# **Owner's Manual**

## EZ Health<sup>™</sup> Platinum Deluxe Automatic Blood Pressure Monitor



ABP-B2

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#### Introduction

Thank you for purchasing the EZ Health<sup>™</sup> Platinum Deluxe Automatic Blood Pressure Monitor model number ABP-B2.

For your safety, please be sure to read this Owner's Manual thoroughly before using the Blood Pressure Monitor. For other specific information about your own blood pressure, CONTACT YOUR PHYSICIAN.

- Measures Blood Pressure & Pulse from the Arm.
- Fuzzy logic measurement system.
- Completely automatic inflation and deflation to provide home blood pressure monitoring convenience.
- Saves up to 80 memories with Date/Time display
- Blue backlight LCD display.
- 3 colour LED lights to indicate Normal (green), Higher (yellow) or Abnormal High (reddish) blood pressure.
- Easy wrap regular arm cuff suitable for arm sizes from 8.7" to 12.6".
- Easy wrap large arm cuff suitable for arm sizes greater than 12.6"
- Automatically turns off after 1 minute.Low Battery and intelligent error detection.
- Operates on four "AA" alkaline batteries or AC adapter.
- Intelligent error detection.
- Recall and Scan Functions.
- High Accuracy.

#### Warning Signs & Safety Statements



ATTENTION!! Read user's manual before use.



Type BF applied part.

#### Health and Blood Pressure Values

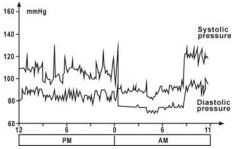
Because of continuous aging of blood vessels, blood pressure of the human body tends to naturally increase from middle age onwards. Further causes for increased blood pressure include obesity, lack of exercise, cholesterol (LDL) adherence to blood vessels causing the vessels lose their elasticity and a variety of other medical problems. Higher blood pressure accelerates hardening of the arteries, making the body more susceptible to coronary heart disease and strokes. Blood pressure fluctuates constantly throughout our daily life and is an essential element for our daily health management. We follow routine blood pressure trends in order to optimize health.

#### What is Blood Pressure

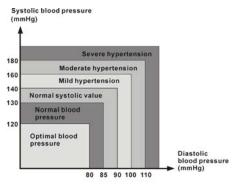
Blood is pumped through your arteries by the beating (contraction and expansion) of your heart. The pressure of the pumped-out blood is called the "blood pressure". Blood pressure elevates with each beat of the heart. The pressure when the heart contracts is called the "systolic blood pressure" and the pressure when the heart relaxes is called the "diastolic pressure". Systolic pressure is always higher than diastolic pressure.

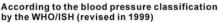
Blood pressure is typically low in the morning and increases from the afternoon to the evening. It is lower in the summer and higher in the winter. Blood pressure naturally varies from time to time throughout the day. Many factors that may cause the blood pressure to fluctuate include: Breathing, Exercise, Mental stress, Smoking, Eating, Concern, Environmental and/or temperature change, Time of day, Urination and bowel movements, Conversation, Bathing, Drinking alcohol, Medication and Physical activity. Variations in Blood Pressure:

The variations in blood pressure over a whole day with measurement taken every five minutes as shown below.



 Classification of Blood Pressure by the WHO: The World Health Organization (WHO) and the Inter-national Society of Hypertension (ISH) developed the Blood Pressure Classification shown as below.





#### Important Information

- Blood pressure values measured at home tend to be lower than those measured in the hospital or physicians office. This is called "White Coat Syndrome" and is caused by the fact that you tend to be nervous when you have your blood pressure measured in the hospital, but you feel relaxed at home. It is important to know your stable normal blood pressure measured at home.
- It is recommended for persons who have heart trouble, kidney trouble, hypertension, diabetes, arteriosclerosis or other problems related to the circulatory system, consult your physician to ensure that the blood pressure monitor is being used properly so that blood pressure monitor accurately reflects your actual blood pressure.
- Blood pressure can fluctuate by 30 to 50 mmHg without being noticed. These changes can be influenced by whether you are nervous or relaxed, exercise or the environment (temperature or mental state).
- The device may show some reading errors in the presence of common arrhythmia such as arterial or ventricular premature beats or atrial fibrillation.

