

Dear **FORA P30/P30 Plus**
System Owner:

Thank you for purchasing the **FORA P30/P30 Plus** Multi-mode Blood Pressure Monitoring System. This manual provides important information to help you operate this system correctly. Before using this product, please read the following contents thoroughly and carefully.

With the compact size and easy operation of this **FORA P30/P30 Plus** Multi-mode Blood Pressure Monitoring System, you can easily monitor your blood pressure by yourself at any time or place. In addition, this system can help you and your healthcare professionals to monitor and adjust your treatment plans, and keep your blood pressure under control.

If you have other questions regarding this product, please contact the place of purchase.

IMPORTANT SAFETY INSTRUCTIONS

READ THIS BEFORE USE

1. Use this device **ONLY** for the intended use described in this manual.
2. Do **NOT** use accessories which are not specified by the manufacturer.
3. Do **NOT** use the device if it is not working properly or damaged.
4. Do **NOT** use the equipment where aerosol sprays are being used, or where oxygen is being administered.
5. Do **NOT** use under any circumstances on newborns, infants, or persons who cannot communicate.
6. This device does **NOT** serve as a cure for any symptoms or diseases. The data measured are for reference only. Always consult your doctor to have the results interpreted.
7. Keep the equipment and its flexible cord away from hot surfaces.
8. Do **NOT** apply the cuff to areas other than the place directed.

KEEP THESE INSTRUCTIONS

TABLE OF CONTENTS

BEFORE YOU BEGIN	04
Intended Use	04
Test Principle	04
Contents of System	05
Monitor Overview	06
Display Screen	07
SETTING THE MONITOR	08
TESTING YOUR BLOOD PRESSURE	11
Before Measurement	11
Taking Measurements	14
MONITOR MEMORY	19
Reviewing Test Results	19
Reviewing Day Average Results	20
MAINTENANCE	22
Battery	22
Using AC Adapter	24
Caring for Your Monitor	25
SYSTEM TROUBLESHOOTING	26
Error Messages	26
Troubleshooting	28
DETAILED INFORMATION	29
Reference Values	29
SYMBOL INFORMATION	30
SPECIFICATIONS	31

BEFORE YOU BEGIN

Intended Use

The FORA P30/P30 Plus Multi-mode Blood Pressure Monitoring System is intended to be used to measure the systolic and diastolic blood pressure and pulse rate by using a non-invasive technique in which an inflatable cuff is wrapped on the upper arm. Do not use this system on babies, young children or persons who cannot express their consent.

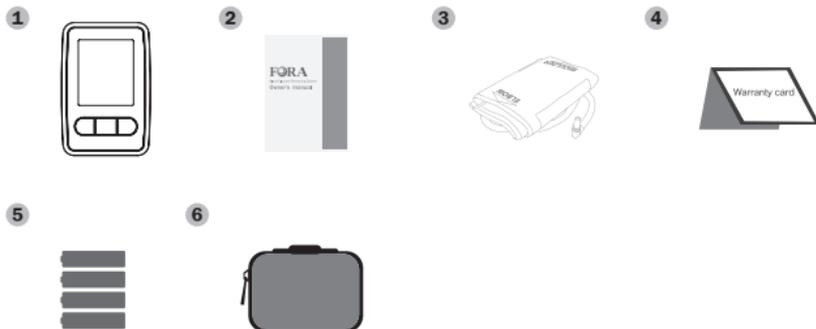
Test Principle

Blood pressure is measured non-invasively at the arm based on oscillometric method.

For people of common arrhythmia, such as atrial or ventricular premature beats or atrial fibrillation we recommend to use auscultatory mode. The reading obtained by single and average mode which use oscillometric method is for reference only and should be discussed with the healthcare professionals.

