

Wellex

Wrist Type Blood Pressure Monitor

Model: BPM18R



INSTRUCTION MANUAL

Please read this instruction manual carefully
before operating this unit.

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Introduction

BPM18R Series Blood Pressure Monitor applies the Oscillometric method to measure human systolic / diastolic blood pressure and heart rate. All values are shown on the LCD monitor and using the Bluetooth technology (BLE4.0) or USB to transfer the related information of your blood pressure measurement. This device is designed only for adults.

CAUTION:

No modification of this equipment is allowed.
Keep your equipment out of the reach of children, pets and pest.
The Patient is an intended operator.
Risk of explosion if battery is replaced by an incorrect type.
Dispose of used batteries according to the instructions.

Important Information Before Use

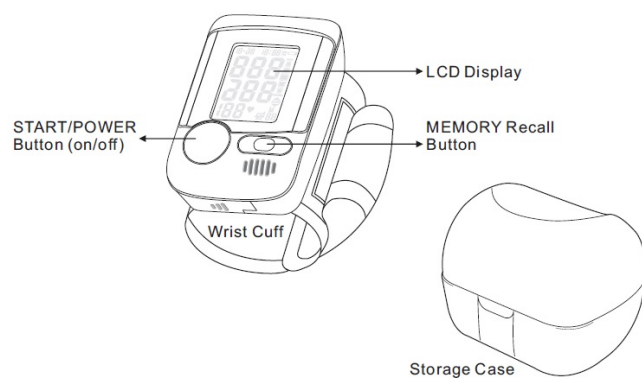
When using this product, please be sure to follow all the notes listed below. Any action against these notices may cause injury or affect the accuracy.

1. WARNING – Do not modify this equipment without authorization of the manufacturer.
2. Blood pressure measurements should only be interpreted by a physician or a trained health care professional who is familiar with your medical history.
Through regular use of this device and recording of your measurements, you can keep your physician informed of the changes in your blood pressure.
3. Perform your measurement in a quiet place. You should be seated in a relaxed position.
4. Avoid smoking, eating, taking medication, alcohol consumption or physical activity 30 minutes prior to taking a reading. If you are exhibiting signs of stress, avoid taking your measurement until the feeling subsides.
5. Rest 15 minutes prior to taking a reading.
6. Remove any constrictive clothing or jewelry that may interfere with the cuff placement.
7. Keep the monitor stable during measurement to achieve an accurate reading. Remain still; do not talk during the measurement.
8. Record your daily blood pressure and pulse readings on a chart.
9. Take your readings at the same time, each day or as recommended by your physician to get an accurate indication of change in your true blood pressure.
10. Wait a minimum of 2~3 minutes between readings to allow for the blood vessels to return to normal. The wait time may vary depending on your individual physiological characteristics.
11. Although such cases are rare, for those with an extremely weak pulse or irregular pulse, errors may result which prevent proper measurement. If abnormal variations are noticed, consult with your physician or trained healthcare professional.
12. This device is intended for adult use. While taking a measurement, you can stop the inflation or deflation process of the cuff at any time by pressing the POWER button.
13. It is recommended that the accuracy should be checked by the manufacturer every two years.
14. If you would require any assistance during setting up, using or maintaining, please contact the manufacturer.

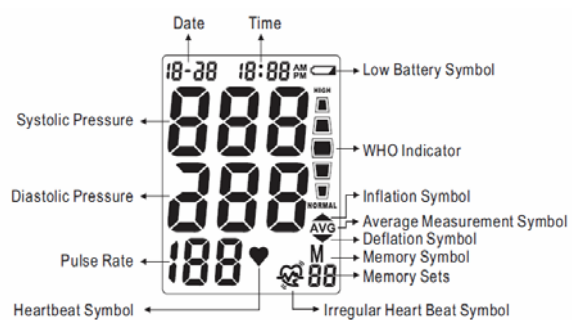


Under any circumstances, the measurement taking result is ONLY for reference.
Any further medical action should follow the advice of doctors.

