Advanced Blood Pressure Monitor
with Blood Pressure Analyzer Software
Instruction Manual

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1. Introduction

Thank you for purchasing the BIOS Diagnostics™ Advanced Blood Pressure Monitor with Blood Pressure Analyzer Software. 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 BD850 is a fully automatic, digital, blood pressure measuring device with a unique fuzzy logic technology as well as patented MAM and PAD technologies. It can store up to 99 blood pressure readings for each of the two users.

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

- **MAM - Averaging Mode** technology used in the device provides accurate measurements. Using three consecutive measurements, your result is calculated and displayed as a single averaged measurement on the display screen.

- **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.
- **Blood Pressure Analyzer Software** allows you to download, record and chart your readings to accurately monitor your daily readings.

This device is easy to use and has been proven in clinical studies to provide excellent accuracy. Before using the BD850, 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™ Advanced Blood Pressure Monitor with Blood Pressure Analyzer Software.

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 size 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, 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. 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

<table>
<thead>
<tr>
<th>Category</th>
<th>Systolic Blood Pressure</th>
<th>Diastolic Blood Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optimal</td>
<td>&lt; 120</td>
<td>&lt; 80</td>
</tr>
<tr>
<td>Normal</td>
<td>&lt; 130</td>
<td>&lt; 85</td>
</tr>
<tr>
<td>High Normal</td>
<td>130 - 139</td>
<td>85 - 89</td>
</tr>
<tr>
<td>Hypertension</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Stage 1: Mild</td>
<td>140 - 159</td>
<td>90 - 99</td>
</tr>
<tr>
<td>• Stage 2: Moderate</td>
<td>160 - 179</td>
<td>100 - 109</td>
</tr>
<tr>
<td>• Stage 3: Severe</td>
<td>&gt; 180</td>
<td>&gt; 110</td>
</tr>
<tr>
<td>Isolated Systolic Hypertension</td>
<td>&gt; 140</td>
<td>&lt; 90</td>
</tr>
</tbody>
</table>

### 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 120mmHg 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.

### 1.6 About MAM Technology

(Average Mode) technology is a new technology that enables optimum reliability in self-measurement of blood pressure.

An advanced measurement accuracy is achieved by the automatic analysis of three successive measurements, with short rest periods in between (see diagram 1).

This new technology provides reliable values for the doctor and can be used as the basis for reliable diagnostics and medication therapy for high blood pressure.

- Reliable patient self-measurement data for the doctor
- Safe hypertension diagnostic tool
- Reliable therapy control

### 1.6A Why Use MAM

- Human blood pressure is not stable

### 1.6B Key Advantages

The technology provides reduction in:
- Device scattering
- Insufficient rest prior to measurement
- Movement effects (i.e. coughing, talking, movement)
- Cuff positioning influences
1.6C Medical Benefits
• Improved accuracy

1.6D Measurement Sequence
• Single results are not displayed
• Due to the “Data Analysis” result, a 4th or 5th measurement may be applied. The following illustration provides a flow chart of the MAM Sequence

![Diagram 1](image)

2. Getting Started

2.1 About the BD850
This section describes the various components of the BD850.
### Item | Function
--- | ---
1. LCD Screen | Your recorded blood pressure, heart rate and time are displayed here.
2. USB Port | Connect to your PC.
3. AC/DC Socket | Connect to adapter.
4. Memory Button | Press to view the previously recorded data.
5. Start/Stop Button | Press to start or stop recording your blood pressure.
6. Time Button | Press to set or view current date and time or to change the user.
7. Arm Cuff Connection | Connect to the upper arm cuff here and place the cuff around your arm to measure your blood pressure.
8. Battery Compartment | Insert the four “AA” batteries here.
9. Upper Arm Cuffs | Standard cuff for arm circumference 22-32 cm. Large cuff for arm circumference 32-42 cm. (Fits into 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 and the date and time, when the appropriate button is pressed.