Contents of System

Your new **FORA P30/P30 Plus** system kit includes:

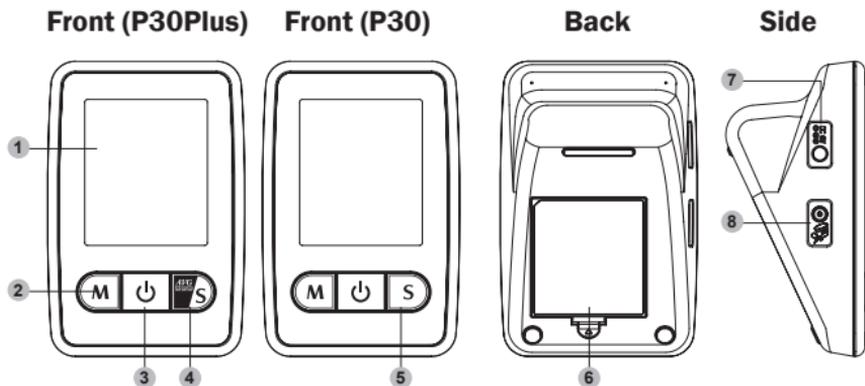


- 1 Monitor
- 2 Owner's Manual
- 3 Wide Range Cuff (24-43cm)
- 4 Warranty Card
- 5 4 x 1.5V AA alkaline batteries
- 6 Protective Wallet

NOTE

All items can be purchased separately and some accessories may not be included in the kit. If you wish to purchase any accessories, please contact our local customer service.

Monitor Overview



1 Screen Display

2 M Button

Enter the monitor memory

3 ON/OFF Button

4 AVG/S Button (For FORA P30 Plus model)

Assist you with blood pressure average mode /
Enter and confirm the monitor settings

5 S Button (For FORA P30 model)

Enter and confirm the monitor settings

6 Battery Compartment

7 AC Adapter Port

Connect to a power supply

8 Air Jack



9 Pressure Cuff

10 Air Tube

11 Air Plug

Connect to air jack

Display Screen



- | | |
|-----------------------------|-----------------------------|
| 1 Date | 8 Day- / Night-Time Symbol |
| 2 Time | 9 Day Average Symbol |
| 3 Systolic Pressure Symbol | 10 Units for Blood Pressure |
| 4 Systolic Pressure Value | 11 Memory Mode Symbol |
| 5 Low Battery Symbol | 12 Pulse Rate Symbol |
| 6 Diastolic Pressure Symbol | 13 Pulse Rate |
| 7 Diastolic Pressure Value | |

SETTING THE MONITOR

Before using your monitor for the first time, check and update settings as below. Make sure you complete the steps below and save the desired settings.

► Entering the Setting Mode

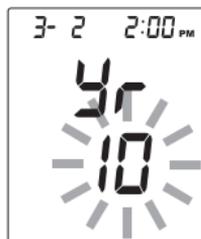
Start with the monitor off.

For FORA P30 Plus press and firmly hold **AVG** for 3 seconds until the monitor turns on. By FORA P30 for this and further steps use **S** instead of **AVG**.

Step 1

Setting the date.

With the year flashing, press **M** until the correct year appears. Press **AVG** to set.



With the month flashing, press **M** until the correct month appears. Press **AVG** to set.



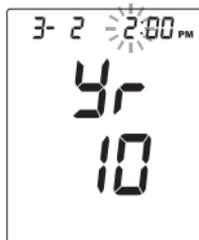
With the day flashing, press **M** until the correct day appears. Press **AVG** to set.



Step 2

Setting the time.

With the hour flashing, press **M** until the correct hour appears. Press **APG** to set.



With the minute flashing, press **M** until the correct minute appears. Press **APG** to set.



Step 3

Setting the time.

Press **M** to select the desired time format — 12h or 24h. Press **APG** to set.



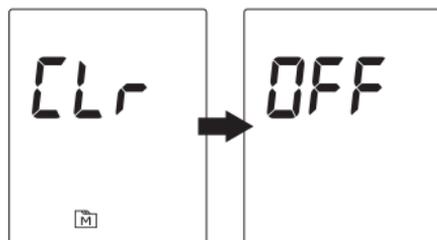
Step 4

Delete the memory.

