Automatic Blood Pressure Monitor Instruction Manual

REF BPMON107	English

PRINCIPLE

Congratulations on your purchase of the Automatic Blood Pressure Monitor. It is a fully automatic, digital Blood Pressure Monitor that measures Systolic Blood Pressure (SYS), Diastolic Blood Pressure (DIA) and Pulse Rate (P) using the upper arm. It enables a fast and reliable measurement by use of the oscillometric method. When used properly, it will give you years of accurate, dependable measurements.
Please read the instructions carefully to ensure accurate blood pressure measurement and safe operation. For further questions on the subject of blood pressure and its measurement, please contact your doctor.

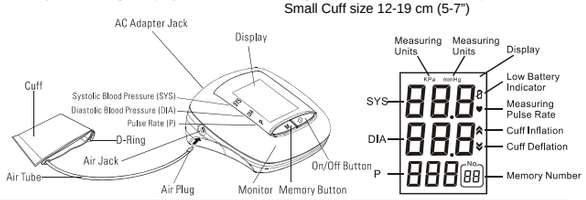
PRECAUTIONS

- It is recommended that you measure your blood pressure twice a day, once in the morning and once in the evening. To ensure comparable readings, measure at the same time of the day.
- Use the appropriate Cuff size to ensure an accurate measurement.
- Do not place the Cuff over any skin wound.
- Do not eat, drink any liquids, exercise, bathe or smoke before taking a measurement to ensure accurate readings.
- Avoid taking measurements during stressful times. Stress raises blood pressure levels.
- **Make sure the Cuff is at the same height as your heart** for an accurate measurement. Every 15 cm (6") difference in height results in a 10 mmHg (1.33kPa) measurement error.
- Pregnant women need to consult their physician when measuring blood pressure, since blood pressure levels may change due to pregnancy.
- Consult your doctor if you have questions about the results of your blood pressure or pulse measurement.
- **Never change the dosages of physician prescribed drugs.** Self blood pressure measurements and self pulse measurements are not a diagnosis or treatment. It is essential to discuss any unusual measurements with your doctor.
- Never inflate the Monitor over 280 mmHg (37.33kPa) and do not attempt to disassemble the Monitor except to replace batteries.
- Do not use the Pulse Rate (P) measurement to check the frequency of heart pacemakers.
- Do not measure blood pressure immediately after bathing or in a moving car for an accurate measurement.
- Take measurements at room temperature (20°C; 68°F). Do not use the Monitor at very low temperatures (<10°C; <50 °F) or very high temperatures (>40°C; >104°F) to ensure an accurate measurement. Coldness normally raises blood pressure measurements.

PRODUCT FEATURES AND INTENDED USE

The Automatic Blood Pressure Monitor is a fully automatic Blood Pressure Monitor that measures Systolic Blood Pressure (SYS), Diastolic Blood Pressure (DIA) and Pulse Rate (P) using the upper arm.

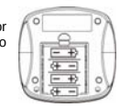
- Fully automatic inflation
- Memory storage and recall with up to 36 measurements
- Easy to read large Display
- Accurate and reliable measurements
- Easy to carry
- Standard Cuff size 19-32 cm (7-13")
  Large Cuff size 32-45 cm (13-18")
  Small Cuff size 12-19 cm (5-7")



BATTERY INSTRUCTIONS AND MEASURING UNITS SETTING

Installing Batteries

1. Pull the Battery Cover in the direction of the arrow to open the Battery Cover. Refer to illustration at right.
2. Insert 4 new "AA" 1.5V (LR6) size batteries making sure the polarity of each battery, positive (+) or negative (-), is correctly placed. Close the Battery Cover, making sure that it snaps shut. Refer to illustration at right.
3. Functional check**:** Press and hold the On/Off Button to test the Monitor for power. All symbols will be displayed if the power is sufficient. Refer to illustration at right.



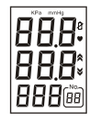
Note: Follow proper precautions and all local regulations when disposing of the batteries and monitor.