**Symbol Guide**

- Irregular heartbeat
- MAM Averaging
- Please wait in between measurements
- User number
- Heartbeat during measurement
- Memory
- 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 Selecting the Right Cuff
The BD850 comes with 2 cuffs, a standard and a large size cuff. Measure arm circumference around the bicep to ensure you are using the proper cuff for you.

If arm circumference measures 22 - 32 cm (8.7” - 12.6”), use the standard size cuff.
If arm circumference measures 32 - 42 cm (12.6” - 16.5”), use the large size cuff.

2.5 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 BD850 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 BD850 to store it safely.
3. Using the Device
This section describes how to get the maximum benefit from your BD850 blood pressure monitor. Follow the instructions carefully to get an accurate measurement of your blood pressure and pulse rate.

3.1 Setting the Time, Date and User
When you insert the batteries for the first time (see “Inserting the batteries”), the BD850 prompts you to set the current date and time. You can also adjust the date, time and user at any time by pressing and holding down the 🔄 button for over 3 seconds. Follow these steps to set the user, date and time settings:

1. When you press the 🔄 button for over 3 seconds, the user icon starts flashing. Press the 🔄 button to switch between user 1 and user 2. Press 🔄 to confirm.

2. You will see the MAM logo flashing along with the words “OFF”. Press the 🔄 button to toggle between on and off. Press the 🔄 button to confirm.

3. Next, the year will start flashing. Press the 🔄 button to adjust the year and press the 🔄 button to confirm setting.

4. 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.

5. 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 Enabling the MAM (optional)
The BD850 has an averaging mode to calculate an average of blood pressure readings. To enable the average mode, do the following:

1. Hold down the button for more than 3 seconds. Select your user (user 1 or 2).
2. The average mode icon starts flashing. Press the button to set the average mode to OFF or ON.
3. Press the button to confirm and exit. Alternatively, you can also set the time and date (see Section 3.1 “Setting the time, date and user” at this time).

For full instructions on use of MAM, please refer to Section 3.5 Measuring your Blood Pressure Using the MAM Feature.

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 10mmHg 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.

d) Tighten the cuff by pulling the end and closing 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 don’t 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 \( \bigcirc \) 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 \( \bigcirc \) button to preserve the batteries. If no button is pressed for 3 minutes, the instrument switches the display off.

3.5 MAM - Measuring Your Blood Pressure Using the MAM Feature
When the unit is set to the MAM (Averaging Mode) setting, 3 separate measurements will take place in succession after which your result is calculated and displayed as a single, averaged measurement. There is a 15 second resting time in-between each measurement. A count down indicates the remaining time and a beep will sound 5 seconds before the 2nd and 3rd readings will begin.

*If one of the measurements causes an error message, it will be repeated one more time. If any additional error occurs the measurement will be discontinued and error code displayed.*

3.6 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.

3.7 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.

![Hypertension Classification Indicator Chart]

The colour coded hypertension classification indicator bar raises according to your measurement.

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

![Hypertension Classification Indicators]

- Indication of a “Normal” Blood Pressure
- Indication of a “High Normal” Blood Pressure
- Indication of a “Pre-Hypertension” Blood Pressure
5. Installation and Data Transmission

a) Insert CD into CD ROM drive of your PC. The installation will start automatically. If not, click on SETUP.EXE.
b) Connect the monitor via USB cable with the PC. Three horizontal bars will appear on the display and last for 3 seconds.
c) The bars will then flash to indicate that the connection between computer and device is successfully made. As long as the cable is plugged in, the bars will keep flashing and the buttons are disabled. During the connection, the device is completely controlled by the computer. Please refer to the ‘help’ file in the software for detailed instructions.

6. 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.

