

# CVS

## INSTRUCTION MANUAL

Bluetooth™  
Blood  
Pressure  
Monitor



Model # BP3KX1-1B

**QUESTIONS? 1-800-568-4147**

## Important Product and Safety Information

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**Follow Instructions for Use.** This document provides important product operation and safety information regarding this Blood Pressure Monitor. Please read this document thoroughly before using the device and keep for future reference.

This blood pressure monitor is an automatic digital blood pressure measuring device for use by adults, including those with Diabetes mellitus, on the upper arm at home or in the doctor's office. It enables a very fast and reliable measurement of the systolic and diastolic blood pressure, as well as the pulse rate, by way of the oscillometric method. This device detects the appearance of irregular heartbeats during measurement and provides a warning signal when the irregular heartbeat is detected. The device can be connected via Bluetooth® to a smart mobile device running the Microlife Connected Health App.

### **This blood pressure monitor IS intended to be used:**

- For self-measurement/monitoring of blood pressure and pulse in adults, including those with Diabetes mellitus; whereas the person being measured may be the user/operator of the device.
- Within a home healthcare environment.
- With a cuff located upon the user's upper arm; ½ inch above the elbow over the artery as indicated on the cuff.

### **This blood pressure monitor IS NOT intended for use with:**

- Pregnancy
- Preeclampsia
- Children under 12
- Neonatal patients



**WARNING – Potentially hazardous situation that if not avoided may result in serious injury or death.**

- Self-measuring means monitoring, not diagnosis or treatment. Unusual values must always be discussed with your doctor. Under no circumstances should you independently alter the dosages of any drugs prescribed by your physician.

Consult your physician before using this device if any of the following or similar conditions are present: arrhythmias such

as atrial or ventricular premature beats or atrial fibrillation, arterial sclerosis, poor perfusion, diabetes, age, pregnancy, preeclampsia, renal diseases. Motion during measurement, including trembling or shivering may affect the measurement.

- Though not for use with children under 12, ensure that any children around this device are supervised; some parts are small enough to be swallowed and any present tubes or cables may provide a risk of strangulation.
- Ensure the cuff tubing is not kinked during use as harmful injury may occur due to the effect of blood flow interference caused by high pressure in the cuff not releasing.

**DO NOT:**

- × Use this device if you think it is damaged or anything appears unusual (e.g. sporadic operation, open packaging upon purchase).
- × Use the displayed pulse for checking the frequency of heart pacemakers as this device is not suitable for this action.
- × Open/modify this device; inaccuracy and/or harmful injury may result.
- × Conduct many frequent measurements as this may result in harmful injury due to blood flow interference.
- × Place the Cuff over a wound as this may cause further injury.
- × Place and pressurize the Cuff over/near any present intravascular access or therapy, or arteriovenous shunt, as this may cause blood flow interference and result in harmful injury.
- × Place and pressurize the Cuff over a limb near the side of a mastectomy as this may cause harmful injury.
- × Use the Blood Pressure Monitor on a limb simultaneously with other medical equipment on the same limb due to possible interference with such medical equipment.
- × Maintain pressure in the Cuff applied to the limb for a prolonged amount of time. Ensure that circulation in the limb is not impaired by checking circulation if prolonged/repeated exposure to pressure occurs.
- × Service the device when being used or when power is supplied. When the device is not in use and power is removed, cuff assembly, batteries and ac adapter (if applicable) may be replaced by the user with Microlife supplied replacements. No other parts/components are accessible.



**CAUTION – Potentially hazardous situation that if not avoided may result in minor/moderate injury, property damage, and/or damage to the device**

- This device contains sensitive electronics components. Avoid strong electrical or electromagnetic fields in the direct vicinity of the device (e.g., mobile telephones, microwave ovens). These can lead to temporary impairment of the measuring accuracy. Move the device to another location if interference is determined.
- When not using the Blood Pressure Monitor for extended lengths of time, remove the batteries to avoid potential battery leakage and damage to the monitor.
- When replacing the batteries, ensure all the batteries are replaced simultaneously to avoid battery damage and potential damage to the monitor. Microlife USA does not recommend using rechargeable batteries.
- To avoid inaccurate measurements and to lessen any discomfort from Cuff pressure, ensure the Cuff is placed correctly on the limb and fits correctly when snug (not tight), as indicated by markings with the Cuff.
- Consult your physician in cases of frequent irregular heartbeat detections.
- This Risk Indicator feature is provided in order to help you understand your potential blood pressure risk. However, this feature is neither a diagnosis nor a substitute for a medical examination. It is important to consult with your physician to determine your risk.

**DO NOT:**

- × Drop this device or expose it to strong vibrations; sensitive components may be affected resulting in inaccuracies and/or operational issues.
- × Use the Blood Pressure Monitor outside of its specified operation temperature and humidity rating, or if stored outside of its specified storage temperature and humidity rating. Avoid storage in direct sunlight.
- × Use this device in a moving vehicle; inaccurate measurements may result.
- × Use third party accessories. Only use Microlife authorized accessories, such as cuffs or AC adapters, as those not approved for use with the device may provide inaccurate

measurements, injury, and/or damage the device.


## STANDARDS

In addition to the standards stated in the Instruction Manual:

- This medical device is compliant with medical device and non-invasive blood pressure monitor standards IEC 60601-1, IEC 60601-1-2, IEC 60601-1-11, and AAMI/ANSI/IEC 80601-2-30, and
- Electromagnetic standards IEC 60601-1-2 along with FCC Part 15, and
- Clinical Testing per standard ISO 81060-2:2013 was conducted on blood pressure device using the same measurement technology.

Please note: According to international standards, your monitor should be checked for accuracy every 2 years.

## TYPE

IP21 Protected against solid foreign particles with a diameter of more than 12.5 mm and vertically falling drops of water, e.g. condensation. Keep Dry. 



Type BF Applied Part

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

## Expected Life

Monitor 5 Years

Cuff 2 Years

## MR Unsafe



## Data Transmission

This product emits radio frequencies (RF) in the 2.4 GHz band. DO NOT use this product in locations where RF is restricted, such as on an aircraft or in hospitals. Turn off the Bluetooth® feature in this monitor, remove batteries when in RF restricted areas. For further information on potential restrictions refer to documentation on the Bluetooth usage by the FCC.

## **FCC**

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Changes or modifications to the product are not approved by Microlife USA and could void the user's authority to operate the equipment under FCC jurisdiction.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: 1) Reorient or relocate the receiving antenna. 2) Increase the separation between the equipment and receiver. 3) Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. 4) Consult the dealer or an experienced radio/TV technician for help.

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance.

## **Trademark Usage:**

Apple, the Apple logo, iPad, and iPhone are trademarks of Apple Inc., registered in the U.S. and other countries. App Store is a service mark of Apple Inc.

Android and Google Play are both trademarks of Google Inc.

The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks in this Blood Pressure Monitor is under license. Other trademarks and trade names are those of their respective owners.

## **Bluetooth® Automatic Blood Pressure Monitor**

Instruction Manual

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## **1. Introduction**

### **1.1. Your automatic blood pressure monitor**

Thank you for purchasing a fully automatic blood pressure monitor. Your monitor is designed to provide fast and reliable digital readings of your pulse, and systolic / diastolic blood pressure using the oscillometric method on your upper arm. It offers clinically proven accuracy and has been designed to be user friendly.

If you have additional questions regarding blood pressure measurements please contact Microlife Customer Service at 1-800-568-4147 or contact your doctor.

### **1.2. Diabetes mellitus validation**

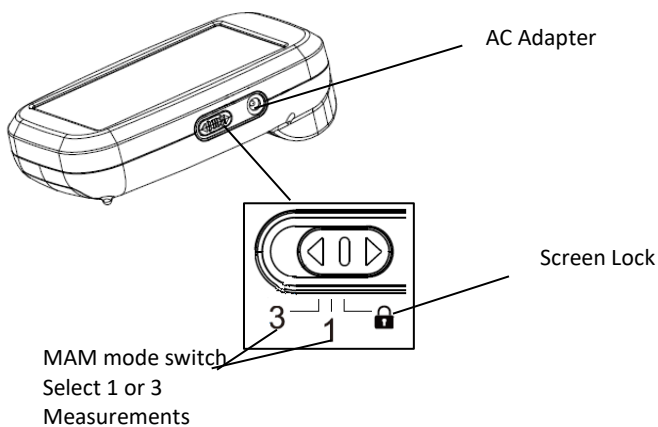
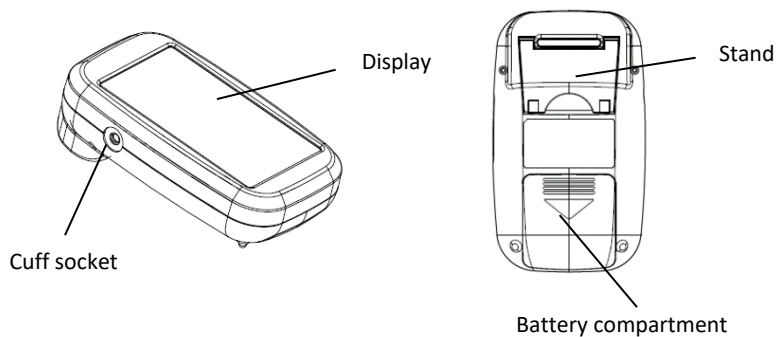
Diabetes, and stiff arteries, can make accurate blood pressure readings a challenge. Microlife's commitment to health has led to a breakthrough clinical validation for accurate readings in the presence of diabetes. This innovation reinforces our commitment to quality, accuracy, and helping you take control of your health.

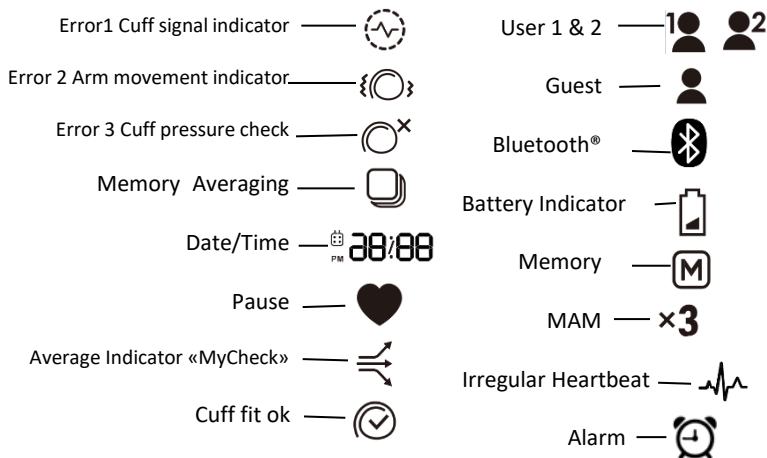
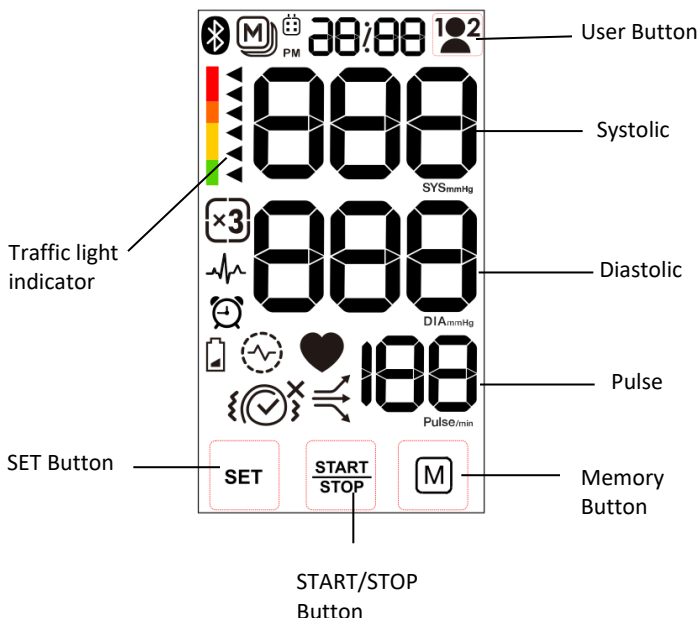
Diabetes mellitus (or diabetes) is a chronic, lifelong condition that affects your body's ability to use the energy found in food. There are three major types of diabetes: type 1 diabetes, type 2 diabetes, and gestational diabetes.

Note: this monitor does not measure blood glucose.

## 2. Components of your blood pressure monitor

### 2.1. Blood pressure monitor





## 2.2 Wide Range Cuff:

For arm circumference 8.7" - 16.5" (22 cm - 42 cm)

If you ever need to buy a replacement cuff, call us toll-free at 1-800-568-4147.

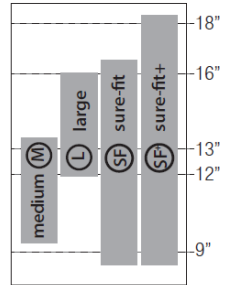
### Anti-Slip Cuff:

Your wide range cuff is equipped with anti-slip grips that ease the process of correctly positioning the cuff on your arm.

### Cuff Sizing:

The proper fit is essential for accurate blood pressure readings. The average arm circumference for a woman is 11", and the average for a man is 13". This cuff can accommodate arm circumferences from 8.7" to 16.5" and fits most adults.

Arm circumference should be measured with a measuring tape in the middle of the relaxed upper arm. If the cuff is too small, call 1-800-568-4147 for additional information.



### Note:

- Do not force cuff connection into the port opening.
- Make sure the cuff connection is not pushed into the AC adapter port.

### 3. How do I get started?

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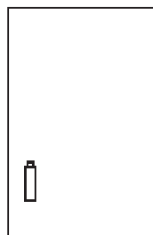
#### 3.1 Protective screen film

There is a protective piece of static film covering the monitor's screen. Please remove it before use.

#### 3.2 Inserting the batteries

After you have unpacked your device, insert the batteries. The battery compartment is located on the back of the device.

- a) Remove the battery cover.
- b) Insert the batteries (4 x size AAA 1.5 V), observing the indicated polarity.
- c) If a battery warning appears in the display, the batteries are discharged and must be replaced.

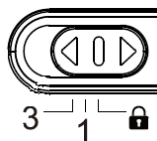


Low Battery Indicator

#### Attention!

- After the low battery indicator appears, the device won't function until the batteries have been replaced.
- Please use AAA 1.5 V batteries and replace them all at the same time.
- If the blood pressure monitor is not used for long periods, remove the batteries from the device.
- We do not recommend using rechargeable batteries.

#### 3.3 Power switch / screen lock



To activate your monitor, push the switch on the right hand side of the monitor to the unlocked position.

**Please keep your monitor locked if you have no need to use the device to avoid lots of battery power consumption.**

### 3.4. Using the interactive touch screen

This monitor features an interactive screen with 2 touch zones which operate similarly to traditional buttons, but require only a light touch of the finger to operate.

The following functions are made easier through the interactive touch screen:

- Setting time and date
- Scrolling through memories
- Selecting the user
- Starting/stopping the blood pressure Measurement



### 3.5. Setting the date and time

1. After the new batteries are inserted and the monitor is unlocked, the year number flashes in the display. You can advance the year by tapping the memory button. To confirm and then set the month, press SET button.
2. You can now set the month using the memory button. To confirm and then set the day, tap SET button.
3. Please follow the instructions above to set the day, hour and minutes.
4. Once you have set the last minute and tapped SET button, the date and time are set and then follow the 3.6 section to set alarm time. To bypass alarm time setting, tap SET button. After that, the time is displayed.
5. If you want to change the date and time, press and hold the SET button down for approximately 5 to 6 seconds until the year number starts to flash. Now you can enter the new values as described above.

### 3.6 Setting alarm time

The device offers two alarm time settings.

1. After completing the date and time setting, now you can start to set the first alarm time.

2. "AL OFF" and alarm icon display on the screen. You can turn ON or turn OFF alarm by tapping the memory button and tapping SET button to confirm.
3. After turning on the first alarm time, set the hour and minutes using the memory button. To confirm, tap SET button.
4. After completing the first alarm time setting, now you can follow the instructions above to set the second alarm time.
5. Once you turn on alarm function, alarm icon displays on the screen in standby mode.
6. If you want to turn off or change the alarm time, press, and hold the SET button down for approximately 5 to 6 seconds until the year number starts to flash. To bypass setting time and date, tap SET button and then follow the instructions above to set alarm time.

### **3.7. Select the user**

This blood pressure monitor is designed to store 120 measurements for each of two users. Memories are not stored in guest mode.

Before taking a measurement, be certain that the correct user has been selected.

With the monitor unlocked, tap user icon to change users.

### **3.8. Select measuring mode: standard or Microlife Averaging Mode (MAM)**

This instrument enables you to select either standard (single measurement) or measurement averaging mode (automatic triple measurement).

a) To select Standard mode, push the switch on the side of the monitor to Position "1."

b) To select Averaging mode, push the switch to Position "3."

Note the "MAM" icon will display on the screen.

If you select 1, then only one measurement will be taken. If you select 3, the unit will inflate and deflate three times resulting in one final averaged measurement.

### **3.9. Microlife Averaging Mode (MAM)**

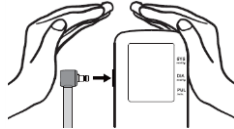
- In Microlife Averaging Mode (MAM), three measurements are automatically taken in succession and the result is then automatically analyzed and displayed. Because your blood pressure constantly fluctuates, a result determined in this way is

more reliable than one produced by a single measurement.

- After pressing the START/STOP button the selected Microlife Averaging Mode appears in the display as the MAM symbol.
- The bottom, right-hand section of the display shows a 1, 2 or 3 to indicate which of the 3 measurements is currently being taken.

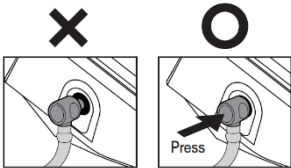
### 3.10. Connecting the cuff and monitor

Push connector by palm. Make sure cuff connector is securely inserted into the side of your blood pressure monitor (a soft "click" may be heard when fully inserted).



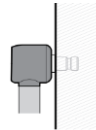
Please Note:

- A loose connection will result in inaccurate readings, and an error message (Err 3).



The connector is not pressed completely

Connector fully pressed



### 3.11. Using the AC power adapter

You may also operate this monitor using the included AC adapter. Use only the included AC adapter to avoid damaging the unit.

- Ensure that the AC adapter and cable are not damaged.
- Plug the adapter cable into the AC adapter port on the right side of monitor.
- Plug the AC adapter into a 110 V power socket (U.S. or Canada).
- Test that power is available by pressing the START/STOP button.

Note:

- No power is taken from the batteries while the AC adapter is connected to the instrument.
- If the power is interrupted during a measurement (e.g., by removal of the adapter from the wall socket), the instrument



must be reset by removing the plug from the instrument. If you have any questions regarding the AC adapter, call us at 1-800-568-4147.

#### **4. How do I take a measurement?**

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**Please note: You should always be seated before and during measurement.**

##### **4.1 Preparing to take a measurement**

- Avoid eating and smoking as well as all forms of exertion directly before measurement. These factors influence the measurement result. Find time to relax by sitting in an armchair in a quiet atmosphere for about 5 minutes before your measurement.
- Remove any garment that fits closely to your upper arm.
- Always measure on the same arm (normally left).
- Compare measurements at the same time of day, since blood pressure changes during the course of the day (as much as 20–40 mm Hg).