Setting the Measurement Units

The Monitor can display blood pressure in either millimeters mercury (mmHg) or kilopascals (kPa).

1. Press the "M" Button. All symbols will be displayed and then mmHg will be displayed as the preset measurement unit.
2. Press the "M" Button and the On/Off Button at the same time to change the measurement unit.

Note: The measurement units can be changed at any time by completing steps 1-2 in the **Setting the Measurement Units** above.



Replacing Batteries

When the low battery indicator symbol "" appears on the Display, the Monitor will give inaccurate results and not function properly until the batteries have been replaced. Remove and replace the batteries by following steps 1-3 in the **Installing batteries** above.

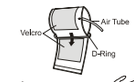
Note**:**
- Only "AA" 1.5V (LR6) batteries should be used for this Monitor.
- Remove all the batteries if the Monitor will not be used for an extended period of time.
- Do not swallow or eat the battery, and keep it out of the reach of children.

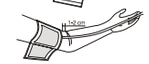
Follow proper precautions and all local regulations when disposing of the blood pressure Monitor and used batteries.

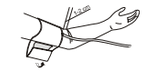
INSTRUCTIONS FOR USE

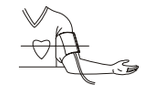
Fitting the Cuff

Make sure to rest for at least 5 minutes before taking a measurement. To ensure accurate measurements, remove all articles of clothing around the upper arm area and fit the Cuff around the upper arm. Only use the Cuff provided or the optional size Cuffs with this Monitor. Cuff size is dependent upon the circumference of the arm, measured 1-2 cm (1") above the inner elbow.









1. Pass the end of the Cuff through the metal D-Ring so that a loop is formed if the Cuff is not already assembled, making sure the Velcro area faces outward. Refer to illustration at right.
2. Insert the Air Tube into the Air Jack on the Monitor. Make sure the Air Tube is plugged in tightly to the Air Jack.
3. Wrap the Cuff around the bare left upper arm so that the bottom of the Cuff is about 1-2 cm (1") above the inner elbow. Make sure the Air Tube is in the center of the inner elbow throughout the entire measurement. Refer to illustration at right.
   Note: If it is not possible to fit the Cuff on the left arm, it can also be placed on the right arm. However, all measurements should be done on the same arm.
4. Tighten the free end of the Cuff and close the Cuff. Refer to illustration at right. Make sure that the top and bottom edges are tightened evenly around the arm. One finger should be able to slide between the Cuff and the upper arm, and it should fit comfortably around the upper arm but not too tight.
5. Sit comfortably and lay your arm on a table or chair with your palm facing upwards. Make sure **the Cuff is at the same height as your heart** and the Air Tube is not kinked. Refer to illustration at right.

Taking the Measurement

Do not inflate the Cuff until the Cuff is properly wrapped around the arm.

1. Press the On/Off Button to turn on the Monitor. All symbols will appear on the Display, indicating that the Monitor is functioning properly. Refer to illustration at right. The pump will immediately begin to inflate the Cuff, and the Display will show an increasing Cuff pressure " " as the Cuff inflates.
   Note**:**
   - Do not move or talk while the measurement is being taken.
   - The desired Cuff pressure should be about 30 mmHg (4kPa) higher than your estimated Systolic Blood Pressure (SYS).
   - If it is necessary to inflate the Cuff pressure higher than 180 mmHg (24kPa), press and hold the On/Off Button until the desired Cuff pressure is reached. The pressure should never exceed 300 mmHg (40kPa).
2. After reaching the appropriate inflation Cuff pressure, the pump will stop and the arrow pointing downwards " " indicates the Cuff pressure is slowly decreasing.
3. A heart symbol " " will appear on the Display when the Monitor detects a Pulse Rate (P). A beep tone is audible for every pulse beat measured.
4. The Display will indicate the measurements in order from top to bottom: Systolic Blood Pressure (SYS), Diastolic Blood Pressure (DIA), and Pulse Rate (P) when the measurement is completed. Refer to illustration at right.

