

**PREMIUM**

**BLOOD PRESSURE  
MONITOR**

**BIOS**  
*Diagnostics*<sup>TM</sup>



**INSTRUCTION  
MANUAL**



# Premium Blood Pressure Monitor

## Instruction Manual

### Table of Contents

#### **1. Introduction**

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- 1.1 Features
- 1.2 Important Information
  - 1.2A *Safety Information*
  - 1.2B *Care of the Device*
- 1.3 About Blood Pressure
- 1.4 Normal Blood Pressure Values
- 1.5 Common Blood Pressure Questions and Answers

#### **2. Getting Started**

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- 2.1 About the 3AL1-3E
- 2.2 About the LCD Screen
- 2.3 Inserting the Batteries
- 2.4 Storing the Cuff

#### **3. Using the Device**

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- 3.1 Setting the time and date
- 3.2 Select the user
- 3.3 Obtaining accurate Measurements
  - 3.3A *Before Measuring*
  - 3.3B *Common sources of errors*
  - 3.3C *Fitting the Cuff*
- 3.4 Measuring your Blood Pressure
- 3.5 Pulse Arrhythmia Detector Feature
- 3.6 Hypertension Classification Indicator
- 3.7 Medication Reminder
- 3.8 Viewing Previously Recorded Values
- 3.9 Clearing All Values
- 3.10 Discontinuing a Measurement
- 3.11 Using the AC Adapter

#### **4. Error Messages / Malfunctions**

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#### **5. Care and Maintenance**

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#### **6. Lifetime Guarantee**

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#### **7. Reference to Standards**

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#### **8. Technical Specifications**

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#### **9. Contact for Support**

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## 1. Introduction

Thank you for purchasing the BIOS Diagnostics™ Premium Blood Pressure Monitor. Designed for convenient and easy operation, this device provides a simple, yet accurate method to measure your blood pressure.


Your blood pressure is an important parameter that can be used to monitor your health. This device enables you to monitor your blood pressure regularly, and maintain a record of your blood pressure measurements. You can then use this record to assist your physician in diagnosing and maintaining a healthy blood pressure level.

### 1.1. Features

The 3AL1-3E is a fully automatic, digital, blood pressure measuring device with a unique fuzzy logic technology and a large LCD screen. It can store up to 99 blood pressure readings for each of the 2 users.

It provides a fast and reliable measurement of systolic and diastolic blood pressure as well as heart rate using the oscillometric measurement method.



**PAD - Pulse Arrhythmia Detector** technology displays pulse irregularities detected during a blood pressure reading. However, if the PAD symbol  appears on a regular basis (e.g. several times a week with measurement taken daily), we advise you to consult your doctor.

- **Hypertension Classification Indicator** displays the range between which your blood pressure values lie.
- **Medication Reminder** allows you to program 2 daily alarms as a reminder to take medication or blood pressure.
- **Memory Feature** 2 users, 99 blood pressure readings each with time and date.

This device is easy to use and has been proven in clinical studies to provide excellent accuracy. Before using the 3AL1-3E, read this instruction manual carefully and keep it in a safe place.

### 1.2 Important Information

Refer to the following sections to learn about important safety instructions and how to take care of the BIOS Diagnostics™ Premium Blood Pressure Monitor.

#### 1.2A Safety Information

- Self-measurement means control, not diagnosis or treatment. Your values must always be discussed with your doctor or a physician who is familiar with your family history.
- If you are undergoing medical treatment and receiving medication, consult your doctor to determine the most appropriate time to measure your blood pressure. Never alter the dosages of any medication without direction from your doctor.
- Your blood pressure depends on several factors, such as age, gender, weight and physical condition. It also depends on the environment and your state of mind at the time of measurement. In general, your blood pressure is lower when you are asleep and higher when you are active. Your blood pressure may be higher when recorded at a hospital or a clinic and may be lower when measured in the relaxing comfort of your home. Due to these variations, we recommend that you record your blood pressure regularly at home as well as at your doctor's clinic.
- Try to record your blood pressure regularly at the same time of the day and under the same conditions. This will help your physician detect any extreme variations in your blood pressure and thus treat you accordingly.

- Morning Hypertension (> 135 / 85 mm Hg): Recently, several studies have identified elevated cardiovascular risks (heart failure, stroke, angina) associated with “morning hypertension”. There is a typical rise in blood pressure during the physiological changes from sleep to arising for the day.
- The ideal time to measure your blood pressure is in the morning just after you wake up before breakfast and any physical activity, and in the absence of the urge to urinate. If this is not possible, try to take the measurements later in the morning, before you start any physical activity. Relax for a few minutes before you record your blood pressure.
- Your blood pressure increases or decreases under the following circumstances:

Blood pressure is higher than normal:

- when you are excited, nervous, or tense
- while taking a bath
- during and after exercise or strenuous physical activity
- when it is cold
- within one hour after meals
- after drinking tea, coffee, or other caffeinated drinks
- after smoking tobacco
- when your bladder is full

Blood pressure is lower than normal:

- after consuming alcohol
- after taking a bath

- The pulse display is not suitable for checking the frequency of heart pacemakers.
- If you have been *diagnosed* with a severe arrhythmia or irregular heartbeat, vascular constriction, liver disorders, or diabetes, have a cardiac pacemaker, or are pregnant, measurements made with this instrument should only be evaluated after consultation with your doctor.
- Take care while handling the batteries in the device. Incorrect usage may cause battery fluid leakage. To prevent such accidents, refer to the following instructions:
  - Insert batteries with the correct polarity.
  - Turn off power after use. Remove and store the batteries if you are not planning to use the device for an extended period of time.
  - Do not mix different types, brands, or sizes of batteries. This may cause damage to the product.
  - Do not mix old and new batteries.
  - Remove batteries and dispose of them according to the proper regulations in your area.
  - Do not disassemble batteries or expose them to heat or fire.
  - Do not short circuit the batteries.
  - Do not use rechargeable batteries.

## 1.2B Care of the Device

For prolonged life of your blood pressure monitor, note the following instructions:

- Do not drop or bang the unit. Prevent sudden jerks, jars or shocks to the device to prevent damage.
- Do not insert any foreign objects in any device openings or vents.
- Do not disassemble the unit.
- If the unit has been stored at very low or freezing temperatures, allow to reach room temperature before using it.
- Do not store the unit in direct sunlight, high humidity or in places with a lot of dust.

- Clean the device with a soft dry cloth. Do not use gasoline, thinner or similar solvents. Carefully remove spots on the cuff with a damp cloth and soap. Do not wash the cuff.

### **1.3. About Blood Pressure**

Your blood pressure level is determined in the circulatory center of your brain. Your nervous system allows your body to adapt or alter blood pressure in response to different situations. Your body alters your pulse or heart rate and the width of blood vessels through changes in muscles in the walls of blood vessels.

Your blood pressure reading is highest when your heart pumps or ejects blood. This stage is called your systolic blood pressure.

Your blood pressure is lowest when the heart rests (in between beats). This is called your diastolic blood pressure.

It is critical to maintain blood pressure values within a “normal” range in order to prevent cardiovascular diseases. Increased blood pressure values (various forms of hypertension) have associated long- and medium-term health risks. These risks concern the arterial blood vessels of your body, which are endangered due to constriction caused by deposits in the vessel walls (arteriosclerosis). A deficient supply of blood to important organs (heart, brain, muscles) can be the result. Furthermore, with long term increased blood pressure values, the heart will become structurally damaged.

There are many different causes of the appearance of high blood pressure. We differentiate between common primary (essential) hypertension, and secondary hypertension. The latter group can be ascribed to specific organic malfunctions. Please consult your doctor for information about the possible origins of your own increased blood pressure values.

### **1.4. Normal Blood Pressure Values**

Blood pressure is too high when, at rest, the diastolic pressure is above 90 mmHg or the systolic blood pressure is over 140 mmHg.

If you obtain readings in this range, consult your doctor immediately. High blood pressure values over time can damage blood vessels, vital organs such as the kidney, and your heart.

Should the systolic blood pressure values lie between 140 mmHg and 160 mmHg or the diastolic blood pressure values lie between 90 mmHg and 95 mmHg, likewise, consult your doctor. Regular self-checks will be necessary.

With blood pressure values that are too low (i.e., systolic values under 105 mmHg or diastolic values under 60 mmHg), consult with your doctor.

Even with normal blood pressure values, a regular self-check with your blood pressure monitor is recommended. In this way you can detect possible changes in your values early and react appropriately.

