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WRIST Blood Pressure Monitor

Instruction Manual
Model: W100

www.biosmedical.com

03.07.19
Trusted by Canadians for 3 Generations

At BIOS Diagnostics™, we are proud of our legacy in blood pressure monitoring in Canada. From the early 1930’s to 1987 we manufactured “Tycos” brand professional blood pressure equipment for doctors and hospitals in Canada.

In the 1970’s we pioneered the first blood pressure devices for monitoring at home, and in the 1980’s we introduced digital technology in Canada. We haven’t been counting, but we know that millions of our home-use monitors have been used by Canadians in the last 30 years.

All BIOS Diagnostics™ devices are developed in collaboration with physicians and clinically tested to prove their measurement accuracy. For more information on clinical tests and other BIOS medical products, visit our website at www.biosmedical.com.

If you have questions about this device or blood pressure monitoring at home, email us at support@biosmedical.com or call the BIOS Medical Hotline 1-866-536-2289.
Wrist Blood Pressure Monitor Instruction Manual
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1. Introduction

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

Wrist Models Recommended by Hypertension Canada

In their 2018 guidelines to Canadian physicians Hypertension Canada recommended wrist models for patients with very large arms (BMI $\geq 35$) and for patients that find the inflation of the upper arm cuff too painful.

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

- Displays:  - Systolic and diastolic pressure
  - Pulse rate
- 2 medication alarms
- 200 memories
- PAD Pulse Arrhythmia Detection: Detects irregular heartbeat.

Readings taken by the blood pressure monitor are equivalent to those obtained by a trained observer using the cuff and stethoscope method.

1.2 Important Information

Refer to the following sections to learn about important safety instructions and how to take care of the BIOS Diagnostics™ Wrist 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 times to measure your blood pressure is in the morning and at least 2 hours after dinner. Measure 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 5 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 / shower
- During and after exercise or strenuous physical activity
- When it is cold
- Within two hours 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 / shower

• 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, Do not use rechargeable batteries.
- 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.

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.
- Do not use the device if you think it is damaged or if anything appears unusual.
- Ensure that children do not use this device unsupervised; some parts are small enough to be swallowed.
- Using the unit in the immediate vicinity of mobile phones, microwave appliances or other devices with strong electromagnetic fields may result in impaired functioning.
- Do not use this device close to strong electromagnetic fields, such as mobile telephones or radio installations. Keep a distance from such devices when using this unit.

1.2C Comparing Readings to Other Blood Pressure Devices

Many questions arise when two blood pressure devices are compared in an effort to check accuracy. An accurate comparison requires repeatable measurements under the same conditions, and significant time is required to reduce naturally occurring blood pressure variability during the test. For proper comparisons, the subject should be seated comfortably with feet flat on the floor, and have rested for 5 minutes before the first reading to allow blood pressure levels to stabilize. The patients back, elbow and forearm should be supported, and the middle of the cuff should be at the level of the right atrium. There should be no talking or moving during the measurement and if comparing to an aneroid gauge or mercury column, observers should avoid parallax and be careful not to round measurements.
The most accurate way to compare devices is to take two readings at the same time. However, most people and doctor's offices do not have the equipment necessary to measure blood pressure from two devices simultaneously. To take sequential measurements properly requires a pair of initial measurements to determine the subject's blood pressure level: first with the reference equipment, followed by 60 seconds, then with the monitor-under-test. The actual accuracy test requires three pairs of measurements with 60 seconds between measurements. These measurements are averaged and a comparison can be made. Since most people tend to relax and their blood pressure falls with subsequent measurements, following this protocol reduces these natural changes in blood pressure levels. The standard technical error of both consumer and professional digital devices is normally ±3 mmHg, so a discrepancy of 6 mmHg is acceptable even when the devices are working within their specifications.

Any comparisons without following the procedures described above will not yield reliable results. In addition, to do an accuracy test properly the reference device must also be tested to a known reference to confirm its accuracy, prior to being used as the reference for comparisons.