#### **Precautions**

- This unit will not serve as a cure for any symptoms of cardiovascular disease or other diseases. The data measured is only for reference. Always consult your physician if any abnormal results are measured.
- Always follow the operation procedures described in the manual to ensure that you measure your correct blood pressure.
- Be sure to store this manual for future reference.

Diseases such as diabetes and hyperlipidemia accelerate hardening of the arteries. If such conditions continue, there is an increased danger of stroke, coronary infarction, arterial stenosis and disorders of the peripheral blood circulation. In such cases, there can be a large difference between blood pressure values taken at the wrist and upper arm. (Since even healthy persons may show a difference of 20 mmHg if the conditions of the measurement status are not suitable. Do not rely on the self-diagnosis or just one measurement, and always follow the advice of a physician.) Physiological conditions may have varying degrees of effect, but generally blood pressure values at the wrist and upper arm should display the same pattern of change. Consequently, it is possible to monitor trends in change by measuring blood pressure at the wrist and upper arm.

#### **Contraindications**

- Do not use the device on infants or persons who cannot communicate, as such use may lead to serious accidents.
- Do not use the device for purposes other than measuring blood pressure.
- Do not use this device near any mobile phone or microwave oven in use, or reading error may occur.
- Do not try to disassemble or modify the unit or cuff, which may damage the unit or cause permanent reading error.
- Do not start the inflation when the arm cuff is not wrapped around the arm.
- Do not drop this unit and avoid subjecting the device to a strong impact.

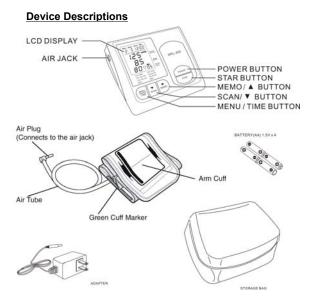
#### <u>Warning</u>

- If the inflation continues and doesn't stop, please open the cuff immediately or turn off the unit by pressing the **POWER** button.
- Do not measure repeatedly for a long period of time.
- This device is not supposed to be used if your arm has any wound or injury.
- Remove batteries if not using the device for a long time.
- Do not use batteries of different types or brands for this may lead to an incorrect reading and possibly cause battery explosion (for example mixing alkaline and heavy duty batteries).
- Leaving the batteries in the blood pressure monitor for over 3 months and not using the device may damage the device by battery leakage. Please read the Installing/Replacing Batteries section in this manual.
- The device might not meet its normal performance if stored or used beyond the temperature and humidity ranges specified below.
  - Operating conditions: 10°C~40°C, 40%~85% R.H.
  - Conditions for storage: -20°C~50°C, 15%~85% R.H.

#### Suggestions before Measuring Blood Pressure

- 1. Please relax yourself physically and mentally for at least 5-10 minutes before measurement.
- Avoid eating, smoking, exercising, bathing and drinking (alcohol/coffee/tea) for at least 20-30 minutes before measuring your blood pressure.
- 3. Be sure the cuff is at the same level as your heart.
- 4. Stress raises blood pressure. Keep calm and relax during measurement.
- 5. Please DO NOT talk or speak during measurement.
- 6. Avoid urination or bowel movement before taking a measurement.

- Wait at least 3 minutes before you take another blood pressure measurement.
- 8. Keep the records for your physician as reference.
- Remember that a single measurement is not necessarily representative of your typical blood pressure. Recording multiple measurements over time will reveal the long-term trend of your blood pressure. Try to measure your blood pressure at the same time each day for consistency.