Refer to the following table for classifying blood pressure values (units: mmHg) according to the World Health Organization (WHO):

Category	Systolic Blood Pressure	Diastolic Blood Pressure
Optimal	< 120	< 80
Normal	< 130	< 85
High Normal	130 - 139	85 - 89
Hypertension		
• Stage 1: Mild	140 - 159	90 - 99
• Stage 2: Moderate	160 - 179	100 - 109
• Stage 3: Severe	> 180	> 110
Isolated Systolic Hypertension	> 140	< 90

### Further information

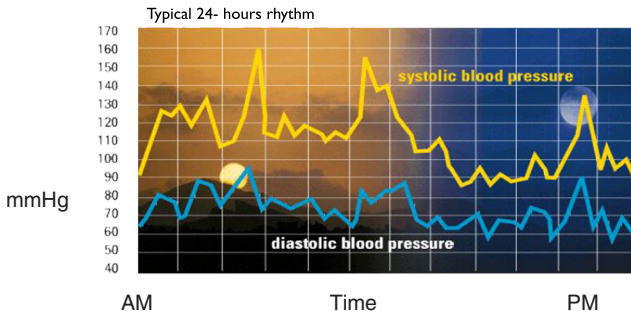
If your values are mostly “normal” under resting conditions but exceptionally high under conditions of physical or psychological stress, it is possible that you are suffering from so called “labile hypertension”. In any case, please discuss the values with your doctor.

Correctly measured diastolic blood pressure values above 120 mmHg require immediate medical treatment.

## 1.5 Common Blood Pressure Questions and Answers

### a) Why is my blood pressure reading always different?

Your blood pressure changes constantly. It is quite normal for blood pressure to fluctuate significantly (50 mmHg to 60 mmHg) throughout the day. Blood pressure is normally lowest at night, but increases during waking hours when the stress and activities of everyday life are highest.



Your blood pressure also increases and decreases under the following circumstances

Blood pressure is higher than normal:

- when you are excited, nervous, or tense
- while taking a bath
- during and after exercise or strenuous physical activity
- when it is cold
- within one hour after meals
- after drinking tea, coffee, or other caffeinated drinks
- after smoking tobacco
- when your bladder is full

Blood pressure is lower than normal:

- after consuming alcohol
- after taking a bath

### b) Why is the doctor's reading different from the reading taken at home?

Your blood pressure can vary due to the environment (temperature, nervous condition). When measuring blood pressure at the doctor's office, it is possible for blood pressure to increase due to anxiety and tension.

### c) Why should I monitor blood pressure at home?

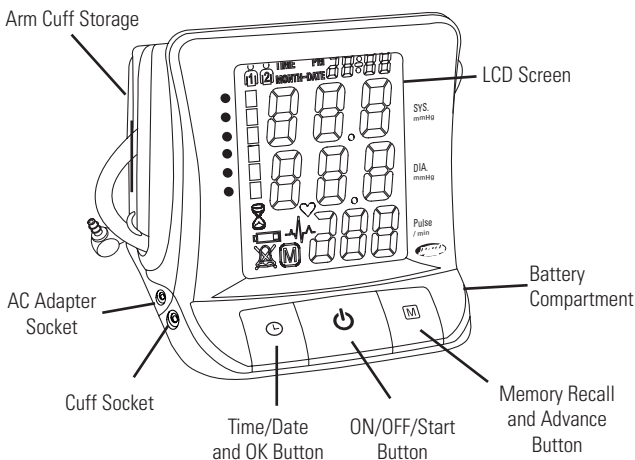
One or two readings will not provide a true indication of your normal blood pressure. It is important to take regular, daily measurements and to keep records over a period of time. This information can be used to assist your physician in diagnosing and preventing potential health problems.




## 2. Getting Started

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### 2.1 About the 3A11-3E

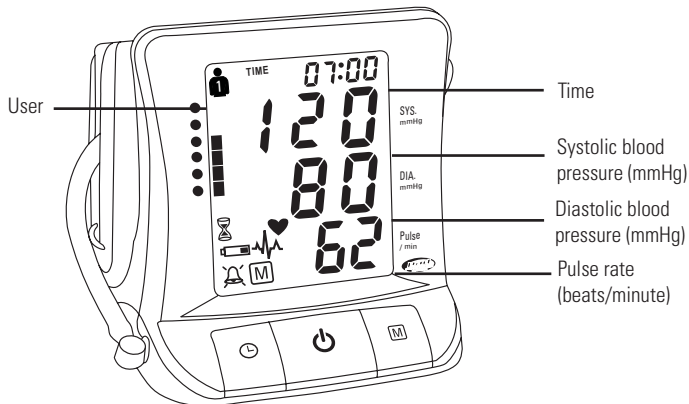
This section describes the various components of the 3A11-3E.









Item	Function
LCD Screen	Your recorded blood pressure, heart rate and time are displayed here.
AC/DC Socket	Connect to adapter.
Memory Button 	Press to view the previously recorded data.
Start/Stop Button 	Press to start or stop recording your blood pressure.
Time Button 	Press to set or view current date and time or to change the user.
Cuff Connection	Connect to the upper arm cuff here and place the cuff around your arm to measure your blood pressure.
Battery Compartment	Insert the four "AA" batteries here.
Arm Cuff	Wide range cuff for arm circumference 22-42 cm. (Fits into storage compartment on unit).