5. Press the On/Off Button to turn off the Monitor. Disconnect Air Tube Plug from Monitor Air Jack. The measurement taken will automatically be stored in memory. The Monitor will automatically shut off after 3 minutes if it is not manually turned off.

Discontinuing a Measurement

To discontinue a measurement in the case of an emergency or any other reason, press the On/Off Button. The Monitor will immediately lower the Cuff pressure and then turn off.

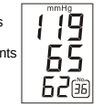
Taking a Successive Measurement

Wait 2-3 minutes before performing another measurement. Start over beginning with **Fitting the Cuff**.

MEMORY

The Automatic Blood Pressure Monitor automatically stores the last 36 measurements taken. The stored values can be recalled at any time by pressing the "M" Button.

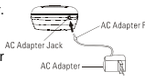
1. Press the "M" Button to Display the last measurement. The "1" means that the measurement displayed was the last measurement taken.
2. Press the "M" Button again and the next to last measurement taken will be displayed along with a "2". The "2" means that the measurement displayed was the second to last measurement taken. Refer to illustration at right.
3. As the "M" Button continues to be pressed, successive stored measurements will be displayed until the 36th measurement. Refer to illustration at right.



The Monitor only stores the last 36 measurements taken. As new measurements are taken, the 36th stored measurement will be erased.

AC ADAPTER

The Automatic Blood Pressure Monitor can also be operated using an AC Adapter. It is required to only use the AC Adapter specified. Other adapters will vary in output voltages and polarities. To order an AC Adapter, please call your local dealer.



1. Plug the AC Adapter Plug into the AC Adapter Jack on the Monitor. Refer to illustration at right.
2. Plug the AC Adapter into a 100-240V~50/60Hz power socket.
3. Functional check: Press the On/Off Button to test the Monitor for power. If power is sufficient, all symbols will be displayed.

Note**:**
- Remove and re-insert the AC Adapter Plug into the AC Adapter Jack to reset the Monitor, if power is interrupted during the measurement.
- Use batteries to prevent power interruption in case the power supply to AC Adapter is interrupted
- No power is taken from the batteries while the AC Adapter is connected to the Monitor.

MAINTENANCE AND STORAGE

- Use a soft, slightly damp cloth to clean the Monitor, and use a soft, damp cloth and soap to clean the Cuff. Do not use thinners or similar solvents for cleaning purposes.
- Do not put Cuff in washer. Never open the Monitor or repair it yourself.
- Do not drop the Monitor or expose to heavy shock.
- Do not fold the Cuff and Air Tube tightly.
- Store the Monitor at temperatures between -20-50°C (-4-122 °F) and 15-90% relative humidity (RH) maximum for proper function of Monitor. Do not store in direct sunlight.
- Keep the Monitor out of the reach of children.

ERROR MESSAGES AND SOLUTIONS

When an error message appears, the measurement will stop and a corresponding error code will be displayed. Note the error number, turn off the Monitor and then follow these instructions.

Display	Causes	Solution
	• Low battery	Replace all 4 "AA" 1.5V (LR6) batteries with new batteries. Follow **Battery Instructions**.
Err 1	• Cuff is not correctly placed. • Cuff inflation takes too long. • Air Jack is not sealed.	Follow **Fitting the Cuff** and properly place the Cuff over the upper arm.
Err 2	• Cuff pressure is more than 300 mmHg (40kPa).	Check to see if the Air Tube is kinked or blocked.
Err 3	• The arm moved during the measurement. • Cuff pressure decreases immediately.	Wait 2-3 minutes and take the measurement again. Check to see if the Air Tube is kinked or blocked.
Err 4	• Measurement takes longer than 3 minutes.	Press and hold down the On/Off Button during inflation to manually inflate the Cuff at least 30 mmHg higher than your normal Systolic Blood Pressure (SYS).