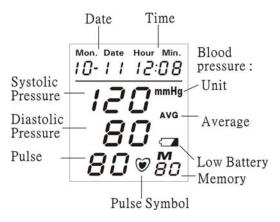
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#### **Description of Control Buttons**

- POWER: To turn on or turn off the unit.
- START: To start inflating cuff to measure blood pressure and pulse.
- TIME: To set the Date/Time.
- MEMO/A : To review the measured record(s). To select the digit of the Date/Time.
- SCAN/
   : To review all previously measured record(s) from memory list automatically. To select the digit of the Date/Time. To delete memorized record(s).

#### Description of LCD Display Symbols

(Changed Diagram)



#### Using Adapter or Installing/Replacing Batteries

You can use the unit by using the Adapter or Batteries. Be sure the unit is turned off before installing/replacing batteries, or the memories & Date/Time setting will be erased. If the batteries are removed or the adapter unplugged for more than 30 seconds, the memories and the Date/Time setting will be erased. Then, you must reset the Date/Time.

#### Using Adapter

Plug the supplied AC adapter cord into the power jack located on the backside of the unit. Plug the AC adapter into a standard 120 V wall outlet. The unit is ready to use. Note: Please use the AC adapter enclosed with the product only. (Input: 120V, Output: 6VDC 500mA,  $\bigcirc$  )

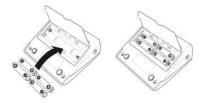


#### Installing/Replacing Batteries

1. Slide the battery compartment to remove it.



- Place the batteries (4 "AA" Alkaline batteries) in the compartment as indicated by the polarity symbols (+ and -) marked inside. All the display symbols appear for 3 seconds and then return to standby mode.
- 3. Replace the battery compartment cover.



Note: When **(**Low Battery indicator) appears on the display, the batteries are weak. Change the batteries as soon as possible, or it may not be able to take any measurement and the memories and the Date/Time setting of the unit may be lost.

#### Warning:

- a. Be sure to follow the instructions above when plugging the adapter and installing or replacing the batteries.
- b. We recommend you to use **ALKALINE batteries** for the best performance and the longest device life.
- c. Use only brand new batteries of the required size and DO NOT mix using old and new or different type of batteries together.
- d. Remove the batteries if not using the blood pressure monitor for an extended period (i.e., 3 months). The batteries can leak chemicals and damage the electronic parts.
- e. Immediately replace run-down batteries with new ones.
- f. Check the batteries periodically and replace them when

necessary.

g. When using the adapter alone without battery, the memories and the Date/Time setting won't be saved kept during a power failure.

#### Program Date and Time

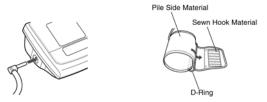
Make sure you have turned off the unit before you program the Date and Time.

- 1. Press and hold **TIME** button for 2 seconds until "2006" shown on the screen and starts to flash.
- 2. Press **MEMO**/▲ button or **SCAN**/▼ button to set the number representing the **Year**.
- 3. You can press and hold **MEMO/**▲ or **SCAN/**▼ buttons for about 2 seconds, the number of the **Year** will be displayed in the faster speed.
- 4. Press **TIME** button to confirm the **Year** setting. Then the number representing the **Date** will flash.
- 5. In the same manner, set the Month, Date, Hour and Minute.

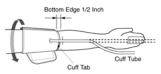
Note: After replacing batteries, always check to make sure the Date/Time is properly set before using the blood pressure monitor. If the batteries are removed for more than 30 seconds, you must reset the Date/Time.

#### How to Apply the Arm Cuff

- 1. Insert the air plug of the arm cuff into the air jack of the blood pressure monitor.
- The cuff should be assembled correctly when it is removed from the box. If it is not, pass the end of the cuff furthest from the tubing through the metal D-ring to form a loop. The smooth cloth should be on the inside of the cuff loop.