##### **4.2 Common errors**

**Note: Comparable blood pressure measurements always require the same conditions. Conditions should always be quiet.**

- All efforts by the user to support the arm can increase blood pressure. Make sure you are in a comfortable, relaxed position and do not flex any of the muscles in the measurement arm during the measurement. Use a cushion for support if necessary.
- If the arm artery lies considerably lower or higher than the heart, an erroneously high or low blood pressure will be measured. Each 15 cm (6") difference in height between your heart and the cuff results in a measurement error of 10 mm Hg.
- Cuffs that are too narrow or too short result in false measurement values. Selecting the correct cuff is extremely important. Cuff size is dependent upon the circumference of the arm (measured in the center). The permissible range is printed on the cuff. If this is not suitable for your use, please

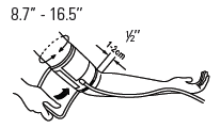
call 1-800-568-4147.

- A loose cuff or a sideways protruding air pocket causes false measurement values.

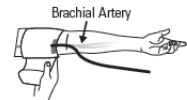
With repeated measurements, blood accumulates in the arm, which can lead to false results. Consecutive blood pressure measurements should be repeated after a 1 minute pause or after your arm has been held up in order to allow the accumulated blood to flow away.

### 4.3 Using the cuff

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



- b) Slide the cuff onto your upper left arm. The rubber tube should be on the inside of your arm extending downward to your hand. Make certain the cuff lies approximately 1/2" (1 to 2 cm) above the elbow.

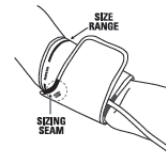


**IMPORTANT:** The red strip on the edge of the cuff (Artery Mark) must lie over the artery which runs down the inner side of the arm.



**TIP:** Align red artery mark to pinky finger.

- c) To secure the cuff, wrap it around your arm and press the hook and loop material together. Check the position of the green SIZING SEAM on the cuff. Ensure green sizing seam overlaps green size range bar.



- d) There should be little free space between the arm and the 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 result in false measurement values. Measure your arm circumference if you are not sure of

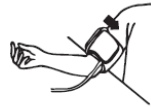


proper fit.

- e) Lay your arm on a table so the cuff is at the same height as your heart. Make sure your arm is relaxed and the tube is not kinked.
- f) Remain seated quietly for 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 your right arm. However, all measurements should be made using the same arm.



Cuff on  
right arm

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

### **4.4. Taking a measurement**

After the cuff has been appropriately positioned the measurement can begin. Remain still during your measurement, do not flex muscles, and refrain from talking.

- a) Remain seated quietly for 5 minutes before you begin the measurement.
- b) Tap the START/STOP button. The pump begins to inflate the cuff. On the display, the increasing cuff pressure is continually shown.
- c) The cuff fit OK icon on the display indicates that the cuff is perfectly placed.
- d) After automatically reaching an individual pressure, the pump stops, and the pressure will deflate slowly. The cuff pressure is displayed during the measurement.
- e) When the device has detected your pulse, the heart symbol in the display begins to blink.
- f) When the measurement has been concluded, the air will automatically release from the cuff. The measured systolic and diastolic blood pressure values, as well as the pulse, are now displayed.
- g) The measurement results are displayed until you switch the device off. If no button is pressed for 1 minute, the device switches off automatically.
- h) When the unit is set to the MAM (Microlife Averaging Mode)

setting, 3 separate measurements will take place in succession, after which your result is calculated and displayed as a single, averaged measurement (individual results are not displayed). There is a 15 second resting time between each measurement. A count-down indicates the remaining time between measurements.

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.

#### **4.5.Memory: reviewing readings**

At the end of a measurement, this monitor automatically stores each result with date and time. This unit stores 120 memories for each of 2 users.

##### **Viewing the stored values**

- With the unit unlocked, tap "M." The display first shows «28A», which stands for the average measurement values of the last 28 days.
- Tapping the M-button again, allows you to see the last performed measurement. The display first shows «M» 23 and a value, e.g.«M17». This means that there are 17 single values in the memory. Tapping the M-button again displays the previous value. Tapping the M-button repeatedly enables you to move from one stored value to another.
- To exit, press START/STOP button.

##### **Memory full**

When the memory has stored 120 results, 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 "M" until "CL" appears and then release "M".
- To continue and erase the values, tap SET button while "CL" is flashing.
- To discontinue with the clearing of memories, tap "START/STOP" button.
- Individual values cannot be cleared.

#### **4.6.Stopping a measurement**

If it is necessary to interrupt a blood pressure measurement for any reason (e.g., the patient feels unwell), the “START/STOP” button can be tapped at any time. The device then immediately lowers the cuff pressure automatically and enters sleep mode.

#### 4.7.Hypertension risk indicator

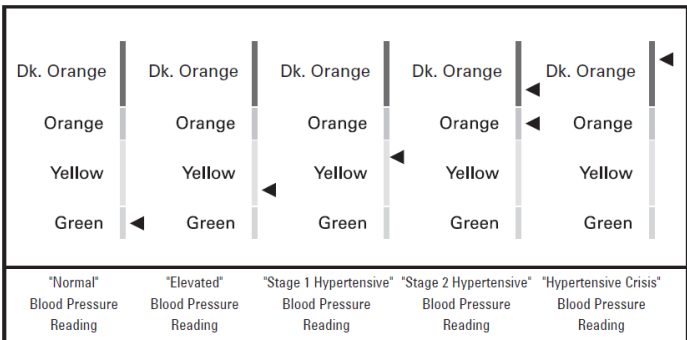
The bars on the left-hand edge of the display show the possible range for a blood pressure reading. The reading can fall within the normal (green), borderline (yellow) or danger (orange, dark orange) range.

The classification is based on standards established by the American Heart Association (AHA) and American College of Cardiology (ACC) in 2017.

Refer to the chart in section 7.2 of this instruction manual for details of the classifications.

A triangle is displayed to the right of the traffic light bar according to your measurement. If the display shows a triangle in the:

- **green zone**, your measurement is "Normal."
- **lower yellow zone**, it is "Elevated."
- **upper yellow zone**, it is "Stage 1 Hypertensive."
- **orange zone**, it is "Stage 2 Hypertensive."
- **lower dark orange zone**, it is "Stage 2 Hypertensive."
- **upper dark orange zone**, it is "Hypertensive Crisis."



#### **4.8. Average Indicator «MyCheck»**

This symbol indicates after each measurement, if the most recent measured value lies below, above or on the same level as your stored average value (see also section 4.5.Memory: reviewing readings).

- If the measured Systole or Diastole is more than 5mmHg higher than the stored average, the arrow shows upwards.
- If the measured Systole or Diastole is more than 5mmHg lower than the stored average, the arrow shows downwards.
- If the measured Systole and Diastole do not differ by more than 5mmHg from the stored average, the arrow shows straight on.
- If the measured systole and diastole differ in different directions from the stored average, this is indicated first with the systole figure flashing, together with the up or down arrow for two seconds. Thereafter, the diastole figure flashes with the arrow pointing up or down for two seconds.

#### **4.9.Irregular heartbeat detector**

The appearance of 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 symbol appears on a regular basis (e.g., several times a week with measurements taken daily), we advise you to tell your doctor.

Please show your doctor the following explanation:

#### **Information on frequent appearance of the irregular 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 the measurement, the irregular heartbeat symbol is displayed with the measurement. If the symbol appears frequently 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.

#### **4.10. Battery change indicator**

Batteries almost discharged

When the batteries are approximately 75% used, the battery symbol will flash a few times as soon as the instrument is switched on. Although the instrument will continue to measure reliably, you should obtain replacement batteries.

Batteries discharged – replacements required

When the batteries are discharged, the battery symbol will appear, unblinking, as soon as the instrument is switched on. You cannot take any additional measurements and must replace the batteries.

1. Open the battery compartment on the bottom of the instrument.
2. Replace all of the batteries at the same time, ensure they are correctly connected, as shown on the symbols in the compartment.
3. The memory retains all values although date and time (and also set alarm times) must be reset – the year number will flash automatically after the batteries are replaced.
4. To set date and time, follow the procedure described in section 3.5.

#### **Note:**

Use four new AAA 1.5 V batteries. Do not use batteries beyond their expiration date. If the monitor is not going to be used for a prolonged period, the batteries should be removed.

We do not recommend using rechargeable batteries.

### **5. Bluetooth® functions and application (App)**

Please download the Microlife Connected Health App (referred to as App in this document) from Apple's App Store® or Google Play® before pairing your devices.:

#### **5.1 Bluetooth® operations**

- Manually turn on Bluetooth®: Tap SET button to activate Bluetooth®, Bluetooth® symbol on display will blink.
- Automatically turn on Bluetooth®: Bluetooth® will activate automatically after a measurement. Bluetooth® symbol on display will blink.
- Manually turn off Bluetooth®: Tap START/STOP button to turn off Bluetooth®.

- Automatically turn off Bluetooth®: Bluetooth® will turn off automatically after 2 minutes if a smartphone does not connect to the device.

### 5.2 Bluetooth® pairing & app setup

1. Open «Microlife Connected Health+» App on the smartphone (Make sure the app is running in the foreground, not in the back- ground.)
2. Turn on Bluetooth® manually to connect device to smartphone.
3. When smartphone finds the device, the smartphone will show a message to pair with the device. Confirm on smartphone to complete pairing. Cancel to abort pairing.
4. After pairing, the app will show a message to setup the device user selection (1 or 2) to the app user profile. Confirm to proceed with setup. Cancel to abort setup (if user selection is incorrect).
5. After setup, the device will automatically exchange measurement data and date/time settings with the app. Bluetooth® turns off automatically after data exchange.

### 5.3 Bluetooth® status

- Bluetooth® symbol blinking slowly: Bluetooth® is activated and waiting for connection.
  - Bluetooth® symbol not blinking: Bluetooth® connection established.
  - Bluetooth® symbol blinking rapidly: Bluetooth® connection error.
- In case of Bluetooth® connection error, turn off device Bluetooth®, wait for a minute, then re-try Bluetooth® connection. Refer to section 6. *Error messages / troubleshooting* for details.