1.2D Calibration

BIOS digital blood pressure monitors do not require recalibration. If the unit turns on and does not display an error code, the product is working properly. In extremely rare cases, the cuff may have developed a pin-hole leak, or the gasket where the cuff connector enters the monitor may not have a proper seal; both of these leaking air issues will potentially cause errors in accuracy, but otherwise the product will work accurately without drifting out of calibration.

1.3 What do your Numbers Mean?

Blood pressure is the pressure in your blood vessels while blood circulates throughout your body. High blood pressure or “Hypertension” is the pressure at which one's normal average blood pressure is considered too high and other health risks including: heart attack, stroke, dementia, kidney failure, heart disease and erectile dysfunction may occur. It is expressed as two numbers: systolic/diastolic 120 mmHg / 80 mmHg (mmHg= millimeters of mercury). “Systolic” numbers refer to the pressure on the walls of your arteries while the heart is contracting and pushing blood. “Diastolic” pressure is the lower number when the heart is at rest and relaxed. A simple way to understand this is to picture a garden hose. When the tap is turned on, the immediate pressure on the walls of the hose is the “systolic” value, and when the tap is turned off it is the “diastolic” number.

There are many different causes 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 measuring at home and you have rested, the diastolic pressure is above 85 mmHg or the systolic blood pressure is over 135 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.

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.

<table>
<thead>
<tr>
<th>Systolic</th>
<th>Diastolic</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 120</td>
<td>Less than 80</td>
<td>This range is considered “Normal” and ideal</td>
</tr>
<tr>
<td>120 – 139</td>
<td>80 – 89</td>
<td>This range is considered “Pre-hypertension”: Discuss with your health care professional. Lifestyle modifications maybe required to avoid advancing into Hypertension.</td>
</tr>
<tr>
<td>140 – 159</td>
<td>90 – 99</td>
<td>This is in the hypertension range. Discuss with your health care professional. Medication(s) and lifestyle modifications are typical treatments.</td>
</tr>
<tr>
<td>160 and higher</td>
<td>100 +</td>
<td>Discuss with your medical professional, medication(s) and lifestyle modifications are necessary to control your hypertension</td>
</tr>
</tbody>
</table>

Adopted From: Understanding and Managing your blood pressure; Hypertension Canada.

Note: A diagnosis of high blood pressure must be confirmed with a medical professional. A doctor should evaluate any unusual blood pressure readings. Additionally, lower targets may be appropriate for some populations such as African-Americans, the elderly, or patients with underlying issues such as diabetes mellitus or chronic kidney disease.

Important for Canadians:

* Hypertension measured at home \( \geq 135/85 \)
* Hypertension measured at a physician’s office \( \geq 140/90 \)
* Hypertension measured at a physician’s office for a diabetic patient \( \geq 130/80 \)

For further information, see our website www.biosmedical.com.

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.
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, this is known as “White Coat Hypertension”. It is not uncommon for blood pressure values to vary during an office visit.

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

2.1 About the W100

1. ON/OFF Button
2. Display
3. Battery Compartment
4. Cuff
5. M-Button (Memory)
6. Time Button

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.
2.3 Inserting the Batteries

Follow these steps to insert the two “AAA” batteries in the device.

1. Open the battery compartment cover in the direction shown.
2. Insert the two “AAA” batteries with the correct polarity as indicated.
3. Replace the battery compartment cover.

**NOTE:** Replace the batteries whenever the weak battery mark shows, the display is dim, or the display does not illuminate when the power is on. Replace all the batteries at the same time - it is dangerous to mix old and new batteries.

Contact your local waste disposal authority for instructions on how to dispose of used batteries. Used batteries can be harmful to the environment, and should not be thrown out with household trash.

3. Using the Device

This section describes how to get the maximum benefit from your Wrist Blood Pressure Monitor. Follow the instructions carefully to get an accurate measurement of your blood pressure and pulse rate.

3.1 Setting the Date and Time

It is important to set the clock before using your blood pressure monitor, so that the correct time stamp can be assigned to each record that is stored in the memory.