- If the cuff is assembled correctly, the sewn hook material will be on the outside of the cuff loop and the metal D-ring will not touch your skin.
- 4. Put your left arm through the cuff loop. The bottom of the cuff should be approximately 1/2" above the elbow. The cuff tubing should be positioned along the middle of the inside of your arm as shown.



- 5. Pull the cuff so that the top and bottom edges are tightened evenly around your arm.
- When the cuff is positioned correctly, press the sewn hook material firmly against the pile side of the cuff.
- The cuff should be wrapped so that it fits snugly and stays in place. You should be able to fit one finger between the cuff and your arm.

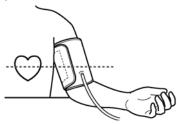


#### **Correct Measurement Position**

In order to ensure accurate readings it is extremely important that the cuff is at the same level as your heart. Higher or lower positions will give deviations from the true value.

#### Measurement while sitting down:

- Sit in a chair with your feet flat on the floor and rest your arm on a table so that the cuff is at the same level as your heart.
- 2. Relax your arm and turn your palm upward.
- 3. Make sure there are no kinks in the air tubing.
- After taking deep breaths several times before measurement, take a natural breath, and then relax your body.



#### How to Take a Measurement

Please read and follow directions in "Suggestions before Measuring Blood Pressure" and "How to Apply the Arm Cuff" before taking a measurement.

- Press POWER button to turn on the unit. All the display symbols appear for a moment and the number 0 flashing. This is the initial testing. Then, the number 0 will stop flashing.
- Press START button to take a measurement. (If the unit has been turned on, press START button to take a measurement directly.)
- When the cuff reaches your correct inflation level, it begins to deflate automatically. As the cuff deflates, decreasing numbers appear on the display. The Heart Symbol I flashes with the beeps at the onset of oscillation signals.



- \* If during deflation the blood pressure monitor senses that higher pressure is required to measure the user's blood pressure, the device will stop deflation and pump again to reach the workable pressure (up to the max. 280 mmHg). If the inflation continues and doesn't stop, please unwrap the cuff immediately or turn off the unit by pressing the **POWER**.
- The monitor exhausts the residual air when the measurement is completed. The Heart Symbol stops flashing and your Blood Pressure and Pulse appear on the display. After taking the measurement,

the latest measured readings will always be displayed before the power is auto turned off (3 minutes).

 Note: Wait at least 5 minutes between successive measurements. Waiting allows your blood vessels to return to normal status. More rest time may be required between measurements depending on individual physiological conditions.

#### How to Use the Memory Features

The measured and displayed Blood pressure and Pulse readings are automatically stored in the memory. The blood pressure monitor can store the most recent 80 measurements. If more than 80 measurements have been taken, the earliest measurement will be erased and replaced by the most recent measurement.

# 1. Review the Average Value and previous measurements:

Press **MEMO**/▲ button, the unit first display the average values of Systolic, Diastolic and Pulse. (Averaged from all memorized readings.) Press **MEMO**/▲ button again to review the measurement from the most recent to the earliest.

The most recent measurement (M 01) appears when you press **MEMO/**▲ button. M 01 is the latest reading measured. The Systolic, Diastolic, Pulse and Date/Time of the measurement will be displayed. Press **MEMO/**▲ button to repeatedly review other memorized readings. The readings will be displayed as M 02, M 03, M 04 ... etc. You can press **SCAN/**▼ button to switch to the automatic display mode.

#### Scan all previous measurements: Press SCAN/▼ button, the unit will display all measurements one by one in one in one second intervals. You can press MEMO/▲ button to switch to the single display mode.

#### 3. The 3 colour LED warning lights:

It will indicate the status of each blood pressure measurement is Normal (green), Higher (yellow) or Abnormal High (reddish).

#### How to Erase Single or All the Memories

#### 1. Delete single measurement:

You can delete the single memory just after taking the measurement. Press **SCAN/▼** button then "dEL" will appear and flash. Press **SCAN/▼** button again to confirm the delete function.