## 2.2 About the LCD Screen

The LCD screen displays the systolic and diastolic blood pressure measurements along with your heart rate. It also displays previously recorded measurements, the date and time, when the appropriate button is pressed.



### Symbol Guide

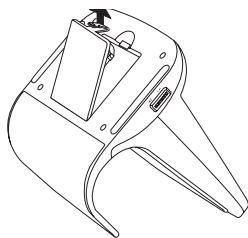
- |   |                              |   |                     |
|---|------------------------------|---|---------------------|
|  | Irregular heartbeat          |  | Memory              |
|  | User number                  |  | Medication reminder |
|  | Heartbeat during measurement |  | Low battery         |



### 2.3 Inserting the Batteries

Follow these steps to insert the four "AA" batteries in the device.

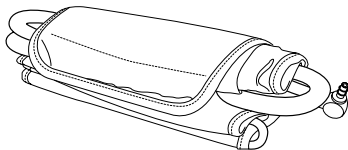
1. Open the battery compartment cover in the direction shown.
2. Insert the four "AA" batteries with the correct polarity as indicated.
3. Replace the battery compartment cover.



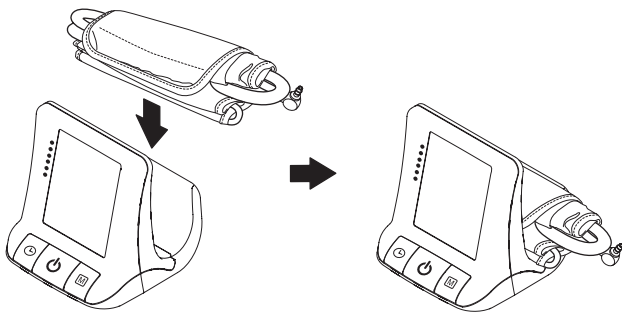
### 2.4 Storing the Cuff

The cuff used for measuring blood pressure is a delicate component of the device and should be stored carefully when not in use. The 3AL1-3E is designed such that the cuff can be stored along with the blood pressure monitor. Follow these steps to store the blood pressure cuff.

1. Roll up the upper arm cuff along with the inflating tube.




2. Push the folded cuff in the compartment at the back of the 3AL1-3E to store it safely.









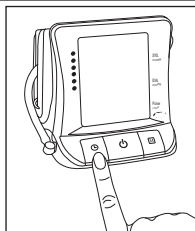
### 3. Using the Device

This section describes how to get the maximum benefit from your 3AL1-3E blood pressure monitor. Follow the instructions carefully to get an accurate measurement of your blood pressure and pulse rate.

#### 3.1 Setting the Time and Date





When you insert the batteries for the first time (see "Inserting the batteries"), the 3AL1-3E prompts you to set the current date and time. You can also adjust the date and time at any time by pressing and holding down the  button for over 3 seconds. Follow these steps to set the date and time:

1. When you replace the batteries, the LCD screen starts flashing the current year setting. Press the  button repeatedly to adjust the year and then press the  button to confirm the setting.
2. Next, the screen starts flashing the month and date setting. Press the  button repeatedly to set the month and date, and then press the  button to confirm the settings.
3. Lastly, the screen starts flashing the hour and minute values. Press the  button repeatedly to set the hour and minutes and then press the  button to confirm the settings.



### 3.2 Select the User

This blood pressure monitor is designed to store 99 measurements for each of two users. Before taking a measurement, be certain that the correct user has been selected.

- Press and hold the  button for 3 seconds until the user icon in the upper left corner of the LCD screen flashes.
- Press the "" button to toggle between users.
- Press the  button again to confirm your selection. You will need to press the  icon to cycle through each time and date settings until you are back in default mode.



### 3.3 Obtaining Accurate Measurements

Your blood pressure can vary based on numerous factors, physiological conditions and your surroundings. Follow these guidelines to obtain accurate and error free measurements of your blood pressure and pulse rate.

#### 3.3A Before Measuring

- Avoid eating, smoking as well as all forms of exertion directly before the measurement. All these factors influence the measurement result. Relax by sitting in an armchair in a quiet atmosphere for about 5 minutes before the measurement.
- Always take measurements on the same arm (normally left) and in the same posture. Do not switch between right and left arms while recording your blood pressure as there may be a difference of up to 10 mmHg pressure between the two arms.
- Attempt to carry out the measurements regularly at the same time of day, since blood pressure changes during the course of the day. The ideal time to measure your blood pressure is in the morning after you wake up, before breakfast and physical activity, and in the absence of the urge to urinate.
- Rest for 5 minutes sitting quietly and release all the tension in your body — especially the arm muscles — before beginning with the measurement. Remain calm and quiet when the measurement is in process. Do not speak or move your arm (as well as other body) muscles during the process.