1. After the new batteries are inserted, the year number flashes in the display. You can set the year by pressing the M-button [M]. To confirm and then set the month, press the time button [O].
2. You can now set the month using the M-button [M]. Press the time button [O] to confirm and then set the day.
3. Please follow the instructions above to set the day, hour and minutes.
4. Once you have set the minutes and pressed the time button [O], the date and time are set and the time is displayed.
5. If you want to change the date and time, press and hold the time button for approximately 3 seconds until the year number starts to flash. Now you can enter the new values as described above.

3.2 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.

3.2A Tips on Taking Accurate Measurements

- In morning before breakfast, 2 hours after dinner, before taking medication
- Avoid coffee and smoking, within the hour, and no exercise 30 minutes before measuring.
- Do not speak while taking the measurement.
- Sit with legs uncrossed so as not to restrict blood flow.
- Empty bladder (if necessary).
- Rest quietly for 5 minutes. Remain calm and quiet while the measurement is in process.
- Take measurements on the non-dominant arm.
- Sit with back supported and measurement arm resting on a table. Sit with feet flat on the floor.

3.2B 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 pillow or towel to support the arm 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.
3.2C Fitting the Wrist and Taking a Measurement

a) Remove all accessories (watch, bracelet, etc.) from your left wrist. If your physician has diagnosed you with poor circulation in your left arm, use your right wrist.
b) Roll or push up your sleeve to expose the skin.
c) Apply the cuff to your left wrist with your palm facing up and the LCD display facing you.
d) Fit the cuff comfortably but not too tight. The cuff will cover a wrist diameter of 13.5 to 21.5 cm (5.25 to 8.5 inches).
e) **IMPORTANT:** Support your arm in a relaxed position and ensure that the instrument is at the same height as your heart. You can use a rolled up hand towel or the storage case.

![Incorrect measurement position](image)

Measurement reading becomes lower

Measurement reading becomes higher

f) Remain seated in a comfortable room temperature for at least 5 minutes, then start the measurement.
g) Press the ON/OFF button to start the measurement.
h) The cuff will now pump up automatically. Relax, do not move and do not tense your arm muscles until the measurement is displayed. Breathe normally and do not talk.
i) When the correct pressure is reached, the pumping stops and the pressure falls gradually. If the required pressure was not reached, the instrument will automatically pump some more air to the cuff.
j) During the measurement, the heart symbol flashes in the display and a beep sounds every time a heartbeat is detected.
k) The result, comprising the systolic (7) and the diastolic (8) blood pressure and the pulse (9) is displayed and longer beep is heard. See section 2.2 about the LCD screen for explanation of the icons.
l) Remove and switch off the monitor.

**Note:** The monitor does switch off automatically after approximately one minute.

**Note:** You can stop the measurement at any time by pressing the ON/OFF button (e.g. if you feel uneasy or an unpleasant pressure sensation).

3.3 Determining Your “Real” Average Blood Pressure at Home

It is normal for blood pressure to vary significantly in the middle of the day when most people are busy with their daily tasks. Hypertension Canada recommends measuring in the morning and evening to avoid variability.
At the end of a measurement, this instrument automatically stores each result, including date and time.

**AM**

*Take: 2 measurements, 1 minute apart*
- Empty bladder (If necessary)
- In the morning before breakfast, before taking medication
- Sit with back supported and measurement arm resting on a table. Sit with feet flat on the floor.

**PM**

*Take: 2 measurements, 1 minute apart*
- Empty bladder (If necessary)
- 2 hours after dinner, before taking medication
- Sit with back supported and measurement arm resting on a table. Sit with feet flat on the floor.
- Avoid coffee and smoking within the hour, and no exercise 30 minutes before measuring.

**RESULTS**

Discard Day 1 measurements.
Average your day 2-7 measurements

\[
\text{Average} = \begin{cases} 
< 135 / 85 \text{ mmHg} & \text{NO} \\
> 135 / 85 \text{ mmHg} & \text{YES} 
\end{cases}
\]

*Note: If the result is “borderline” repeat the series for confirmation. This data can be used by a medical professional to make a diagnosis of hypertension.*

### 3.4 Data Memory

**Viewing the stored values**
- Press the M-button briefly, when the instrument is switched off. The display first shows << M >> and then a value, e.g. << M17 >>. This means that there are 17 values in the memory. The instrument then switches to the last stored result.
• Press the M-button again displays the previous value. Pressing the M-button repeatedly enables you to toggle between one stored value and another.