## 6. Error messages / troubleshooting

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If an error occurs during a measurement, the measurement is discontinued and a corresponding error code is displayed (example: Error no. 2).



### Error No. Possible cause(s)/Solutions

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ERR 1

Weak signal. The tube may have loosened,





or no pulse was detected.\* Ensure cuff connections are tight with proper cuff placement. See section 4.3.

ERR 2



Movement detected. Repeat measurement, keeping still and quiet.

ERR 3



No pressure detected. Inflation of the cuff takes too long. The cuff is not correctly seated or the hose connection is not tight. Re-position cuff and repeat the measurement. **Please follow the procedure described in "3.10. Connecting the cuff and monitor" to ensure the cuff is properly connected.**

ERR 5

Abnormal reading. The measured readings indicate an unacceptable difference between systolic and diastolic pressures. Take another reading following directions carefully. Contact your doctor if you continue to get unusual readings.

ERR bt

Bluetooth® is malfunctioning. Contact your local Microlife distributor.

Bluetooth®Symbol  
blinks rapidly



Bluetooth® connection error. Turn off device Bluetooth® and close the app on the smartphone. Wait for 1 minute, open the app on the smartphone and manually activate Bluetooth® on the device, to re-try Bluetooth® connection and data transfer.

HI

The cuff pressure is too high. Relax for 5 minutes and repeat the measurement.\*

LO

The pulse is too low (less than 40). Repeat the measurement.\*

**\*If this or any other problem occurs repeatedly, please consult your doctor.**

### **Other possible errors and their solutions**

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

| <b>Malfunction</b>  | <b>Remedy</b>  |
|---|--|
| The display remains blank when the instrument is switched on although the batteries are in place.                       | 1.Check batteries for the correct polarity.<br>2.If the display is unusual, remove the batteries and exchange them for new ones.   |
| The pressure does not rise although the pump is running.  | Check the connection of the cuff tube and connect properly.  |
| The device frequently fails to measure blood pressure values or the values measured are too low or high.                | 1.Check the positioning of the cuff.<br>2.Measure blood pressure again in peace and quiet, carefully following the details in section 4.   |
| Every measurement results in a different value, although the device functions normally and normal values are displayed. | Please read the following information and points listed in section 4.2<br><b>"Common errors."</b> Repeat the measurement. <b>Please note: Blood pressure fluctuates continually so successive measurements will show some variability.</b> |
| Blood pressure values differ from those measured by my doctor.  | Record the daily development of the measured values and consult your doctor (see section 4.1) <b>Please note: Individuals visiting their doctor frequently experience anxiety which can</b>  |

|  |  |
|--|--|
| <p>After the instrument has inflated the cuff the pressure falls very slowly, or not at all. (No reasonable measurement possible.)</p> | <p><b>result in a higher reading than at home under resting conditions.</b></p> <ol style="list-style-type: none"> <li>1. Check cuff connections.</li> <li>2. Ensure the unit has not been tampered with.</li> </ol> |
|--|--|

## 7. How is blood pressure measured?

### 7.1. What is blood pressure, and why does it fluctuate?

Your level of blood pressure is determined in the circulatory center of the brain and adjusts to a variety of situations through feedback from the nervous system. To adjust blood pressure, the strength and frequency of the heart (pulse), as well as the width of circulatory blood vessels is altered. Blood vessel width is affected by fine muscles in the blood vessel walls.

Your level of arterial blood pressure changes periodically during heart activity. During the "blood ejection" (Systole), the value is highest (systolic blood pressure value). At the end of the heart's "rest period" (Diastole), pressure is lowest (diastolic blood pressure value).

Blood pressure values must lie within certain normal ranges in order to prevent particular diseases.

Blood pressure is very high if your systolic blood pressure is over 140 mmHg and/or your diastolic pressure is above 90 mmHg, **while at rest**. In this case, please consult your doctor immediately. Long-term values at this level endanger your health due to continual damage to the blood vessels in your body.

Should the systolic blood pressure values lie between 130 mmHg and 139 mmHg and/or the diastolic blood pressure values lie between 80 mmHg and 89 mmHg, consult your doctor. Regular self-checks will be necessary.

If you have blood pressure values that are too low (i.e., systolic values under 105 mm Hg and/or diastolic values under 60 mm Hg), consult your physician.

Even with normal blood pressure values, a regular self-check with your blood pressure monitor is recommended. You can

detect possible changes in your values early and react appropriately.

If you are undergoing medical treatment to control your blood pressure, keep a record of values along with time of day and date. Show these values to your physician.

**Never use the results of your measurements to independently alter the medication prescribed by your physician.**

## 7.2. Measurement guidelines

The following standards for assessing high blood pressure (in adults) have been established by the American Heart Association (AHA) and American College of Cardiology (ACC) in 2017.

| Category             | Systolic<br>(mm Hg) | Diastolic<br>(mm Hg) |
|----------------------|---------------------|----------------------|
| Normal               | <120                | and <80              |
| Elevated             | 120-129             | and <80              |
| <b>Hypertension</b>  |                     |                      |
| Stage 1 Hypertension | 130-139             | or 80-89             |
| Stage 2 Hypertension | 140-179             | or 90-119            |
| Hypertensive Crisis  | ≥180                | or ≥120              |

### Additional information

- This chart reflects a 2017 update to blood pressure standards.
- 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." Consult your doctor.
- Correctly measured diastolic blood pressure values above 120 mm Hg require immediate medical treatment.