#### 3.3B Common Sources of Error

All efforts by the patient to support the arm can increase the blood pressure. Make sure you are in a comfortable, relaxed position and do not activate any of the muscles in the measurement arm during the measurement. Use a cushion for support if necessary.

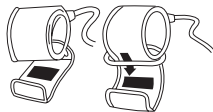
#### ATTENTION

**Comparable blood pressure measurements always require the same conditions with a peaceful and calm environment. Ensure that you take measurements under the same conditions to obtain an accurate estimate of blood pressure variation patterns.**

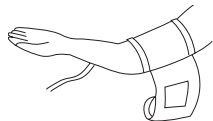
- If the arm artery lies considerably lower or higher than the heart, an erroneous value of blood pressure is measured. Each 15 cm difference in height results in a measurement error of 10 mmHg.
- A loose cuff causes false measurement values.
- With repeated measurements, blood accumulates in the arm, which can lead to false results. Consecutive blood pressure measurements should be repeated after at least a 15 second pause or after the arm has been held up in order to allow the accumulated blood to flow away.

### 3.3C Fitting the Cuff

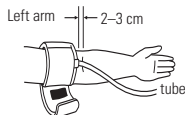
- a) Pass the end of the cuff through the flat metal ring so that a loop is formed. The closure must be facing outward. (Ignore this step if the cuff has already been prepared.)



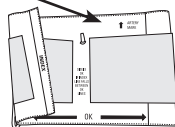
- b) Place the cuff over the left upper arm so that the tube is closer to your lower arm.



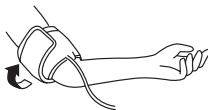
- c) Lay the cuff on the arm as illustrated. Make certain that the lower edge of the cuff lies approximately one inch above the elbow and that the tube is closer to the inner side of the arm. **Important: The small white arrow (Artery Mark) on the cuff must lie exactly over the artery which runs down the inner side of the arm.**



ARTERY  
MARK

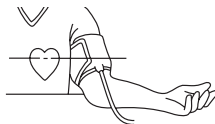


- d) Tighten the cuff by pulling the end and close the cuff.



- e) There should be little free space between the arm and cuff. You should be able to fit 2 fingers between your arm and the cuff. Clothing must not restrict the arm. Any piece of clothing which does, must be removed. Cuffs that do not fit properly results in false measurement values. Measure your arm circumference if you are not sure of proper fit.

- f) Lay your arm on a table (palm upward) so the cuff is at the same height as your heart. Make sure the tube is not kinked.



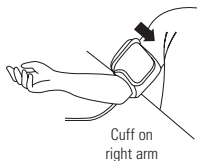
- g) Remain seated quietly for at least 5 minutes before you begin the measurement.



## Comment:



If it is not possible to fit the cuff to your left arm, it can also be placed on the right arm. However all measurements should be made using the same arm.

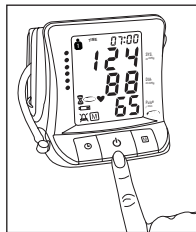
Comparable blood pressure measurements always require the same conditions (relax for several minutes before taking a measurement).




## 3.4 Measuring Your Blood Pressure

After following the guidelines described in the previous section and placing the cuff around your upper arm, you are now ready to measure your blood pressure. Follow these steps to record your measurement.

1. Press the  button to turn on the device and start measurement. The LCD screen is turned on. The cuff begins to inflate while the increasing cuff pressure is displayed on the screen. After the suitable inflation pressure is reached, the cuff stops inflating and the pressure gradually falls. A long beep sounds when the measurement is completed. The systolic and diastolic blood pressure values along with the pulse rate are displayed on the screen. The measurement is displayed for approximately 3 minutes.
2. Switch off the device by pressing the  button to preserve the batteries. If no button is pressed for 3 minutes, the instrument switches the display off.



## 3.5 PAD - Pulse Arrhythmia Detector Feature

This symbol  indicates that certain pulse irregularities were detected during the measurement. In this case, the result may deviate from your normal basal blood pressure – repeat the measurement. In most cases, this is no cause for concern. However, if the PAD symbol appears on a regular basis (e.g. several times a week with measurement taken daily), we advise you to consult your doctor. Please show your doctor the following explanation:



## Information for the doctor on frequent appearance of the Pulse Arrhythmia Heartbeat Symbol

This instrument is an oscillometric blood pressure monitor device that also analyzes pulse frequency during measurement. The instrument is clinically tested.