TROUBLESHOOTING

When a problem occurs, note the problem, turn off the Monitor and then follow these instructions.

Problem	Solution
The Display is empty when the Monitor is switched on and the batteries are installed. Manufacturer	• Check to see if the batteries are installed with the correct polarity. • Replace all 4 batteries with new ones.
The Cuff is not inflating when the pump is running.	• Check the connection of the Air Tube and connect properly. • Un-kink the Air Tube if necessary.
The Monitor fails to measure blood pressure values, or they are too low or too high.	• Make sure the Cuff is not too tight. • Remove all articles of clothing around the upper arm area. • Retake your measurement in a quiet place after relaxing for at least 2-3 minutes.
Every measurement results in different values although the Monitor functions normally.	• Read **Instructions for Use** over again and follow them precisely. • Make sure that no clothing is restricting blood flow to the upper arm.

CLASSIFICATION OF BLOOD PRESSURE VALUES

Listed below is a table classifying blood pressure values according to the World Health Organization (WHO). It is only to be used for reference. Please consult your doctor regarding your measurements. **Never change the dosages of physician prescribed drugs.**

Range	SYS (mmHg)	DIA (mmHg)	Suggestion
Normal Range	120 – 139	80 – 89	Self-check
Mild Hypertension	140 – 159	90 – 99	Consult your doctor
Moderately Serious Hypertension	160 – 179	100 – 109	Consult your doctor
Serious Hypertension	> 180	> 110	Consult your doctor immediately

SPECIFICATIONS

Feature	Technical Specification
Measurement Area	Upper arm
Measurement Technology	Oscillometry
Measurement Range	Blood Pressure (SYS and DIA): 30 to 280 mmHg (4.00-37.33kPa) Pulse Rate (P): 40 to 200 beats per minute
Accuracy	Blood Pressure (SYS and DIA): ± 3 mmHg (0.40kPa)
Measurement Resolution (DIA/SYS)	1 mmHg (0.13kPa)
Cuff Pressure Display Range	0-299 mmHg (0-39.86kPa)
Inflation Method	Automatic by electric pump
Deflation Method	Automatic pressure release valve
Rapid Pressure Release Method	Automatic exhaust valve
Display	Liquid Crystal Display (LCD)
Memory	Automatically stores the last 36 measurements taken
Operating Temperature	10 - 40°C (50 - 104 °F)
Operating Humidity	10 - 85% RH
Storage Temperature	-20 - 50°C (-4 - 122°F)
Storage Humidity	10 - 95% RH
Arm Size and Cuff Circumference	Standard Cuff : for 19-32 cm (7-13") upper arm circumference
Power Source	4 "AA" 1.5V alkaline (LR6) or equivalent battery 6V 500mA or 600mA output AC Adapter
Battery Life	About 300 uses
Size (L×W×H)	11.9 cm x 11.8 cm x 6.2 cm (4.7 "x 4.6" x 2.4")
Weight	558 g (19.7 oz) (with batteries and Standard Cuff)

This product complies with BS EN 1060:1997, EN 60601-1 and EN 60601-1-2.

CATALOG

Use this CATALOG to order replacement supplies and accessories from your local dealer.

Product Name	Catalog	Quantity
Automatic Blood Pressure Monitor Kit	BPMON107	1

WARRANTY

The Automatic Blood Pressure Monitor is under warranty for 2 years after date of purchase. The warranty includes the Monitor and the Cuff, but does not cover battery, packaging or any purchased accessories. The warranty does not cover damages caused accidentally or from misuse. The Monitor and the Cuff will only be replaced when returned together with the original invoice/cash ticket.

Index of Symbols

⚠	Attention, see instructions for use	LOT	Lot Number
	Internally powered equipment type B		Manufacturer
Cuff	Cuff	EC REP	Authorized Representative
		REF	Catalog #

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Customer Care Line 0800 0430318

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Number: 1150366001
Effective date: