



Instruction Manual

**Touch Screen
Blood Pressure
Monitor**

Model # BP3GT1-6B

QUESTIONS? 1-800-568-4147

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1. Introduction

1.1. Features of your Touch Screen Blood Pressure Monitor

Your blood pressure monitor is a fully automatic digital blood pressure measuring device for use by adults on the upper arm at home or in your doctor's/nurse's office. It enables very fast and reliable measurement of the systolic and diastolic blood pressure as well as the pulse by way of the oscillometric method. This device offers clinically proven accuracy and has been designed to be user friendly.

Before using, please read this instruction manual carefully and then keep it in a safe place. Please contact your doctor for further questions on the subject of blood pressure and its measurement.

Attention!

1.2. Important information about self-measurement

- Self-measurement means control, not diagnosis or treatment. Unusual values must always be discussed with your doctor. Under no circumstances should you alter the dosages of any drugs prescribed by your doctor.
- The pulse display is not suitable for checking the frequency of heart pacemakers.
- In cases of irregular heartbeat, measurements made with this instrument should only be evaluated after consultation with your doctor.

Electromagnetic interference:

The device contains sensitive electronic 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.

2. Important information on blood pressure and its measurement

2.1. How does high/low blood pressure arise?

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.

2.2. Which values are normal?

Blood pressure is too high if your diastolic pressure is above 100 mmHg and/or your systolic blood pressure is over 160 mmHg, **while at rest**. In this case, please consult your physician immediately. Long-term values at this level endanger your health due to continual damage to the blood vessels in your body.

If your systolic blood pressure values are between 140 mmHg and 159 mmHg and/or the diastolic blood pressure values are between 90 mmHg and 99 mmHg, consult your physician. Regular self-checks are necessary.

If you have blood pressure values that are too low (i.e., systolic values under 105 mmHg and/or diastolic values under 60 mmHg), 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 drug doses prescribed by your physician.

Which values are normal?

The following standards for assessing high blood pressure (in adults) have been established by the National Institutes of Health JNC7, 2003.

Category	Systolic (mmHg)	Diastolic (mmHg)
Normal	<120	and <80
Pre-Hypertension	120-139	or 80-89
Hypertension		
Stage 1 Hypertension	140-159	or 90-99
Stage 2 Hypertension	≥160	or ≥100

Further information

- If your values are mostly normal under resting conditions but exceptionally high under conditions of physical or psychological stress, it is possible that you are suffering from so-called "labile hypertension." Consult your doctor.
- Correctly measured diastolic blood pressure values above 120 mmHg require immediate medical treatment.

This device is not intended for use on children 12 years of age or younger.

2.3. What can be done if regular high or low values are obtained?

- 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 hypertension. The latter group can be ascribed to specific organ malfunctions. Please consult your doctor for information about the possible origins of your own increased blood pressure values.
- 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