Memory Full
• When the memory has stored 200 results, the display shows << Full M >> after a measurement. From this point onwards, a new measured value is stored by overwriting the oldest value.

Clear all Values
• If you are sure that you want to permanently remove all stored values, hold down the M-button (the instrument must have been switched off beforehand) until << CL >> appears and then release the button. To permanently clear the memory, press the M-button while << CL >> is flashing. Individual values cannot be cleared.

3.5 Setting the Alarm Function
This instrument allows you to set 2 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.

a) To set an alarm time, without releasing, push the time button “○”, followed by the M button do not release 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.

b) Press the time button to set the hours - the hour display flashes and pressing the M-button allows you to set the alarm hour. To confirm, press the time button “○”.

c) The minute display will now flash. The minutes can be set using the M-button . To confirm, press the time button “○”.

d) The bell symbol will now flash . Use the M-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 M-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 will sound at the set time every time.

• To switch-off the alarm when it is sounding, press the ON / OFF button “○”.

• To permanently switch off the alarm, proceed as above 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.
4. PAD - Pulse Arrhythmia Detection

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.

5. Error Messages / Malfunctions

If an error occurs during a measurement the LCD displays the corresponding error code.

<table>
<thead>
<tr>
<th>Error</th>
<th>Description</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Err1</td>
<td>Signal too weak</td>
<td>The pulse signals on the cuff are too weak. Reposition the cuff and repeat the measurement*</td>
</tr>
<tr>
<td>Err2</td>
<td>Error signal</td>
<td>During the measurement, error signals were detected by the cuff, caused for instance by movement or muscle tension. Repeat the measurement keeping your arm still.</td>
</tr>
<tr>
<td>Err3</td>
<td>No pressure in the cuff</td>
<td>An adequate pressure cannot be generated in the cuff. A leak may have occurred. Check the cuff is correctly connected and is not too loose. Replace the batteries if necessary. Repeat the measurement.</td>
</tr>
</tbody>
</table>
Abnormal result

The measuring signals are inaccurate and no result can therefore be displayed. Read through the checklist for performing reliable measurements and then repeat the measurement.*

Pulse or cuff pressure too high

The pressure in the cuff is too high (over 300 mmHg) OR the pulse is too high (over 200 beats per minute). Relax for 5 minutes and repeat the measurement.*

Pulse too low

The pulse is too low (less than 40 beats per minute). Repeat the measurement.*

* Please consult your doctor, if this or any other problem occurs repeatedly.

If you think the results are unusual, please read through the information in << Section 1 >> carefully.

<table>
<thead>
<tr>
<th>Malfunction</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>The display remains blank when the device is switched on.</td>
<td>1. Check batteries for correct polarity.</td>
</tr>
<tr>
<td>The device frequently fails to measure the blood pressure values, or the values measured are too low or too high.</td>
<td>1. Check the positioning of the cuff and cuff tension. The cuff should be snug but not tight. 2. Measure the blood pressure again, ensuring that you have remained motionless for a sufficient amount of time to ensure an accurate reading.</td>
</tr>
<tr>
<td>Every measurement produces varying results although the instrument functions normally and the values displayed are normal.</td>
<td>Note: blood pressure fluctuates continuously; therefore measurements will show some variability.</td>
</tr>
<tr>
<td>Blood pressure values measured differ from those measured by the doctor.</td>
<td>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.</td>
</tr>
</tbody>
</table>

For assistance call BIOS Medical Blood Pressure Hotline: 1-866-536-2289
6. Care and Maintenance

a) Do not expose the device to either extreme temperatures, high humidity, dust or direct sunlight. If the unit has been stored at very low or freezing temperature, allow to reach room temperature before using it.

b) Clean the device with a soft, dry cloth. Do not use gas, thinners or similar solvents. Spots on the cuff and unit can be removed carefully with a slightly moistened cloth and soapsuds.

c) Do not drop or bang the monitor or treat it roughly in any way. Prevent sudden jerks and shocks. Avoid strong vibrations.

d) Never open the monitor. This invalidates the manufacturer’s warranty.