Blood Pressure Monitor Features



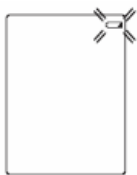
Description of LCD Display



Battery Installation

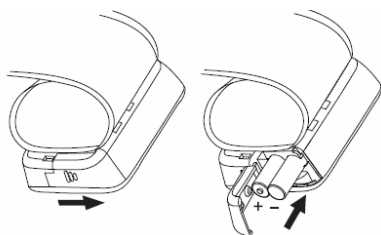
Low battery warning:

It is necessary to replace the batteries when the Low Battery symbol “” appears on the display, or when the display does not turn on after the POWER button is pressed.



Replacing the Battery:

1. Slide the battery cover on the bottom of the monitor.
2. Insert or replace 2 x 1.5 V AAA batteries into the battery compartment, ensuring to match the indicated polarity symbols. Always use new batteries.
3. Replace the battery cover.



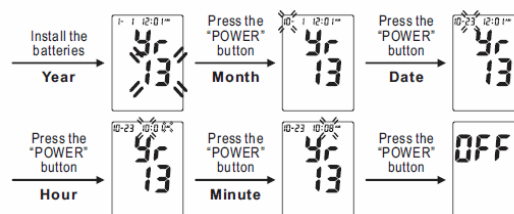
Battery-operated

1. Always use NEW batteries; never mix old and new batteries.
2. Do not use rechargeable batteries; rechargeable batteries can vary greatly in quality and strength. Use of rechargeable batteries may affect the performance of this device.
3. Please properly dispose of the batteries away from small children and heat.
4. It is recommended to remove the batteries if the unit will not be used for an extended period of time.
5. Batteries must be disposed of in accordance with local environmental and institutional policies.
6. Remove the battery during extended storage.

Setting the Date and Time

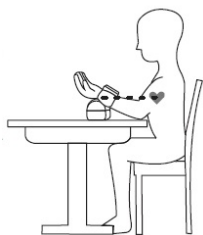
It is necessary to set the date and time for the unit every time batteries are initially installed or replaced.

1. After replacing batteries, the “Year” will begin to flash on the display.
2. Press the “MEMORY” button to advance the display to the desired “Year”, press “POWER” button to confirm the “Year”.
3. Next, the “Month” will blink. Repeat steps 2 to set the “Month” and “Date”, then “hour”, then “Minute”.
4. After setting the minute, the unit will automatically exit out or press power button the date/time setting mode and briefly show the word OFF before shutting down.



Applying Your Cuff

It is important to avoid smoking, eating, taking medication, alcohol consumption or physical activity 30 minutes prior to taking a reading. If for any reason you are unable to or should not use your left wrist,



please modify the instructions for cuff application to your right wrist.

Your physician can help you identify which wrist is best for

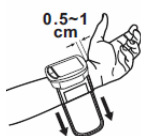


you to take measurements from.

Applying Your Cuff

1. Remove any constrictive clothing or jewelry that may interfere with cuff placement.
2. Be seated at a table or desk with your feet flat on the floor.
3. Hold your wrist in front of you with your palm facing upward.
4. Apply the preformed cuff to your wrist so that the digital display face is positioned on the inside area of your wrist facing you.

5. Adjust the cuff 0.5~1 cm from the edge of the head of the ulna bone.



6. The cuff should fit comfortably, yet snugly around your wrist.

Blood pressure naturally varies from one wrist to the other; therefore, measure your blood pressure on the same wrist to ensure comparability of the two readings.

Taking a blood pressure measurement

Please read the preceding portions of this manual prior to taking your first reading.

1. Rest your elbow on a solid surface with your palm facing upward. Elevate your wrist so that the cuff is at the same level as your heart. Relax your left hand.
2. Press the POWER button. This will turn the power on.

3. After the self-test, the values for the last reading will appear on the display.



4. The blood pressure monitor start to measure.

5. The 'Easy Positioning System' helps to ensure the arm is in the correct position. Simply move your arm up and down until the wrist stays right height.

6. The measurement starts automatically once the correct position has been obtained. Do not move or speak while the measurement is in progress.

7. The cuff will automatically begin to inflate, with the display showing the increasing pressure in the cuff. As the pressure increases, an arrow pointing up will appear on the display.



8. When the inflation has reached optimum level, the display will begin to show the decreasing pressure; the screen will display an arrow pointing down while you feel the pressure of the cuff decrease.



9. To detect the heartbeat, the heartbeat symbol will appear and continuous flashes on the LCD display.

10. Your blood pressure measurement and pulse will display simultaneously on the screen.

11. The Hypertension Indicator will indicate your reading range on the display separately.



12. The reading will automatically be stored in memory.

13. Select POWER to turn the unit off and conserve energy and battery life. The unit will automatically shut-off approximately 2 minutes.



Irregular Heartbeat Detector

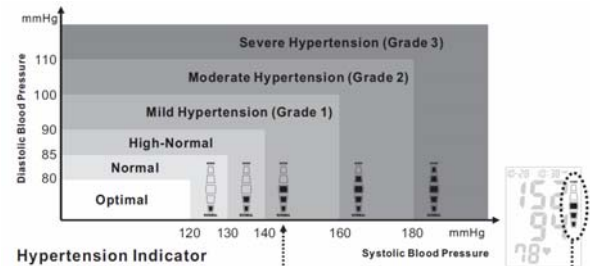
Your digital blood pressure monitor features an Irregular Heartbeat Detector. Irregular Heartbeats may influence the results of the measurement. If the monitor detects the Irregular Heartbeats during measurement, the symbol “” will appear on the display with the measurement values. You can take another measurement to make sure the values are not influenced by moving during measurement or Irregular Heartbeat.

2. If this symbol appears frequently, we recommend you consult your physician.
3. This device does not replace a cardiac examination, but serves to detect pulse irregularities at an early stage.



World Health Organization (WHO)

This unit features our unique Hypertension Indicator. The World Health Organization has established globally accepted standards for the assessment of high or low blood pressure readings. The below chart should be considered only as a guideline, always consult with your physician or health care professional to interpret your individual results.



Memory Function

Recalling Measurements in Memory:

1. Press and release the “MEMORY” button. The unit will first display the average of the last 3 stored measurements.

2. Continue to press the “MEMORY” button to successively view the next previously stored measurements.

Measurements will

appear on

the display from most

current to oldest; the

memory number will appear on the lower right corner.

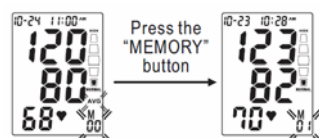
3. All results for a given measurement will display,

including measurement results, pulse rate,

Hypertension Indicator, and date/time stamp.

4. When the number of readings exceeds 90, the oldest data will be replaced with the new record.

5. Press the Power button to turn the monitor OFF at any time during review of the stored measurements.



Clearing Measurements from Memory:

From power display off, press and hold down the “MEMORY” button until the display shows CLr. This indicates that all measurements have been erased.



Troubleshooting

Problem	Probable Cause	Recommended Action
Nothing appears in the display even when the power is turned on.	Batteries are drained.	Replace all batteries with new ones.
Low Battery Symbol appears.	Battery are not correctly aligned with terminals.	Reinsert batteries in the correct position.
	Batteries are drained.	Replace all batteries with new ones.
	In colder temperatures batteries have weaker electrical charges.	Warm up the batteries, or use the device in a warmer setting.
Device operation time is inconsistent.	Different battery brands have different life spans.	Use Alkaline batteries and replace all batteries at the same time with same brand batteries.
No reading after measurement.	Batteries are drained.	Replace all batteries with new ones.
Suspicious blood pressure results.	Perhaps the cuff was improperly positioned.	Adjust patient and wrist cuff to measure.
	Blood pressure naturally varies throughout the day.	Rest a while, relax and measure again.
Suspicious heart rate results.	Bodily movement during device use.	Refrain from moving during measurement.
	Measurement shortly after exercise or exposure to the outdoors.	Do not take measurements after exercise or coming back from the outdoors.
Power switches off automatically.	System design.	Push the power button again, and then begin measure again.
During measuring, air re-inflates.	It could be a normal action if the user's blood pressure is higher than the initial pressure value, the device automatically pumps to a higher pressure by 40mmHg each time.	Relax, and try to take a measure again.
	The wrist cuff is not fastened properly.	Check that the wrist cuff is fastened properly and retake the measurement.

Error Codes

Err Code	Meaning	Corrective Action
Err 0	No pulse or detect pulses not enough.	Take off heavy clothes and retry again.
Err 1	Leakage in Cuff Pressure/Inflation too low.	The wrist cuff is not fastened properly. Re-apply the cuff, and take a measurement again.
Err 2	Pressure fault.	Rest a while, relax and retry again.
Err 3	Deflation fault.	The wrist cuff is not fastened properly. Re-apply the cuff, and take a measurement again.
Err	Memory error.	Take off batteries to reboot the device, then take another measurement.
	Low batteries.	Replace all batteries with new ones.

Data Transferring

Bluetooth function:

What You Need

An Android device with Android version 4.3 or above and hardware support for Bluetooth 4.0.

An iOS device with iOS version 5 or above and hardware support for Bluetooth 4.0. All devices Apple released since the iPhone 4S (including the 4S) do, the older ones don't.

Note:

Please refer to the instruction manual of your smart phone for how to activate the Bluetooth function.

Set Up Process

1. Download an app which supports Bluetooth 4.0 from the iTunes App Store or Google Play.
2. Enable Bluetooth on your mobile device.
3. Open the app and activate the function.
4. Turn on the BPM18R.
5. The app should automatically detect your BPM18R. Tap the BPM18R that is showed in the device list.
6. Your BPM18R is now successfully connected to your mobile device. Every measure reading will be transfer to your mobile device automatically.

You can send results in memory zone as following step

1. Press Memory recall button of blood pressure monitor to enter memory mode. The symbol AVG and M will appear on the display and the number of memory index is "00".
2. Turn on the bluetooth function of device to search the blood pressure monitor. Then the blood pressure monitor will be searched and connected the bluetooth device.
3. After the connection is completed, you can press memory recall button to display the memory result on LCD. Each result showed on LCD, the result will be transmitted by bluetooth immediately.

USB function:

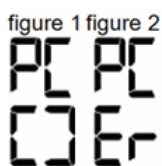
Connect the blood pressure monitor to your PC using the USB Cable.  appears on the display. Begin the data transfer in the PC software. During the data transfer, an animation is shown on the display.

- A successful data transfer is displayed as in figure 1.

If the data transfer is unsuccessful, an error message appears as in figure 2.

In this case, interrupt the PC connection and start the data transfer again.

After 30 seconds of not being in use or if communication with the PC is interrupted, the blood pressure monitor switches itself off automatically.



Care and Maintenance

1. Clean the device and wrist cuff carefully only with a slightly moistened cloth.
2. Do not immerse the device in water. It may cause damage if water enters.
3. Do not use any gas, strong detergent, or solvents to clean the device, including the wrist cuff.
4. Use a soft, dry cloth to clean your monitor.
5. Do not store in direct sunlight, dust or excessive humidity.
6. Avoid extreme temperatures.
7. Do not disassemble the monitor or cuff.
8. Remove batteries if the monitor will not be used for an extensive period of time.