While “dEL” and a flashing “M” symbol appears on the display, if you do not wish to delete the saved results, press **AVC** to skip this step.



To delete **ALL** the results, press **M** twice. “CLr” and “M” are displayed on the monitor, which indicates that all results have been deleted.



Congratulations! You have completed all settings!

NOTE

- These parameters can **ONLY be changed** in the setting mode.
- If the monitor is idle for 3 minutes during the setting mode, it will turn off automatically.

TESTING YOUR BLOOD PRESSURE

This monitor provides you different ways to measure your blood pressure. Select from the operations below:

- **Single measurement**
Perform an individual blood pressure measurement.
- **Averaging measurement (For FORA P30 Plus only)**
Automatically performs three (3) consecutive blood pressure measurements and displays the average result in the end.
- **Auscultatory measurement**
Only well trained persons may use this mode to measure blood pressure manually. The manual operation method involves applying a stethoscope and listening to the pulse during deflation while the air is slowly let out from the cuff (the Korotkoff method). Please ask your health-care professional to train you how to use auscultatory mode.

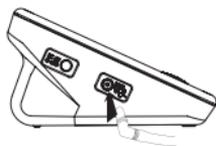
Before Measurement

- Avoid caffeine, tea, alcohol and tobacco for at least 30 minutes before measurement.
- Wait 30 minutes after exercising or bathing before measurement.
- Sit or lie down for at least 10 minutes before measurement.
- Do not measure when feeling anxious or tense.
- Take a 5-10 minute break between measurements. This break can be longer if necessary, depending on your physical conditions
- Keep the records for your doctor as reference.
- Blood pressure varies between each arm. Always measure your blood pressure on the same arm.

► Fitting the Cuff Correctly

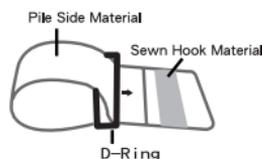
Step 1

Connect the air plug of the tubing to the air jack of the monitor.



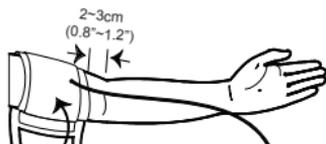
Step 2

Assemble the cuff as shown on the right. The smooth surface should be inside the cuff loop and the metal D-ring should not touch your skin.



Step 3

Stretch your left (right) arm in front of you with your palm facing up. Slide and place the cuff onto your arm with the air tube and artery mark region (in red) toward the lower arm.



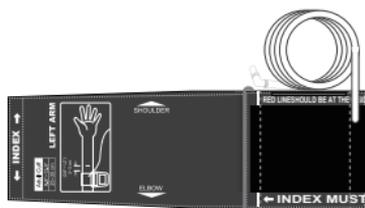
Wrap and tighten the cuff above your elbow. The red line on the edge of the cuff should be approximately 0.8 to 1.2 inches (2 to 3 cm) above your elbow. Align the tube over the main arteries on the inside.

Step 4

Leave a little free space between the arm and the cuff; you should be able to fit two fingers between them. Clothing must not restrict the arm. Remove all clothing covering or constricting the measurement arm.

Step 5

Press the hook material firmly against the pile material. The top and bottom edges of the cuff should be tightened evenly around your upper arm.



► The range index of cuff should fall into this range.

► Proper Measurement Position

Step 1

Sit down for at least 10 minutes before measuring.

Step 2

Place your elbow on a flat surface. Relax your hand with the palm facing up.

Step 3

Make sure the cuff is about the same height as the location of your heart.

Press  Remain still and do not talk or move during the measurement.



WARNING

If the cuff is relatively lower (higher) than the heart, the obtained blood pressure value could be higher (lower) than the actual value. A 15 cm difference in height may result in an error around 10 mmHg.

Step 4

Measurement is in progress.