#### 2. Delete all measurements:

Turn off the unit first then keep pressing **SCAN**/▼ until "dEL ALL" displayed. Press **SCAN**/▼ button again and all memories will be deleted when "00 ALL" shown on the screen.

#### **Maintenance**

#### Storage

- 1. Always use the storage box provided with the device to transport or store the unit.
- 2. If you are not to use the device for an extended period, remove the batteries for storage.
- Do not store the device in direct sunlight, high temperatures, humid, dusty, or corrosive environment.
- 4. Do not stretch, bend or tug on the arm cuff.
- 5. Do not immerse the unit in the water.

#### Cleaning

- 1. Do not use an alcoholic-base, benzene, gasoline or solvent agent to clean the device.
- Wipe with a moistened cloth with tap water or a mild cleaning agent and then dry the device with a soft and dry cloth.
- 3. The dirt on the cuff can be cleaned by the moistened cloth and soap.
- 4. Do not flush the device and cuff.
- 5. Do not bend the cuff or sleeve or attempt to turn the sleeve inside-out.
- Do not disassemble the device or dismantle the cuff or try to repair yourself. If any problem occurs, bring the monitor to your distributor for further assistance.
- 7. Do not operate the device in severe environments, extreme temperature or humidity, or direct sunshine.

#### Error Message & Troubleshooting

The unit is manufactured using a complete quality assurance system.

If the measurement is not made correctly, the following error will be displayed. Measure your blood pressure again using the appropriate corrective action.

Error Indicators	Cause	How to correct
Mon. Date Hour Min. 10-1112:00 1 E	<ul> <li>Incorrect posture in measurement or the user moves or talks during measurement.</li> <li>There is artificial interference and noise during measurement.</li> <li>User is tense and does not relax or has severe heart beat irregularity or arrhythmia.</li> </ul>	<ul> <li>Cuff is not fastened well; please fasten again following the instructions.</li> <li>Wait at least 3 minutes before taking another measurement.</li> <li>Repeat steps listed under "How to Take a Measurement."</li> <li>User has special characteristic, please refer to a physician.</li> </ul>

#### ERROR MESSAGE

Error Indicators	Cause	How to correct
10-1112:00 2 8	<ul> <li>No pulse or blood pressure sensed.</li> <li>Incorrect posture during measurement.</li> <li>Cuff is not wrapped properly.</li> </ul>	<ul> <li>Cuff is not fastened correctly or not tight enough; please fasten the cuff by following the instructions.</li> <li>Wait at least 5 minutes before taking another measurement. Please see "How to Take a Measurement" on page 15.</li> </ul>
10-1112:00 3 5	<ul> <li>Insufficient or failure to inflate.</li> <li>Cuff broken.</li> </ul>	<ul> <li>Cuff is not fastened well; please re-fasten the cuff following the instructions.</li> <li>Pump, or venting valve or deflation valve failure, please contact the distributor.</li> </ul>

If a trouble occurs while you are using the blood pressure monitor, check the Troubleshooting first. If you can not measure your blood pressure correctly even after taking the appropriate countermeasures, the monitor may be broken. Please send the unit to the distributor for repair. Do not dismantle or try to repair the monitor by yourself.

#### TROUBLESHOOTING

Condition	Cause	Correction
After the batteries are installed, no indication or symbol displayed on the LCD. The wrong indication when power is turned on.	<ul> <li>Batteries are not installed properly.</li> <li>Batteries run out of electricity.</li> </ul>	<ul> <li>Check and correct the battery polarities.</li> <li>Remove the old batteries and wait for one minute, then install the new batteries.</li> </ul>
The inflation cannot be done or the air pressure cannot rise.	Cuff is not wrapped properly.	•Check the arm position and fasten the cuff correctly and re-measure the pressure again.
	Battery low. Battery voltage is excessively low.	<ul> <li>In order to keep the previous measurements &amp; date/time, ensure the unit is turned off before replacing batteries.</li> <li>Replace with new "AA" Alkaline batteries.</li> </ul>

