except month, date, time and memory zone number) should appear.

7. Maintenance

- 7-1. Clean the device body, case and the cuff carefully with a clean, soft and slightly dampened cloth and then wipe them dry with another piece of dry cloth.
- 7-2. Do not use thinner, alcohol, petrol (gasoline) or any strong cleansers to clean.
- 7-3. Do not wash the cuff or make it wet, and never use chemical cleaner on it.
- 7-4. Do not in any way twist the cuff.
- 7-5. Make sure no water will enter the main unit.
- 7-6. When the unit is not to be used for a long time, remove the batteries. (Leaking of battery liquid can cause damage.)
- 7-7. Do not attempt to disassemble or change any parts of the monitor, including cuff.
- 7-8. If any suggestion or service is requested please consult your service station.
- 7-9. Do not place the item directly under the sunlight, in high temperature, or humid and dusty places.
- 7-10. Do not store in extremely low (less than -20 °C) or high (more than 70 °C) temperature.
- 7-11. To avoid accidental strangulation, keep this product away from children and do not drape tube around neck.

8. Display Messages/Troubleshooting

Display mark	Condition/Cause	Corrective action
Pulse symbol	Flashes on the LCD when pulse is detected during measurement.	Measurements in progress. Do not move or talk.
Battery symbol	Appears when the battery voltage is excessively low.	Replace all four batteries with new ones. Insert the batteries in correct polarities.
Measuring error symbol	Appears when the accurate blood pressure could not be obtained.	Press "START/STOP" button again to re-measure. Or check cuff if wrapped properly around the arm and according to instructions. Check palm if exerting effort. Check if there is movement during measurement. Check if posture is correct.

9. Specifications

Model Number	BPM701
Method of Measurement	Oscillometric
Range of measurement	Pressure 0 ~ 300 mmHg Pulse 40 ~ 199 beats/minute
Accuracy	Pressure +/- 3 mmHg Pulse +/- 5% Max
Inflation	Automatic inflation (Air Pump)
Exhaust	Automatic exhaust valve
Display	Liquid Crystal Display
Dimension	14.5 x 10.6 x 6.5 cm (L x W x H)
Unit Weight	Approx. 355 g with batteries
Sets of memory	3 databases of 40 memories each = total 120 sets
Cuff size	Arm circumference approx. 23 ~ 33 cm/ 9 ~ 13 inch
Operating Temperature	+10 °C to +40 °C, less than 85% R.H.
Storage Temperature	-20 °C to +70 °C, less than 85% R.H.
Power Supply	"AA" (1.5 V) Alkaline battery x 4
Battery Life	About 6 months when used once a day
Auto Power Off	Whenever not used for 1 minute
Accessories	4 pcs "AA" (1.5 V) battery, arm cuff with tube, instruction manual, pouch.

These specifications are subject to change without notice for purpose of improvement.

Note

This blood pressure monitor complies with the EC Directive and bears the CE mark "CE0197". This blood pressure monitor also complies with mainly following standards, (included but not limited)

- Safety standard:
EN 60601-1 Medical electrical equipment part 1: General requirements for safety
EMC standard:
EN 60601-1-2 Medical electrical equipment part 1-2: General requirements for safety- Collateral standard: Electromagnetic compatibility- Requirements and tests
Performance standards:
EN 1060-1 Non-invasive sphygmomanometers - General requirements
EN 1060-3 Non-invasive sphygmomanometers - Supplementary requirements for electromechanical blood pressure measuring systems.
EN 1060-4 Non-invasive sphygmomanometers - Test procedures to determine the overall system accuracy of automated non-invasive sphygmomanometers.

- Important/Note! Read the operating instructions.
- Discard the used product to the recycling collection point according to local regulations.
- Consult instructions thoroughly before use.
- Classification:**
- Internally powered equipment
- BF type applied part
- IPX0
- Not suitable for use in presence of flammable anaesthetic mixture with air or with Oxygen or nitrous oxide
- Continuous operation with short-time loading
- Manufacturer:**
HEALTH & LIFE Co., Ltd.
9F, No. 186, Jian Yi Road,
Chung Ho City 235, Taipei, Taiwan
- Authorized Representative in the European Community**
EMERGO EUROPE
Molenstraat 15, 2513 BH,
The Hague, The Netherlands
TEL : +31-70-3458570
FAX : +31-70-3467299

To avoid inaccurate results caused by electromagnetic interference between electrical and electronic equipments, do not use the device near a cell phone or microwave oven.

Distributor:
Sabre Nederland b.v.
Ellermanstraat 23
1099 BX Amsterdam the Netherlands

- To ensure precise measurement reading, recalibration of the device is recommended after 2 years from the date of purchase. Shipping plus handling cost and recalibration service fee shall be charged accordingly.