Technical Specification

Measuring range :

- Calibration Accuracy :
- Operating environment :
10oC~40oC (50oF~104oF)
with relative humidity up to 85% (non condensing)
- Storage/ Transportation environment :
-20oC~+50oC (-4oF~+122oF)
with relative humidity up to 85% (non condensing)
- Power Source :
- Weight :
- Dimensions :
- Cuff circumference (M Size) : approx. 12.5~21 cm
- 2 x 1.5 V AAA batteries
approx. 106g (exclude batteries)
approx. 58mm x 88.5mm x 28.3mm (W x H x D)

FCC Statement

Note: 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 of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.
5. FCC Caution: To assure continued compliance, (example – use only shielded interface cables when connecting to computer or peripheral devices). Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.
6. 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.
7. This device 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. This transmitter must not be colocated or operating in conjunction with any other antenna or transmitter.

EMC Tables

AVITA BPM18R is intended for use in the electromagnetic environment specified below. The customer or the user of **AVITA BPM18R** must make sure that it is used in such an environment.

Guidance and manufacturer's declaration - Electromagnetic emissions

Phenomenon	Professional healthcare facility environment a)	HOME HEALTHCARE ENVIRONMENT a)
Conducted and radiated RF EMISSIONS		CISPR 11 Group 1 Class B
Harmonic distortion	Not applicable	
Voltage fluctuations and flickering	Not applicable	

a) The equipment is suitable for use in Home Health Environments and Professional Health Care Environments limited to patient rooms and respiratory treatment facilities in hospital or clinics. The more restrictive acceptance limits of Group 1 Class B (CISPR 11) have been considered and applied. The equipment is suitable for use in the mentioned environments when directly connected to the Public Mains Network.
b) The test is not applicable in this environment unless the ME EQUIPMENT and ME SYSTEM used will be connected to the PUBLIC MAINS NETWORK and the power input is otherwise within the scope of the Basic EMC standard.

Guidance and manufacturer's declaration - Electromagnetic immunity - Enclosure port

Phenomenon	Basic EMC standard or test method	Immunity test levels	HOME HEALTHCARE ENVIRONMENT
		Professional healthcare facility environment	
ELECTROSTATIC DISCHARGE	IEC 61000-4-2	± 8kV contact ± 2 kV, ±4kV ±, ±8 kV, ±15 kV air	
Radiated RF EM fields	IEC 61000-4-3	a)	10 V/m b) 80MHz - 2.7 GHz 80% AM at 1kHz
Proximity fields from RF wireless communications equipment	IEC 61000-4-3	COMPLIANT NOTE: Further information about distances to be maintained between portable and mobile RF communications equipment (transmitters) and the AVITA BPM18R can be requested from AVITA using the contact information provided in this manual. However, it is advisable to keep the electromechanical aerosol equipment at an adequate distance of, at least, 0.5 m from mobile phones or other RF communications transmitters to minimise possible interference.	
RATED power frequency magnetic fields.	IEC 61000-4-8	30 A/m c) 50 Hz or 60 Hz	

a) The equipment is suitable for use in Home Health Environments and Professional Health Care Environments limited to patient rooms and respiratory treatment facilities in hospital or clinics. The more restrictive IMMUNITY acceptance limits have been considered and applied.
b) Before modulation is applied.
c) This test level assumes a minimum distance of at least 15 cm between the ME EQUIPMENT or ME SYSTEM and sources of power frequency magnetic fields.

Explanation of Symbols

	Follow instructions for use
	Disposal information: Should you wish to dispose of the article, do so in accordance with current regulations. Details are available from your local authority
	"ON/OFF" (push-push)
	Type of protection of applied part against electric shock, body floating
IP 22	This product meets the basic safety and essential performance requirements indicated in the IP22 conditioning test (protection against solid foreign objects of 12.5mm Ø and greater and against vertically falling water drops when enclosure tilted up to 15°)
	Temperature limits
	Manufacturer's name and address
	SN YYMWWWXXXXX SN: Product Serial Number YY: year, M: month, WWW: working sheet, XXXXX: serial no.



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