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

If problems occur when using the device the following points should be checked, and if necessary, the corresponding measures should be taken.
<table>
<thead>
<tr>
<th>Malfunction</th>
<th>Remedy</th>
</tr>
</thead>
</table>
| The display remains empty when the device is switched on. The batteries are inserted. | 1. Check batteries for correct polarity.  
2. If the display is unusual, re-insert the batteries or exchange them for new ones. |
| 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. | 1. Check the positioning of the cuff.  
2. Measure the blood pressure again, ensuring that you have remained motionless for a sufficient amount of time to ensure an accurate reading. |
| Every measurement produces varying results although the instrument functions normally and the values displayed are normal. | Note that blood pressure fluctuates continuously; therefore measurements will show some variability.                                    |
| Blood pressure values measured differ from those measured by the doctor.   | Record the daily development of the values and consult your doctor.  
**Note:** Individuals visiting their doctor frequently experience anxiety which can result in a higher blood pressure reading than at home. |

### 7. 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 warrantee.

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

### 8. Lifetime Guarantee

**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
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.

### 9. Reference to Standards

**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
- EN1060-1
- EN1060-3
- EN1060-4

**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.

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

### 10. Technical specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Weight:</strong></td>
<td>Approximately 370 gm (not including batteries)</td>
</tr>
<tr>
<td><strong>Size:</strong></td>
<td>98 (W) x 163 (L) x 106 (H) mm</td>
</tr>
<tr>
<td><strong>Storage temperature:</strong></td>
<td>–20°C to 55°C/–4°F to 131°F</td>
</tr>
<tr>
<td><strong>Operation temperature:</strong></td>
<td>10 to 40°C</td>
</tr>
<tr>
<td><strong>Humidity:</strong></td>
<td>15% to 90% relative humidity maximum for Storage temperature and Operation temperature.</td>
</tr>
<tr>
<td><strong>Display:</strong></td>
<td>LCD-Display (Liquid Crystal Display)</td>
</tr>
<tr>
<td><strong>Measuring method:</strong></td>
<td>Oscillometric</td>
</tr>
<tr>
<td><strong>Pressure sensor:</strong></td>
<td>Capacitive</td>
</tr>
<tr>
<td><strong>Measuring range:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>SYS/DIA:</strong></td>
<td>30 to 280 mmHg</td>
</tr>
<tr>
<td><strong>Pulse:</strong></td>
<td>40 to 200 beats per minute</td>
</tr>
<tr>
<td><strong>Cuff pressure display range:</strong></td>
<td>0 to 299 mmHg</td>
</tr>
<tr>
<td><strong>Memory:</strong></td>
<td>99 measurements for each user, 2 users</td>
</tr>
<tr>
<td><strong>Measuring resolution:</strong></td>
<td>1 mmHg</td>
</tr>
<tr>
<td><strong>Accuracy:</strong></td>
<td>Pressure within ± 3 mmHg</td>
</tr>
<tr>
<td></td>
<td>Pulse ± 5% of the reading</td>
</tr>
<tr>
<td><strong>Inflation:</strong></td>
<td>Automatically by pump</td>
</tr>
<tr>
<td><strong>Deflation:</strong></td>
<td>Silicon passive valve</td>
</tr>
<tr>
<td><strong>Arm Circumference:</strong></td>
<td>22-32 cm (medium size)</td>
</tr>
<tr>
<td></td>
<td>32-42 cm (large size)</td>
</tr>
<tr>
<td><strong>Power source:</strong></td>
<td>4 dry cells (batteries), UM-3, size AA 1.5V</td>
</tr>
<tr>
<td></td>
<td>AM-3, size AA, 1.5V</td>
</tr>
<tr>
<td><strong>Accessories:</strong></td>
<td>cuff type 7052-45 for arm circumference 22 - 32 cm</td>
</tr>
<tr>
<td></td>
<td>or cuff type BD050 for arm circumference 32 - 42 cm</td>
</tr>
</tbody>
</table>

Technical alterations reserved
11. Contact for Support

Thermor Ltd.
16975 Leslie Street
Newmarket, ON L3Y 9A1
www.biosexactly.com

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

Email: thermor@thermor-ins.com

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