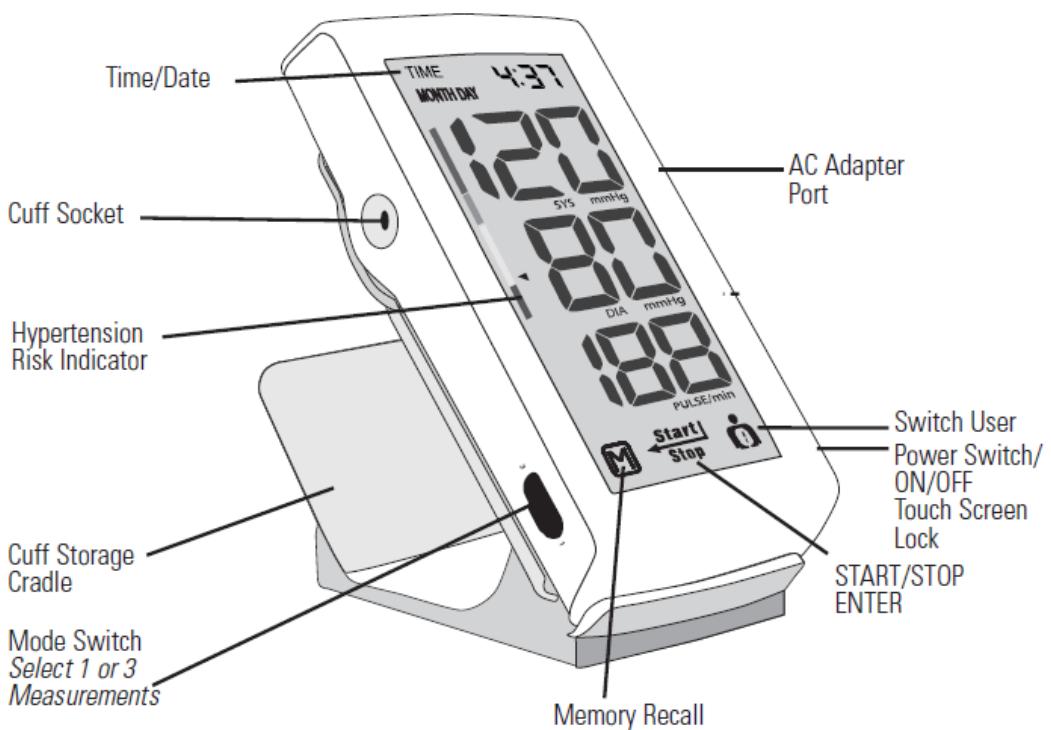
- Give up smoking completely.
- Drink only moderate amounts of alcohol.
- Restrict your caffeine consumption (e.g., coffee).

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.

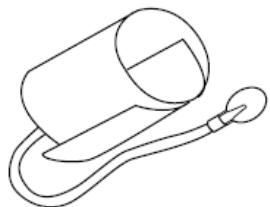
3. Components of your blood pressure monitor

a) Measuring unit

**b) Wide Range Cuff:**

For arm circumference 22 cm-46 cm (8.7" - 18.1")

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

**Please Note:**

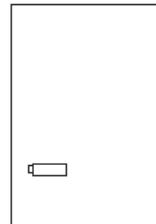
Arm circumference should be measured with a measuring tape in the middle of the relaxed upper arm. Do not force cuff connection into the opening. Make sure the cuff connection is not pushed into the AC adapter port. If the cuff is too small, call 1-800-568-4147 for further information. This unit will only work accurately with the included cuff.

4. Using your blood pressure monitor for the first time

4.1. Inserting the batteries

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



Discharged
Battery

Attention!

- After the low battery indicator appears, the device won't function until the batteries have been replaced.
- Please use "AAA" Long-Life or Alkaline 1.5 V batteries.
- If the blood pressure monitor is not used for long periods, remove the batteries from the device.

4.2. Power switch

To activate your monitor, push the switch on the right hand side downwards to the unlock position.



4.3. Using the interactive touch screen

This monitor features an interactive touch screen which operates similarly to traditional buttons, but requires only a light touch of the finger to operate.

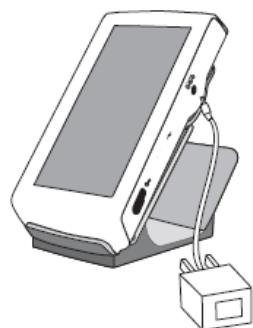
The following functions are made easier through the interactive touch screen:

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

4.5. Using the AC power adapter

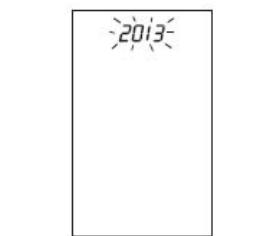
You may also operate this monitor using the included AC adapter. Use only the included AC adapter to avoid damaging the unit.

- a) Ensure that the AC adapter and cable are not damaged.
- b) Plug the adapter cable into the AC adapter port on the right side of monitor.
- c) Plug the AC adapter into a 110 V power socket (U.S. or Canada).
- d) Test that power is available by switching the screen lock located on the right side of the monitor off and on. The screen display will be visible if the power is available.