Condition	Cause	Correction
The blood pressure cannot be taken, and the LCD shows error message or wrong result.		<ul> <li>Re-fasten the cuff.</li> <li>Relax yourself.</li> <li>Keep the cuff and heart at the same level during the measurement.</li> <li>Keep silent and still in measurement.</li> <li>If the patient has severe heart beat irregularity or arrhythmia, and the blood pressure reading may not be correct. Please consult your physician.</li> </ul>
Under normal operating circumstances, the reading at home is different from that of the clinics.		<ul> <li>Usually people feel more tense in a hospital or clinic (white coat syndrome) than in their home.</li> <li>Record the results and consult with your physician.</li> </ul>

Each measurement has different reading.	<ul> <li>The variation might be due to the different environments.</li> <li>The blood pressure is changing according to the</li> </ul>
	according to the physiological or psychological status
	of the human body.

#### **Specifications**

Model No.	ABP-B2
Display	LCD Digital Display with backlight
Measurement	Oscillometric method
Method	
Measurement	Pressure: 20~280mmHg
Range	Pulse: 40~190 / minute
Accuracy /	Pressure: ±3mmHg or 2% of reading
Calibration	Pulse: $\pm$ 5% of reading
Memory capacity	80 sets memories
Inflation	Automatic inflation by air pump
Deflation	Automatic liner pressure deflation valve
Pressure	Automatic exhaust valve
Release	
Sensor	Semiconductor pressure sensor
Power Supply	Adaptor Input 120VAC, Output 6VDC
	6V DC (4 "AA" alkaline batteries)
Measuring	1 mmHg
Interval	
Operating	+10°C~+40°C (50 °F~104 °F)
Temperature /	40%~85% R.H. maximum
Humidity	

Storage	-20°C~+50°C (-4 °F~122 °F)
Temperature /	15%~85% R.H. maximum
Humidity	
Battery Life	Approx. 200 uses (alkaline batteries)
Unit Weight	Approx. 400 grams (not including batteries)
Cuff	Fits arm circumference 8.7" ~ 12.6"
Circumference	Large Cuff for sizes >12.6"
Unit dimensions	Approx. 115 (l) x 125 (w) x 50 (h) mm
Accessories	Storage Case, Owner's Manual, Adapter

Please understand that specifications may be changed without prior notice.

#### Warranty Information

Your product EZ Health<sup>™</sup> Platinum Deluxe Blood Pressure Monitor, is guaranteed to be free of defects in workmanship and materials under normal use for a period of TWO years from the date of purchase.

For repair within two year warranty, our Authorized Service Agent must be advised of the defects of the device. This warranty covers parts and labor only under normal usage, any transportation cost and freight incurred will be at the owner's expenses. Any defect from natural causes, e.g., flood, hurricane etc., is not within this warranty. This warranty does not cover damage incurred by: usage NOT following the instructions, accidental damage, or being tampered with or serviced by unauthorized Service Agents.

Monitor subjected to misuse, abuse, negligence, unauthorized repair or modifications, will void the warranty. The warranty excludes expendables and consumables like batteries. All warranty claims must be directed to the distributor for the sale of the device. The content of this warranty is subject to change without further notice.

### PERSONAL BLOOD PRESSURE RECORD

Na	me
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\_\_\_\_\_ Age \_\_\_\_\_ Weight \_\_\_\_\_

Date	Time	SYS./DIA./PULSE	Remark

### PERSONAL BLOOD PRESSURE RECORD

Name	A	ge Weight	
Date	Time	Sys./Dia./Pulse	Remark

#### **Conformity Standards**

- Medical device electrical safety: EN 60601-1
- Electromagnetic Compatibility: EN 60601-1-2
- EN 1060-1, EN 1060-3
- Performance standard: ANSI/AAMI SP10-1992

#### Manufacturer Tremblay Harrison Inc.

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