



BLOOD PRESSURE MONITOR | Clarity Bluetooth™

Instruction Manual

Model: BD323



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BIOS VP of Marketing - Mark Beaton accepts the 2017 Hypertension Canada Certificate of Excellence from Angelique Berg, CEO of Hypertension Canada

Trusted by Canadians for 3 Generations

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

In the 1970s we pioneered the first blood pressure devices for monitoring at home, and in the 1980s 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**.

Blood Pressure Monitor - Clarity

Instruction Manual

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1. Introduction

Thank you for purchasing the BIOS Diagnostics™ Blood Pressure Monitor - Clarity. 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.

Indications for Use:

This blood pressure monitor (BD323) is intended to measure the systolic/diastolic pressure, and pulse rate of an adult individual by using a non-invasive oscillometric technology. This device is designed to be portable, and used in both home and professional environments for every day blood pressure monitoring.

1.1 Features

The BD323 uses oscillometric technology to measure the arterial blood pressure and pulse rate. The cuff is wrapped around the arm and automatically inflated by the air pump. Within the device senses weak fluctuations of the pressure in the cuff produced by extension and contraction of the artery of the arm in response to each heartbeat. The amplitude of the pressure waves is measured, converted in millimeters of the mercury column, and is shown on the display.

- **Free MediLink App** This monitor will connect via Bluetooth to Android and iOS devices. The MediLink App enables users to send secure data to physicians for interpretation.
- **Memory Features** 30 blood pressure readings with time and date.
- **BP Assessment Indicator** Displays the range between which your blood pressure values lie, according to Hypertension Canada.
- **Detects Irregular Heartbeat**
- **3X Averaging** Takes 3 blood pressure measurements consecutively and averages the last two to show one measurement.
- **Time and Date**

This device is easy to use and has been proven in clinical studies to provide excellent accuracy. Before using the BD323, read this instruction manual carefully and keep it in a safe place.

The blood pressure monitor meets the accuracy requirements of Hypertension Canada and has been tested for clinical accuracy.

1.2 Important Information

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

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 mmHg): 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.
- **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 to “reference device” with known accuracy. Significant time is required to reduce naturally occurring blood pressure variability during the test. 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 patient's 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 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 a known “reference device” and not following the procedures described above will yield unreliable 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

Digital blood pressure monitors do not require regular recalibration, unless the product has been dropped and internal parts have been damaged. 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” number, 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

When rested, and measuring your blood pressure at home, measurements with diastolic pressure readings above 85 mmHg or systolic readings over 135 mmHg are considered high. If you obtain consistent 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.

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

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 $\geq 140/ 90$

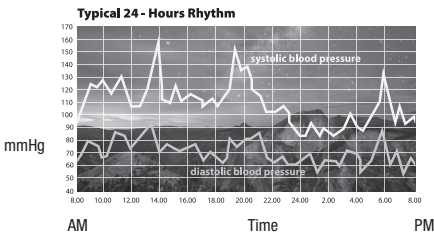
* Hypertension measured at a physician’s office for a diabetic patient $\geq 130/80$

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 as much as 50 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".

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 3X Averaging

3X Averaging is a technology that enables optimum reliability in self-measurement of blood pressure.

Measurement accuracy is achieved by the automatic analysis of three successive measurements, with rest periods in between.

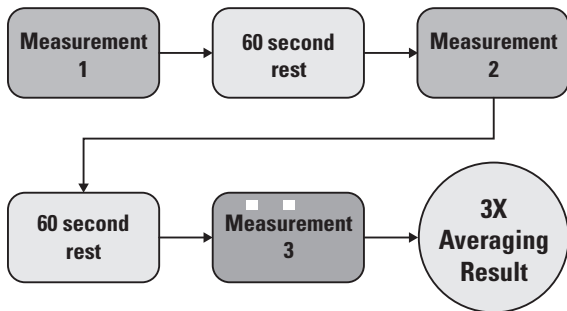
1.6A Key Advantages

The technology provides reduction in:

- Insufficient rest prior to measurement
- Movement effects (i.e. coughing, talking, movement)
- Cuff positioning influences

1.6B Measurement Sequence

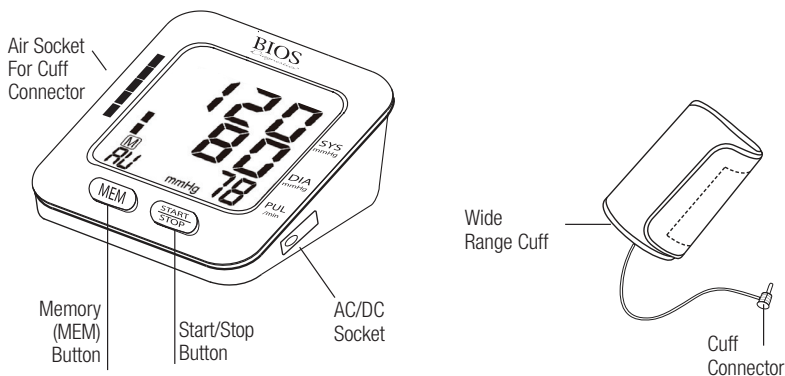
- Single results are displayed after each measurement is taken. Once all 3 measurements have been taken the average will be displayed as the final measurement.
- The following illustration provides a flow chart of the 3X Averaging sequence



2. Getting Started

2.1 About the BD323

This section describes the various components of the Blood Pressure Monitor - Clarity.



Upper arm cuff:

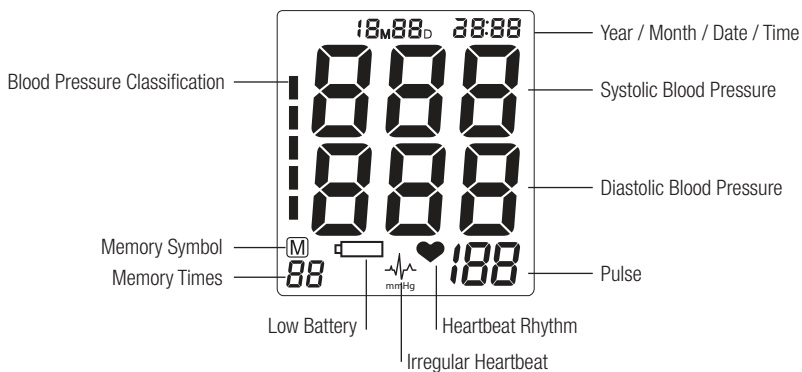
Wide range cuff for arm circumference 24 - 43 cm or 9.4" - 17".

Cuff connection:

Insert the cuff connector into the opening provided on the left side of the monitor as shown in the diagram.

2.2 About the LCD Screen

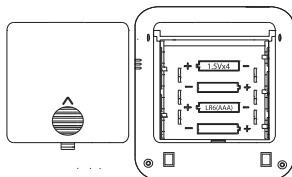
The LCD screen displays the systolic and diastolic blood pressure measurements along with your heart rate. It also displays previously recorded measurements and the date and time, when the appropriate button is pressed.



2.3 Inserting Batteries (not included)

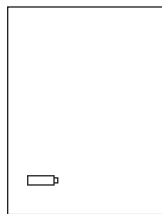
Follow these steps to insert four “AAA” batteries in the device.

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



Attention!

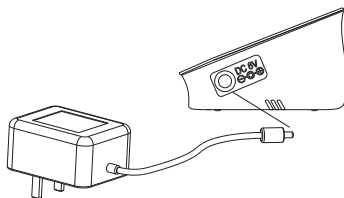
- After the battery warning appears, the device is blocked until the batteries have been replaced.
- Please use “AAA” Long-Life or Alkaline 1.5V batteries.
- If the blood pressure monitor is left unused for long periods, please remove the batteries from the device.
- Do not mix old and new batteries. Do not mix alkaline, standard (carbon-zinc) or rechargeable batteries.



2.4 Using an AC/DC Power Adapter (not included)

You may also operate this monitor using an AC/DC adapter.

1. Ensure that the AC/DC adapter and cable are not damaged.
2. Plug the adapter cable into the AC/DC adapter port on the right side of the blood pressure monitor.
3. Plug the adapter into your electrical outlet. When the adapter is connected, no battery current is consumed.



NOTE: AC Adapter power source - 6V D.C. 600mA

NOTE: If using both batteries and adapter at the same time, make sure to unplug the adapter from the monitor first to ensure the time and date do not reset. If you unplug the adapter from the outlet the time and date will reset.

3. Using the Device

This section describes how to get the maximum benefit from your BD323 blood pressure monitor. Follow the instructions carefully to get an accurate measurement of your blood pressure and pulse rate.

IMPORTANT: If you are using the monitor for the first time remove the protective film from the blood pressure screen.

3.1 Measurement Mode Selection (3X or Single)

Clinical studies demonstrate taking multiple blood pressure readings and calculating an “average” is more likely to determine your true blood pressure. Your blood pressure monitor allows you to switch the monitor to 3X averaging mode that will automatically take multiple readings consecutively.

3X Averaging Mode

1. If you would like to take a 3X Averaging measurement, when the monitor is off press and hold the **MEM** button until you see “nor” on the screen. Press the **START/STOP** button to switch to 3X Averaging, you will see “tHr” on the screen. Press **MEM** button to confirm.
 - nor – single measurement
 - tHr – multiple measurements (3X Averaging)

2. After pressing the **MEM** button, the YEAR digits will flash, you can at this time set the time and date (see section 3.2) or press the **MEM** button 6 times to exit out of the setup.
3. 3X Averaging takes 3 measurements in succession and calculates the result and displays it as a single average measurement.
4. Each measurement will be displayed on the screen for a few seconds after it has been taken. After each measurement there will be 60 seconds resting time in-between each measurement. The monitor will count down from 60 seconds.

NOTE: If one of the measurements causes an error message, it will be repeated. If any additional error occurs the monitor will continue to take measurements until a good reading has been taken.

Single Mode

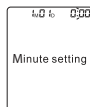
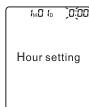
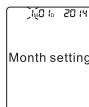
1. If you would like to take a single mode measurement, press and hold the **MEM** button until you see “tHr” on the screen. Press the **START/STOP** button to switch to single mode, you will see “nor” on the screen. Press the **MEM** button to confirm.

NOTE: The blood pressure monitor default is set to “nor” (single mode measurement) when first powered up.

3.2 Setting the Time, Date and Year

NOTE: Setting the year, month, date and time is one sequential process.

1. Press and hold the **MEM** button until you see “nor” on the screen. Let go of the **MEM** button and then press it once, you will see the YEAR digits flash. Use the **START/STOP** button to choose the year and press **MEM** to store in the memory.
2. Repeat the same process to set the MONTH by using the **START/STOP** button. Press the **MEM** button to store it in the memory.
3. The same process is repeated to set the DATE. The date will flash and can be changed with the **START/STOP** button. Afterwards, HOURS will begin to flash.
4. TIME; hours, and then minutes can be set following the same procedure by using the **START/STOP** buttons. Finish the process by pressing the **MEM** button and the YEAR, MONTH, DATE, HOUR and MINUTES will all be stored in the products memory.
5. Next, you will see “CL” on the display, press the **MEM** button to exit out of the setup or see section 3.10 on how to Clear Measurements from Memory.



NOTE: In order to change any setting you must repeat the process and confirm each setting by pushing the **MEM** button.

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 Tips on Taking Accurate Measurements



In the 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.



Ensure that the cuff is level with the heart while the arm is supported on the table.



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.

3.3B 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 and reliable readings.

- 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 45 second pause or after the arm has been held up in order to allow the accumulated blood to flow away.

3.3C Fitting the Wide Range Cuff

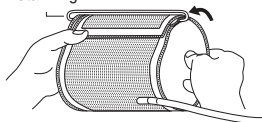
NOTE: Visit www.biosmedical.com for a video that illustrates how to properly fit the cuff.