After the monitor is turned on, the cuff will begin to inflate automatically.

Taking Measurements

► Taking a Single Measurement

Always apply the pressure cuff before turning on the monitor.

Step 1

Press . All the LCD symbols will appear. Then the cuff will begin to inflate automatically.

Step 2

The heart symbol “” will flash when a pulse is detected during the inflation.



Step 3

After the measurement, the monitor displays the systolic pressure, diastolic pressure and pulse rate.



Step 4

Press  to switch off. Or it will switch off automatically after idle for 3 minutes.



NOTE

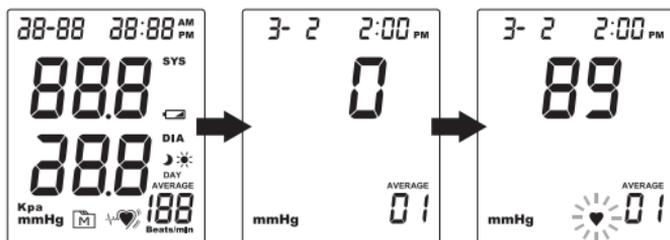
- If you press  during measurement, the monitor will be turned off.
- If the pulse rate symbol is shown as “” instead of “”, this indicates that the monitor has detected an irregular heart beat.

► Averaging Measurement Mode (For FORA P30 Plus only)

Always apply the pressure cuff before turning on the monitor.

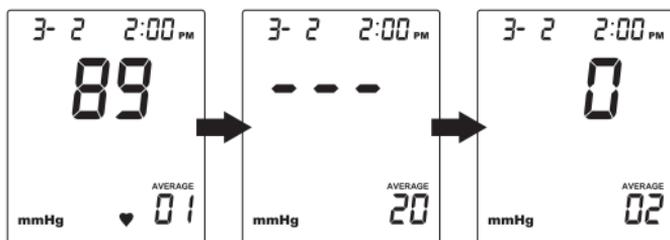
Step 1

Press **AVG**. The monitor will turn on and enter the averaging mode. Then the cuff will begin to inflate automatically.



Step 2

After the first measurement is completed, the monitor will start counting down before the second measurement begins. The number on the right represents the remaining countdown between each measurement. The monitor will take three (3) measurements consecutively with intervals of 20 seconds.

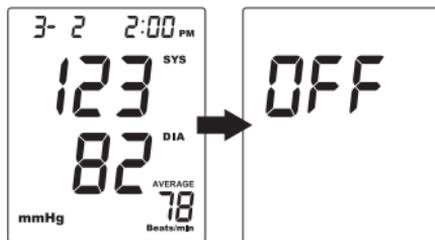


NOTE

When the difference between the first and second systolic pressure is more than 15mmHg, the time interval for third measurement will be 40 seconds.

Step 3

After taking three measurements, the results are averaged to produce the blood pressure measurement with AVERAGE symbol display on the monitor. Press  to turn off the monitor. Or it will switch off automatically after idle for 3 minutes.



► Auscultatory Mode

Only well trained persons may use this mode to measure blood pressure manually. This manual method involves applying a stethoscope to the arm and listening to the pulse while the air is slowly let out from the cuff (the Korotkoff method). Please ask your health-care professional to train you how to use auscultatory mode.

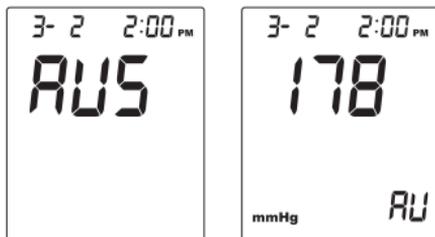
The systolic pressure is the maximum pressure in an artery at the moment when the heart is beating and pumping blood through the body. The diastolic pressure is the lowest pressure in an artery in the moments between beats when the heart is resting.

Step 1

Place a stethoscope on the arm where there is a pulse. Wrap the cuff around the upper arm and hold in place with Velcro.