If pulse irregularities occur during measurement, the irregular heartbeat symbol is displayed after the measurement. If the symbol appears more frequently (e.g. several times per week on measurements performed daily) or if it suddenly appears more often than usual, we recommend the patient seek medical advice.

The instrument does not replace a cardiac examination, but serves to detect pulse irregularities at an early stage.

## 3.6 Hypertension Classification Indicator

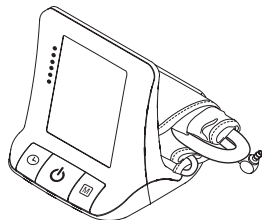
The bars on the left hand edge of the display show you the range within which the indicated blood pressure values lies. Depending on the height of the bar, the readout value is either within the normal (green), borderline (yellow) or danger (red) range.

The classification is based on standards adopted from WHO (World Health Organization); which is recognized by the Canadian Hypertension Society (CHS).

Refer to the chart below for details of the classification.

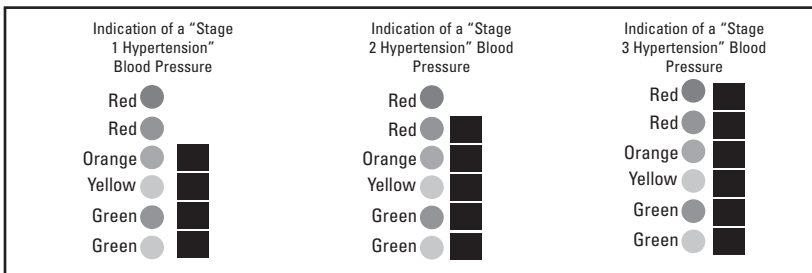
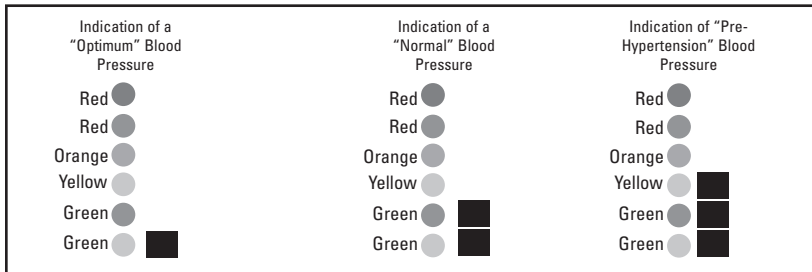
	SYS (mmHg)	DIA
Red	180▲	110▲
Red	160-180	100-110
Orange	140-160	90-100
Yellow	130-140	85-90
Green	120-130	80-85
Green	▼120	▼80

WHO World Health Organization 2003













The indicator bar raises according to your measurement.


- If your measurement has only one or two bars, your measurement is in the green zone, or “Normal” according to National Institute of Health (NIH) standards.
- If your measurement has three bars, it is in the yellow zone, or “Pre-Hypertension” according to NIH standards, or high normal according to the WHO classification.
- If your measurement has four bars, it is in the orange “Stage 1 Hypertension” zone.
- If your measurement has five bars, it is in the red “Stage 2 Hypertension” zone.
- If your measurement has six bars, it is in the red “Stage 3 Hypertension” zone.




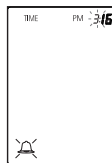
### 3.7 Medication Reminder

This instrument allows you to set two alarm times at which an alarm signal will then be triggered. This can be a useful aid, for instance as a reminder to take medication or to remind you to take your blood pressure at the same time each day.

1. To set an alarm time, press the  button (the instrument must be switched off beforehand) and immediately afterwards the  button and hold both down until the bell symbol appears in the bottom left of the display. Then release both buttons. The flashing "1" in the display indicates that the first alarm time can now be set.
2. Press the  button to set the hours – the hours display flashes and pressing the  button allows you to set the alarm hour. To confirm, press the time button
3. The minute display will now flash. The minutes can be set using the  button. To confirm, press the  button again.
4. The  symbol will now flash. Use the  button to select whether the alarm time is to be active  or inactive . To confirm, press the time button.



To set a second alarm time, proceed as above but if the "1" flashes, press the  button to select "2" and confirm with the time button.

- An active alarm time is indicated by the bell symbol in the display.
- The alarm sounds at the set time every day.
- To switch-off the alarm when it is sounding, press the  button.
- To permanently switch off the alarm, proceed as above (steps 1-4) and select the crossed out bell symbol.  
This will then disappear from the display.
- The alarm times must be re-entered each time the batteries are replaced.