- a) Putting the cuff velcro side down on a table, the words on the cuff should be facing right side up. Put the end of the cuff (with fastener) through the metal ring, making the cuff a cylinder. (Ignore this step if your cuff is already set up.) Proper assembly allows the Velcro® to match up properly. Measure on your non-dominant arm, unless there is a >10 mmHg difference with the other arm, in which case use the arm with the higher pressure.

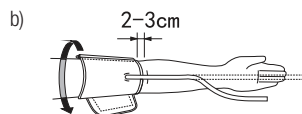
a)



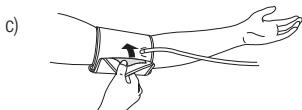
Metal Ring



b) Place the cuff around your bare arm. Make sure the bottom edge of the cuff is about 1" (2-3 cm) above the elbow joint. Adjust the cuff so that the rubber tubing under the cuff lies over the brachial artery, which runs on the inside of the arm (see Fig. B). The red material should be over the brachial artery.



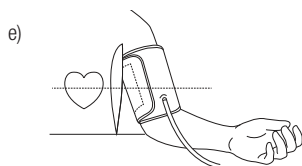
c) Pull the cuff and tighten it by attaching the Velcro® fastener.



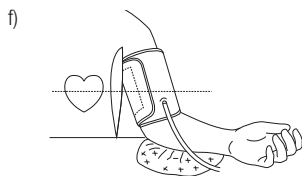
d) The cuff should fit snugly around the bare arm, but not too tight. You should be able to fit two fingers under the cuff. If the cuff is the wrong size, the device will not measure your blood pressure accurately. Contact the store, or BIOS Medical for other sized cuffs.



e) Place the arm on the table (palm facing upwards) so that the cuff is at the same level as the heart. Make sure there is no kink in the hose.

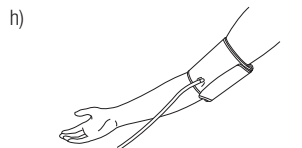


f) You can adjust the level of your arm by putting a cushion under your arm. Ideally the cuff should be at heart level.



g) Remain seated in a comfortable room temperature for at least 5 minutes, then start the measurement.

h) For those who cannot put the cuff on the left arm, put it on the right arm as shown.



i) More than 6 consecutive measurements will cause blood accumulation in the lower arm which will affect the measuring results. To improve reading accuracy, raise the arm being measured, squeeze and relax your hand several times, then take another measurement. Another option is to take the cuff off and wait at least 5 minutes before repeating measurement.



j) If this device was stored in low temperature, it is necessary to leave it in room temperature for at least 1 hour, otherwise the measurement can be inaccurate.

Comment:

Continue to use the same arm for comparisons. It is not unusual for there to be a difference in blood pressure between arms. Initially, check BP on both arms. If one arm is 10mmHg higher, continue to measure on that arm.

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

ATTENTION: Do not use a cuff other than the original cuff contained in this kit!

3.4 Measuring Your Blood Pressure

After the cuff has been appropriately positioned, the measurement can begin.

NOTE: Ensure you are in the measurement mode you want (see section 3.1 to select 3X Averaging mode or Single mode)

1. Press the **START/STOP** button until all the symbols appear on the screen. You will see "bt" flashing on the display. At this time you can connect the app with the monitor (see section 3.6) or press the **START/STOP** button again and the monitor will continue with a measurement, "nor" or "tHr" will appear on the display for a second to remind you what mode you are in. You will hear 2 short beeps and after "0" will flash for 2 seconds. The pump then begins to inflate the cuff. The increasing pressure in the cuff is shown on the display.
2. After the suitable pressure has been reached, the pump stops and the cuff gradually deflates. The cuff pressure will then be displayed. In case the initial inflation is not sufficient, the device automatically re-inflates to a higher pressure.
3. When the device detects a heartbeat, the heart symbol "♥" on the display starts to flash and you can hear a beep for every heartbeat.
4. When the measurement has been completed, you will hear a long beep and the systolic, diastolic and pulse rate will appear on the display.
5. The measurement readings remain on the display until you switch off the device. If no button is pressed, the device switches off itself in 3 minutes.