Step 2

Press and hold **⏻** until “AUS” symbol appears on the display with a beep. Release the button. Then cuff begins to inflate automatically. After reaching the cuff pressure, the deflation begins.



Step 3

You can adjust the inflation pressure by keep pressing **M** to inflate if necessary. If you release **M**, the inflation will stop and deflation begins.

Step 4

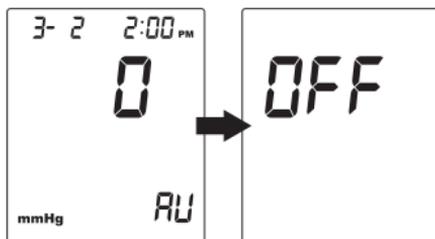
The systolic pressure is measured when the operator first hears the pulse. Write down the value on the display. This value indicates the systolic pressure. You have to record the values as the result will not be stored in the memory.

Step 5

The diastolic pressure is measured from the moment the operator is unable to hear the sound of the pulse. Write down the value on the display. This value indicates the patient's diastolic pressure. You have to record the values as the result will not be stored in the memory.

Step 6

The monitor will return to 0 mmHg after the measurement is completed. To turn off the monitor, press and hold  or it will switch off automatically after idle for 3 minutes.



MONITOR MEMORY

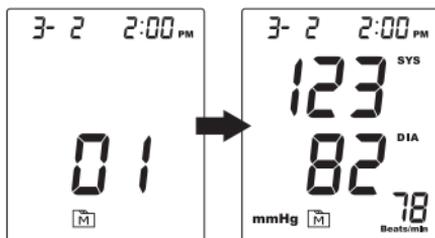
Your monitor stores the 60 most recent blood pressure test results along with respective dates and times in the monitor memory. To recall the memory, **start with the monitor off.**

Reviewing Test Results

Step 1

Press and release **M**.

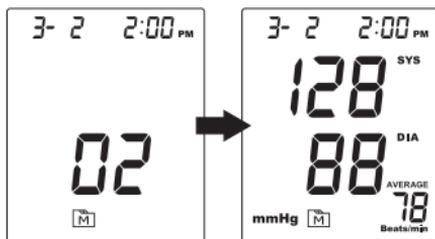
Symbol **01** with “**M**” appears on the display, and the first reading you see is the last blood pressure result along with date and time.



Step 2

Press **M**.

Press **M** again to review all test results stored in the monitor.



Step 3

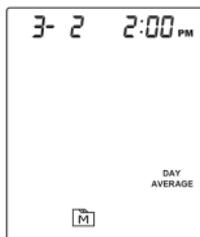
Exit the memory.

Press **OFF** and the monitor turns off.

Reviewing Day Average Results

Step 1

Press and hold **M** for 3 seconds.



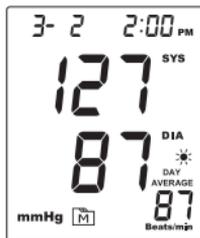
Step 2

Press **M** and the Day average result appears on the display.



Step 3

Press **M** again to review the Day-time average result



Step 4

Press **M** again to review the Night-time average result.



Step 5

Exit the memory.

Press  and the monitor turns off.

NOTE

- “☀” Day-time average is the average of the measurements taken during 4:00 A.M. to 11:59 A.M.
- “🌙” Night-time average is the average of the measurements taken during 6:00 P.M. to 11:59 P.M.
- If using the monitor for the first time, “—” displays when you recall the test results or review the average result. It indicates that there is no test result in memory.

MAINTENANCE

Battery

Your monitor comes with four 1.5V AA size alkaline batteries.

► Low Battery Signal

The monitor displays either of the two messages below to alert you when the power is getting low.

Step 1

The “” symbol appears with display messages:

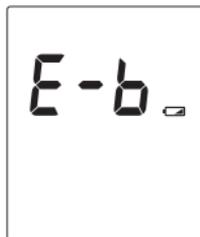
The monitor is functional and the result remains accurate, but it is time to change the batteries.