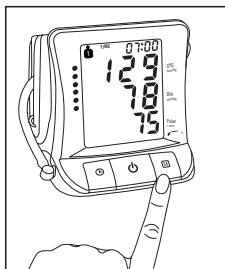


### 3.8 Viewing Previously Recorded Values




The blood pressure monitor automatically stores your measurements with time and date. It can store up to 99 measurements for each of the 2 users. When more than 99 measurements are made, the oldest readings are deleted for that particular user to make space for the new ones.

To view the previously stored values, press the  button. The last measurement is displayed. The date and time of the measurement are also displayed after the reading. Press the  button repeatedly to view all the measurements that are recorded on the device.

**Note: Blood pressure measurements are not stored when an error is encountered during measurement.**




### 3.9 Clearing All Values

If you are sure that you want to permanently remove all stored values, hold down the  button (the instrument must have been switched off before hand) until the "CL" appears and then release the button. If you do not want to clear the values, press the  button. To permanently clear the memory, press the  button while "CL" is flashing.



### 3.10 Discontinue a Measurement

If it is necessary to interrupt a blood pressure measurement for any reason (e.g. the patient feels unwell), the  button can be pressed at any time. The device then immediately lowers the cuff pressure automatically.

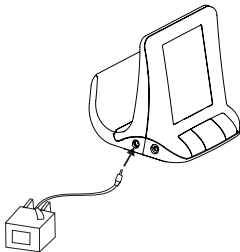


### 3.11 Using the AC Adapter

You may also operate this monitor using the included AC Adapter (output 6V DC/600 mA with DIN plug). Use only the included AC Adapter to avoid damaging the unit.

1. Ensure that the AC Adapter and cable are not damaged.
2. Plug the adapter cable into the AC Adapter port on the blood pressure monitor.
3. Plug the adapter into your electrical outlet.


When the AC adapter is connected, no battery current is consumed. Note: No power is taken from the batteries while the AC adapter is connected to the monitor. If electrical power is interrupted, (e.g., by accidental removal of the AC adapter from the outlet) the monitor must be reset by removing the plug from the socket and reinserting the AC adapter connection.





#### 4. Error Messages / Malfunctions

If an error occurs during a measurement, a long beep followed by two short beeps is generated and the LCD display the corresponding error code.

Error	Possible Cause	Remedy
Err 1	No pulse has been detected.	Ensure that the cuff is being worn correctly, and that you have your arm at the heart level.
Err 2	Unnatural pressure impulses influence the measurement result. Reason: The arm was moved during the measurement.	Avoid unnecessary movement or talking.
Err 3	The inflation of the cuff takes too long. The cuff is not correctly seated.	Ensure that the cuff is being worn correctly.
Err 5	The difference between systolic pressure and diastolic pressure is too far away from acceptable and reasonable range.	Ensure that the cuff is being worn correctly and that you have been inactive for a sufficient time before making the measurement.
Err 6	Due to unstable conditions during measurements, it is not possible to calculate an average result.	Avoid unnecessary movement and talking.
	Low battery	Replace batteries.
H <sub>i</sub>	Cuff pressure is over 300 mmHg.	Ensure that the cuff is worn correctly and measure again. Avoid movement or talking when the cuff is being inflated.
L <sub>o</sub>	Pulse below 40 is detected.	Ensure that the cuff is worn correctly.

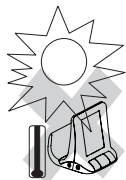
If problems occur when using the device the following points should be checked, and if necessary, the corresponding measures should be taken.

Malfunction	Remedy
The display remains empty when the device is switched on. The batteries are inserted.	<ol style="list-style-type: none"><li>1. Check batteries for correct polarity.</li><li>2. If the display is unusual, re-insert the batteries or exchange them for new ones.</li></ol>
The pressure does not rise even though the pump is running.	Check the connection of the cuff tube and connect properly if necessary.
The device frequently fails to measure the blood pressure values, or the values measured are too low or too high.	<ol style="list-style-type: none"><li>1. Check the positioning of the cuff.</li><li>2. Measure the blood pressure again, ensuring that you have remained motionless for a sufficient amount of time to ensure an accurate reading.</li></ol>

<p>Every measurement produces varying results although the instrument functions normally and the values displayed are normal.</p>	<p>Note that blood pressure fluctuates continuously; therefore measurements will show some variability.</p>
<p>Blood pressure values measured differ from those measured by the doctor.</p>	<p>Record the daily development of the values and consult your doctor.  <b>Note: Individuals visiting their doctor frequently experience anxiety which can result in a higher blood pressure reading than at home.</b></p>

## 5. Care and Maintenance

- a) Do not expose the device to either extreme temperatures, humidity, dust or direct sunlight.