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

f) 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.
- **Do not** use the device if you think it is damaged or if anything appears unusual.
- Ensure that children do not use this device unsupervised; some parts are small enough to be swallowed.
- Using the unit in the immediate vicinity of mobile phones, microwave appliances or other devices with strong electromagnetic fields may result in impaired functioning.
- **Do not** use this device close to strong electromagnetic fields such as mobile telephones or radio installations. Keep a distance from such devices when using this unit.

### 7. Reference To Standards

**Device standard:** NIBP requirements: EN 1060-1/-3/-4, IEC 60601-1, IEC 60601-1-11

**Electromagnetic compatibility:** ANSI / AAMI SP10

Readings taken by the blood pressure monitor are equivalent to those obtained by a trained observer using the cuff and stethoscope auscultation method.

### 8. Technical Specifications

<table>
<thead>
<tr>
<th>Weight:</th>
<th>130g including batteries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size Height x Width x Depth:</td>
<td>80 mm x 70 mm x 70 mm / 3.1” x 2.6” x 2.6”</td>
</tr>
<tr>
<td>Storage Temperature:</td>
<td>-20 to 55°C / -4 to 131°F 15-95% relative maximum humidity</td>
</tr>
<tr>
<td>Operating Temperature:</td>
<td>10 to 40°C / 50 to 104°F 15-95% relative maximum humidity</td>
</tr>
<tr>
<td>Measuring method:</td>
<td>Oscillometric, corresponding to Korotkoff method: Phase I systolic, Phase V diastolic</td>
</tr>
<tr>
<td>Measurement range:</td>
<td>60 to 255 mmHg</td>
</tr>
<tr>
<td></td>
<td>40 to 200 mmHg</td>
</tr>
<tr>
<td></td>
<td>40 to 199 per minute</td>
</tr>
<tr>
<td>Cuff pressure display:</td>
<td>0 - 299 mmHg</td>
</tr>
<tr>
<td>Resolution:</td>
<td>1 mmHg</td>
</tr>
<tr>
<td>Static accuracy:</td>
<td>pressure within +/- 3 mmHg</td>
</tr>
<tr>
<td>Pulse accuracy:</td>
<td>+/- 5% of the readout value</td>
</tr>
<tr>
<td>Voltage source:</td>
<td>2 x 1.5V Batteries, Size AAA</td>
</tr>
<tr>
<td>Battery lifetime:</td>
<td>460 measurement</td>
</tr>
</tbody>
</table>
Follow Instructions for Use. This document provides important product operation and safety information. Please read this document thoroughly before using the device and keep for future reference.

Type BF applied part

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

Keep Dry IP20: Protected against solid foreign particles with a diameter of more than 12.5 mm, no protection against water.

9. 10 Year Warranty

BIOS Diagnostics™ Wrist Blood Pressure Monitor has a 10 year 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 warranty does not cover damage from misuse or tampering.

100% Satisfaction Guarantee

If at any time, you are not completely satisfied with the performance of this device, call our BIOS Medical Hotline and speak with a customer service person, who will make arrangements to have the device repaired or replaced to your full satisfaction.

If you have questions regarding the operation of your monitor call the

BIOS Medical 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:

Repair Department
16975 Leslie Street
Newmarket, ON L3Y 9A1
www.biosmedical.com
Email: support@biosmedical.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.

BIOS Medical

MANUFACTURED BY / FABRIQUÉ PAR :

THERMOR LTD.
16975 LESLIE STREET
NEWMARKET, ON L3Y 9A1
MADE IN CHINA / FABRIQUÉ EN CHINE
WWW.BIOSMEDICAL.COM

Keep Dry