Step 2

The “” symbol appears with E-b:

The power is not enough for a measurement. You must change the batteries immediately.



► Replacing the Battery

To replace the batteries, make sure that the monitor is turned off.

Step 1

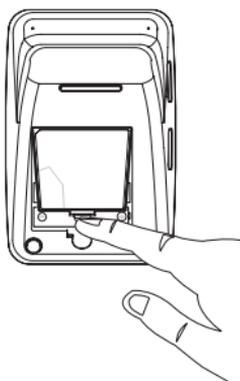
Press the edge of the battery cover and lift it up to remove.

Step 2

Remove the old batteries and replace with four new 1.5V AA size alkaline batteries.

Step 3

Close the battery cover.



NOTE

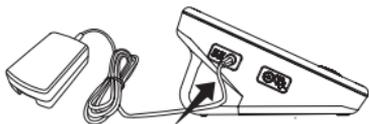
- Replacing the batteries do not affect the test results stored in memory.
- As with all small batteries, these batteries should be kept away from small children. If swallowed, promptly seek medical assistance.
- Batteries might leak chemicals if unused for a long time. Remove the batteries if you are not going to use the device for an extended period (i.e., 3 months or more).
- Properly dispose of the batteries according to your local environmental regulations.

Using AC Adapter

► Connect AC adapter to the monitor

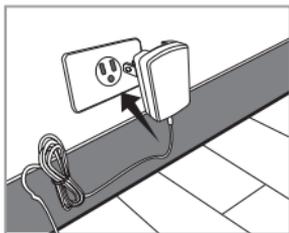
Step 1

Connect AC adapter plug to AC adapter jack of the monitor.



Step 2

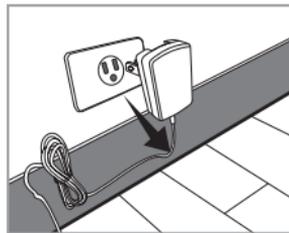
Plug AC adapter power plug into an electrical outlet. The monitor is ready for use.



► Remove AC adapter from the monitor

Step 1

With the monitor off, remove AC adapter power plug from the electrical outlet.



Step 2

Disconnect AC adapter plug from AC adapter jack of the monitor.



Caring for Your Monitor

To avoid the meter and test strips attracting dirt, dust or other contaminants, please wash and dry your hands thoroughly before use.

► **Cleaning**

- To clean the monitor exterior, wipe it with a cloth moistened with tap water or a mild cleaning agent, then dry the device with a soft dry cloth. Do **NOT** flush with water.
- Do **NOT** use organic solvents to clean the monitor.
- Do **NOT** wash the pressure cuff.
- Do **NOT** iron the pressure cuff.

► **Monitor Storage**

- Storage condition: -20°C to 60°C (-4°F to 140°F), below 95% relative humidity.
- Always store or transport the monitor in its original storage case.
- Avoid dropping and heavy impact.
- Avoid direct sunlight and high humidity.

SYSTEM TROUBLESHOOTING

If you follow the recommended action but the problem persists, or error messages other than the ones below appear, please call your local customer service. Do not attempt to repair by yourself and never try to disassemble the monitor under any circumstances.

Error Messages

MESSAGE	CAUSE	WHAT TO DO
	Inflation or pressure error.	Please contact local customer service for help.
	Deflation error.	
	Blood Pressure measurement error.	Refit cuff tightly and correctly. Relax and repeat measurement. If error still exists, please contact the local customer service for help.

	<p>Battery is too low.</p>	<p>Replace the batteries or use the AC adaptor.</p>
	<p>Problem with the monitor.</p>	<p>Please contact local customer service for help.</p>
		

Troubleshooting

1. If nothing is displayed after pressing  :

POSSIBLE CAUSE	WHAT TO DO
Batteries exhausted.	Replace the batteries.
Batteries incorrectly installed or absent.	Check that the batteries are correctly installed.