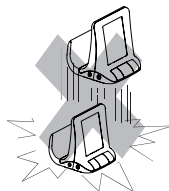


- b) The cuff contains a sensitive air-tight bubble. Handle this carefully and avoid all types of stress through twisting or buckling.

- c) Clean the device with a soft, dry cloth. Do not use gas, thinners or similar solvents. Spots on the cuff can be removed carefully with a damp cloth and soapsuds. **The cuff with bladder must not be washed in a dishwasher, clothes washer, or submerged in water.**



- d) Handle the tube carefully. Do not pull on it. Do not allow the tubing to kink and keep it away from sharp edges.



- e) Do not drop the monitor or treat it roughly in any way. Avoid strong vibrations.

- f) **Never open the monitor.** This invalidates the manufacturer's warranty.



- g) Batteries and electronic instruments must be disposed of in accordance with the locally applicable regulations, not with domestic waste.

## 6. Lifetime Guarantee

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BIOS Diagnostics™ blood pressure monitors have a lifetime warranty to be free of manufacturing defects for the life of the original owner. This warranty does not include the inflation system including the cuff and inflation bladder. The cuff is warranted for two years. The warranty does not cover damage from misuse or tampering.

If you have questions regarding the operation of your monitor call the **BIOS Diagnostics™ Blood Pressure Hotline:**

**1-866-536-2289**

Should repair be necessary, return the unit with all component pieces. Enclose proof of purchase and \$5.00 for return shipping and insurance. Ship the unit **prepaid** and insured (at owners option) to:

Thermor Ltd.  
Repair Department  
16975 Leslie Street  
Newmarket, ON L3Y 9A1  
[www.biosexactly.com](http://www.biosexactly.com)

[thermor@thermor-ins.com](mailto:thermor@thermor-ins.com)

Please include your name, return address, phone number, and email address. Thermor will repair or replace (at Thermor's option) free of charge any parts necessary to correct the defect in material or workmanship.

Please allow 10 days for repair and return shipping.

## 7. Reference to Standards

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### **Device standard:**

Device corresponds to the requirements of the standard for non-invasive blood pressure monitors:

AAMI/ANSI SP10  
IEC 60601-1  
IEC 60601-1-2  
EN 1060-1  
EN 1060-3  
EN 1060-4

### **Electromagnetic compatibility:**

Device fulfills the stipulations of the International standard IEC 60601-1-2

This unit has received an A/A rating according to the B.H.S protocol and is "recommended for home use." This is the highest grading available for blood pressure monitors. Please see the B.H.S website at [www.bhsoc.org](http://www.bhsoc.org).

Product using the identical measurement algorithm was tested by unaffiliated researchers using B.H.S. study protocol. Results on file and available upon request.

## 8. Technical specifications

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<b>Weight:</b>	570 g
<b>Size:</b>	134.94 (W) x 137.92 (L) x 145.9 (H) mm
<b>Storage temperature:</b>	-20°C to 55°C / -4°F to 131°F
<b>Humidity:</b>	15 to 90% relative humidity maximum
<b>Operation temperature:</b>	10°C to 40°C / 50°F to 104°F
<b>Display:</b>	LCD-Display (Liquid Crystal Display)
<b>Measuring method:</b>	Oscillometric
<b>Pressure sensor:</b>	Capacitive
<b>Measuring range:</b>	
<b>SYS/DIA:</b>	30 to 280 mmHg
<b>Pulse:</b>	40 to 200 beats per minute
<b>Cuff pressure display range:</b>	0 to 299 mmHg
<b>Memory:</b>	Automatically stores the last 99 measurements for 2 users (total 198)
<b>Measuring resolution:</b>	1 mmHg
<b>Accuracy:</b>	Pressure within $\pm 3$ mmHg Pulse $\pm 5\%$ of the reading
<b>Power source:</b>	4 AA batteries, 1.5V AC adapter 6V DC 600 mA
<b>Accessories:</b>	Wide range cuff BD051 for arm circumference 22-42 cm

Technical alterations reserved

## 9. Contacts for Support

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Thermor Ltd.  
16975 Leslie Street  
Newmarket, ON L3Y 9A1  
[www.biosexactly.com](http://www.biosexactly.com)

**Toll Free Help Line: 1-866-536-2289**

Email: [thermor@thermor-ins.com](mailto:thermor@thermor-ins.com)

Made in China