NOTE: The symbol "⚡" will be displayed along with the reading if an irregular heartbeat has been detected during the measurement. If the "⚡" symbol appears frequently (e.g. several times a week), it may be an indication of a more serious heart problem, and you should consult your doctor.

3.5 Discontinuing a Measurement

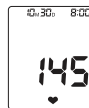
To stop the measurement (eg. the patient feels unwell) press the **START/STOP** button. The device will immediately decrease the cuff pressure automatically.

3.6 Bluetooth and MediLink App

For the most up to date information on what Android and iOS operating systems are compatible with our device applications please visit: biomedical.com, the Apple Store, or the Play Store.

PLEASE NOTE: Android and iOS system and software updates may render the app obsolete on older devices.

1. To begin using the free MediLink App, download and install onto your smartphone or tablet.



2. Turn ON Bluetooth on your device.
3. Open the **MediLink App**. You will need to register and create a password.
4. With the app open to the blood pressure and heart rate tab select 'Add Bluetooth BP Monitor'. (Figure 1)
5. Select your device from the list of monitors. (Figure 2)
6. Follow the instructions on your phone screen to pair the device. While pairing, your device monitor will flash 'bt'. A pop up asking you 'Is this your blood pressure monitor?' will appear. Select Yes. (Figure 3)

NOTE: Ensure that Bluetooth settings are enabled on your phone before attempting to pair.

7. If connection is successful, the app will ask you to select which user you want to link/import data for. Device has paired successfully when you can see the device listed at the bottom of your app screen. (Figure 4)

NOTE: On the blood pressure machine the user is displayed in the top left corner.

NOTE: The blood pressure monitor will sync to the App, and memory will download onto the App.

8. Once the memory download is complete, you can take your measurement. When the measurement is completed the monitor will sync with the App automatically.

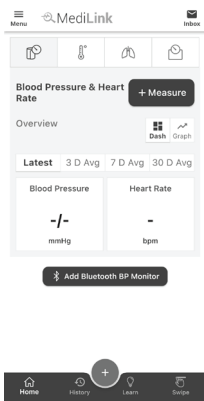


Figure 1

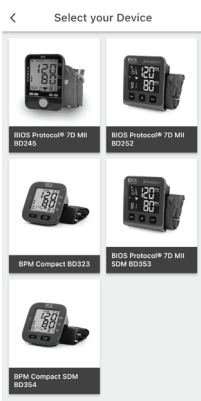


Figure 2

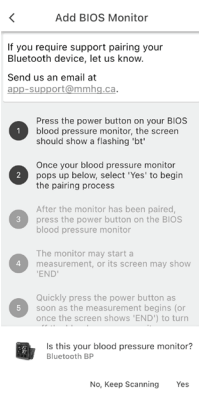


Figure 3

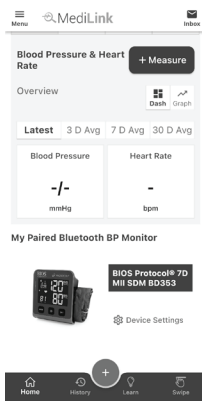


Figure 4

NOTE: For more information on the App and how to use it, visit our website www.biosmedical.com or call our BIOS Medical Hotline: 1-866-536-2289

3.7 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.

***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.**



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

= Average

≤ 135 / 85 mmHg

No Hypertension

≥ 135 / 85 mmHg = YES

Yes Hypertension

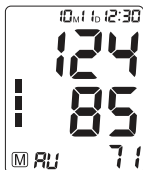
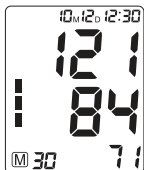
3.8 Memory Recall

This blood pressure monitor automatically stores 30 measurements in its memory. The oldest record will be replaced by the latest measurement value when there are more than 30 sets.

3.9 Recall the Memory with the Power Off

Press the **MEM** button, the average of all the measurements will be shown, you will see "AL" on the bottom left hand side of the screen.

Press the **MEM** button to see the most recent measurement value. Subsequent measurements can be displayed one after the other by pressing the **MEM** button.