2. If the heart rate is higher/lower than user's average:

POSSIBLE CAUSE	WHAT TO DO
Movement during measurement.	Repeat measurement.
Measurement taken just after exercise.	Rest at least 30 minutes before repeating measurement.

3. If the result is higher/lower than user's average measurement:

POSSIBLE CAUSE	WHAT TO DO
May not be in correct position while measuring.	Adjust to the correct position to measure.
Blood pressure naturally varies from time to time.	Keep in mind for next measurement.

4. If the cuff inflates again while measuring:

POSSIBLE CAUSE	WHAT TO DO
Cuff is not fastened.	Fasten the cuff again.
If user's blood pressure is higher than the pressure the device has inflated, the device will automatically increase the pressure and start to inflate again. Stay relaxed and wait for the measurement.	

DETAILED INFORMATION

Reference Values

Human blood pressure naturally increases after reaching middle age. This symptom is a result of continuous ageing of the blood vessels. Further causes include diabetes, lack of exercise and cholesterol (LDL) adhering to the blood vessels. Rising blood pressure accelerates hardening of the arteries, and the body becomes more susceptible to apoplexy and coronary infarction.

Definitions and Classification of blood pressure levels according to 2007 ESH-ESC Practice Guidelines for the Management of Arterial Hypertension:

Category	Systolic (mmHg)		Diastolic (mmHg)
Optimal	< 120	and	< 80
Normal	120–129	and/or	80–84
High normal	130–139	and/or	85–89
Grade 1 hypertension	140–159	and/or	90–99
Grade 2 hypertension	160–179	and/or	100–109
Grade 3 hypertension	≥ 180	and/or	≥ 110
Isolated systolic hypertension	≥ 140	and	< 90

Isolated systolic hypertension should be graded (1, 2, 3) according to systolic blood pressure values in the ranges indicated, provided that diastolic values are < 90mmHg.

Source: The European Society of Hypertension and European Society of Cardiology Task Force Members. 2007 ESH-ESC Practice Guidelines for the Management of Arterial Hypertension. *J Hypertens* 2007; 25: 1751-1762.

SYMBOL INFORMATION

Symbol	Referent
	Consult instructions for use
	Batch code
	Manufacturer
	Serial number
	Caution, consult accompanying documents
	Do not use if package is damaged
	Type BF Equipment
	CE mark
	Dispose of in accordance with the requirements of your country.

SPECIFICATIONS

System Performance	
Power	Four 1.5V AA alkaline batteries
Size of monitor w/o cuff	160 (L) x 95 mm (W) x 66.5 mm (H), 400g with batteries.
Cuff Size	24-43 cm (9.4 - 16.9 inches) with air tube 100 cm
Memory	Maximum 60 memory records
Power saving	Automatic power off if system is idle for 3 minutes
System operating conditions	10 °C to 40 °C (50 °F to 104 °F), below 85% RH
Meter storage conditions	-20 °C to 60 °C (-4 °F to 140 °F), below 95% RH
Power Supply Input	DC +6V / 1A (max) via Power Plug

Blood pressure measurement performance	
Measurement unit	mmHg
Systolic Measurement Range	50 mmHg -255 mmHg
Diastolic Measurement Range	25 mmHg -195 mmHg
Pulse Rate Measurement Range	40 -199 beats / minute
Accuracy of Pressure	± 3 mmHg or $\pm 2\%$ of reading
Accuracy of Pulse rate	$\pm 4\%$ of reading

This device has been tested to meet the electrical and safety requirements of: IEC/EN 60601-1, IEC/EN 60601-2.

Reference to Standards:

- EN 1060-1 /-3, NIBP-requirements
- IEC60601-1 General requirement for safety
- IEC60601-1-2 Requirements for EMC
- EN1060-4, NIBP clinical investigation
- ANSI/AAMI SP10, NIBP requirements