## 7.3. What can I do to change my blood pressure?

a) Consult your doctor.

b) Increased blood pressure values (various forms of hypertension) are associated with considerable health risks over time. Arterial blood vessels in your body 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 result from arteriosclerosis. Furthermore, the heart will become structurally damaged with increased blood pressure values.

c) There are many different causes of high blood pressure. We

differentiate between the common primary (essential) hypertension and secondary

d) There are measures which you can take to reduce and even prevent high blood pressure. These measures must be permanent lifestyle changes.

### **1) Eating habits**

- Strive for a normal weight corresponding to your age. See your doctor for your ideal weight.
- Avoid excessive consumption of common salt.
- Avoid fatty foods.

### **2) Previous illnesses**

• Consistently follow all medical instructions for treating illness such as:

- Diabetes (diabetes mellitus)
- Fat metabolism disorder
- Gout

### **3) Habits**

- Give up smoking completely.
- Drink only moderate amounts of alcohol.
- Restrict your caffeine consumption (e.g., coffee).

### **4) Physical constitution**

• **After a preliminary medical examination, do regular exercise.**

- Choose sports which require stamina and avoid those which require strength.
- Avoid reaching the limit of your performance.
- With previous illnesses and/or an age of over 40 years, please consult your doctor before beginning your exercise routine. You must receive advice regarding the type and extent of exercise that is appropriate for you.

## **8. Care and maintenance**

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

b) Clean the device with a soft, dry cloth. Do not use gasoline, thinners or similar solvents. Spots on the cuff can be removed carefully with a damp cloth and soapsuds. **Do not wash the cuff in a dishwasher, clothes washer or submerge it in water.**

c) Handle the tube carefully. Do not pull on it. Do not allow the

tubing to kink and keep it away from sharp edges.

d) **Never open the monitor.** This voids the manufacturer's warranty.

## 9. Limited warranty

Your Automatic Blood Pressure Monitor is **warranted for 5 years** by Microlife USA Inc, against manufacturer defects for the original purchaser only, from date of purchase.

**The 5 year warranty applies to the monitor only. The following accessories are warranted for 1 year: cuff and AC adapter.**

Batteries are not covered by this warranty.

The warranty does not apply to consequential and incidental damages, or damage caused by batteries, improper handling, and accidents. Professional use, not following the operating instructions, and alterations made to the monitor or accessory by third parties, are also not included in this warranty. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

Microlife USA Inc will investigate your concern. A monitor or accessory as defined by this warranty, determined to be out of specification, will be replaced and shipped to you at no cost. A monitor or accessory as defined by this warranty, determined to be within specification, will be returned to you with a report of findings, at no cost.

Please use the below customer service contact information to reach Microlife USA Inc. regarding any warranty concerns. We ask that you please contact us before sending any product back in order to better identify, and more quickly process, your concern.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

## 10. Technical specifications

Weight: . . . . . 320 g (with batteries)

Size: . . . . . 86 (W) x 151 (L) x 47 (H)  
mm

Storage temperature: . . . . . -20 to +55°C (-4° to +131°  
F)

Operation/Storage Humidity: . . . . .15 to 90% relative humidity maximum  
Operation temperature: . . . . .10 to 40°C (50° to 104°F)  
Display: . . . . .LCD (Liquid Crystal Display)  
Measuring method: . . . . .Oscillometric  
Pressure sensor: . . . . .Semiconductor  
Measuring range:  
SYS: . . . . .60 to 255 mm Hg  
DIA: . . . . .40 to 200 mm Hg  
Pulse: . . . . .40 to 199 per minute  
Cuff pressure display range: . . . . .0-299 mm Hg  
Memory: . . . . .Automatically stores the last 120 measurements for 2 users (total 240)  
Measuring resolution: . . . . .1 mm Hg  
Accuracy: . . . . .Pressure within  $\pm 3$  mm Hg or 2% of reading >200 mm Hg  
Pulse  $\pm 5\%$  of the reading  
Power source: . . . . .a)4 AAA batteries, 1.5 V  
b)AC adapter 6 V DC 600 mA (voltage 4.5 V DC to 6 V DC)  
Accessories: . . . . .Cuff type: Wide range cuff for arm circumference 22-42 cm (8.7"-16.5")  
Storage case  
Technical alterations reserved.  
Made in China

### **11.How to contact us**

Microlife USA, Inc.  
1617 Gulf to Bay Blvd.  
Clearwater, FL 33755

**Toll Free Help Line: 1-800-568-4147**

Email: [custserv@microlifeusa.com](mailto:custserv@microlifeusa.com)  
[www.microlifeusa.com](http://www.microlifeusa.com)