IMPORTANT:

In memory a measurement that was taken in the 3X Averaging mode will have “AV” on the bottom left hand side of the screen to indicate it is an averaged measurement. “AV” and the measurement will toggle back and forth on the screen.

3.10 Clear Measurements From Memory

If you are sure that you want to permanently remove all stored memories, when the power is off, press and hold the **MEM** button and then press it 6 times until “CL” appears. Press the **START/STOP** button until “CL” flashes 3 times to clear the memory. After this, press either the **MEM** button, the symbols “M” and “RL” will appear on the screen. This means that the memory has successfully cleared.

3.11 Blood Pressure Assessment Indicator

The bars on the left hand side of the display show you the range within which the indicated blood pressure value 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 by Hypertension Canada. The indicator bar rises according to your measurement.






- If your measurement has only one or two bars, your measurement is in the green zone, or “Normal”.
- If your measurement has three bars, it is in the yellow zone, or “High Normal”, in the pre-hypertensive range.
- If your measurement has four bars, it is in the red zone “High Blood Pressure with Self / Home Monitoring”.
- If your measurement has five bars, it is in the red zone or “Moderate to Severe Hypertension”.

	SYS (mmHg)	DIA
Red	145▲	95▲
Red	135-145	85-95
Yellow	121-134	81-84
Green	110-120	70-80
Green	▼110	▼70

4. Error Messages / Malfunctions

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

Error	Possible Cause	Remedy
E-1	Weak signal or a sudden change in pressure	Ensure that the cuff is worn correctly and measure again. Avoid movement or talking when the cuff is being inflated.

	External disturbance (eg. if there is a cell phone near by)	Electromagnetic interference can cause odd behaviour in the monitor. Move away from the source.
	Appears when there is an error during the inflation process	Make sure the cuff is wrapped around the arm properly and that the air plug is properly connected to the unit.
	Abnormal blood pressure	Rest for 5 minutes and try measurement again.
	Low battery	Replace batteries.
	This is NOT an error	Your monitor is ready to pair with a Bluetooth (BT) enabled device. To pair, follow the instructions in section 3.6. To continue without pairing, ignore, and the device will automatically advance to measurement mode.

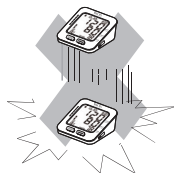
If problems occur when using the device the following points should be checked, and if necessary, the corresponding measures should be taken.

Malfunction	Remedy
The display remains blank when the device is switched on.	<ol style="list-style-type: none"> 1. Check batteries for correct polarity. 2. If using the AC adapter, ensure it is correctly inserted.
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"> 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.
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.	<p>Record daily measurements for consultation with your doctor.</p> <p>Note: Individuals visiting their doctor frequently experience anxiety which can result in a higher blood pressure reading than at home.</p>

For assistance call BIOS Medical Blood Pressure Hotline: 1-866-536-2289

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. Dirt on the cuff should be removed with a damp cloth and soap. Do not put in the washing machine or dishwasher. Do not submerge 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) The monitor contains sensitive parts, and should be treated gently.
- 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. 4 Year Limited Warranty

This BIOS Diagnostics™ blood pressure monitor has a 4 year limited 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 2 years. 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 tested 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 correction 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.
Returns 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 test 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 return shipping.

7. Technical Specifications

Operating environment:	5 to 40°C / 41 to 104°F 15% to 93% RH
Storage environment:	-20 to 55°C / -4 to 131°F 10% to 93% RH
Weight:	217 g (not including batteries)
Dimensions:	103 x 103 x 65 mm
Measuring procedure:	Oscillometric during deflation
Measurement range:	0 – 299 mmHg
Pulse	40 – 199 beats per minute
Resolution:	1 mmHg
Static accuracy:	pressure within ± 3 mmHg
Pulse accuracy:	± 5 % of the reading
Voltage source:	4 x 1.5 V Batteries; size AAA (not included) AC adapter (not included)



Read the instruction manual carefully before using this device, especially the safety instructions, and keep the instruction manual for future use.



Type BF applied part



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