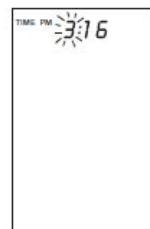


4.4. Setting the date and time

1. After the new batteries are activated and the monitor is unlocked, the year number flashes in the display. You can advance the year by pressing minus and plus. To confirm and then set the month, press enter.
2. You can now set the month using the minus and plus. To confirm and then set the day, press enter.
3. Please follow the instructions above to set the day, hour and minutes.
4. Once you have set the last minute and pressed enter, 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 down for approximately 3 seconds until the year number starts to flash. Now you can enter the new values as described above.
6. To bypass setting date and time, press the time.



-- ← +
Enter



-- ← +
Enter

Note:

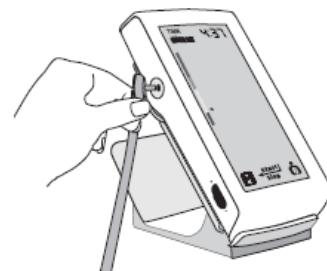
- No power is taken from the batteries while the AC adapter is connected to the instrument.
- If the power is interrupted during a measurement (e.g., by removal of the adapter from the wall socket), the instrument must be reset by removing the plug from the instrument.

If you have any questions regarding the AC adapter, call Blood Pressure Support at 1-800-568-4147.

4.6. Cuff tube connection

Insert the cuff tube into the opening on the left side of the instrument.

Note: This unit will only work accurately with the included cuff.



4.7. Select the user

This blood pressure monitor is designed to store 120 measurements for each of two users. In addition, there is a guest mode in which results are not stored.

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

- a) With the power switch on and the unit in standby, press and hold the user to cycle through users ("1," "2" or guest mode).
- b) To confirm your selection wait 2-3 seconds.

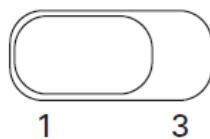


Guest Mode

4.8. Select the measuring mode: standard or measurement 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 left side of the instrument down to Position "1."
- b) To select Averaging mode push the switch upward to Position "3." Note the "MAM" icon will illuminate on the display.



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 average.



4.9. Measurement averaging mode technology (MAM)

- In Measurement 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 adjusting the switch as described in section 4.8, the selected Measurement 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.
- There is a resting period of 15 seconds between measurements. An hourglass will appear during this period.

5. Measurement procedure

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

5.1. Before 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 ten 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 mmHg).

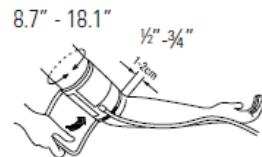
5.2. Common sources of error

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 mmHg.
- 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.

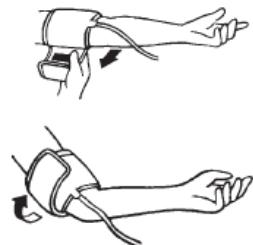
5.3. Fitting the cuff

- a) The cuff is pre-formed for easier use. Remove tight or bulky clothing from your upper arm.
- b) Position the cuff on the arm as illustrated, so that the tube is closer to your lower arm. Make certain that the lower edge of the cuff, with the red edge, lies approximately 1/2" to 3/4" (1 to 2 cm) above the elbow and that the tube is closer to the inner side of the arm.

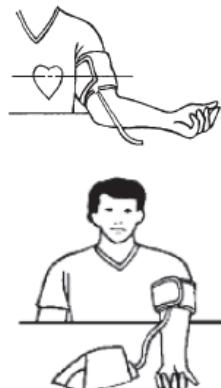


IMPORTANT: The red strip on the edge of the cuff (Artery Mark) must lie over the artery which runs down the inner side of the arm.

TIP: Align red artery mark to pinky finger.



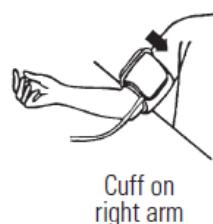
- c) To secure the cuff, wrap it around your arm and press the hook and loop material together.
- d) There should be little free space between the arm and the cuff. You should be able to fit 2 fingers between your arm and the cuff. Clothing must not restrict the arm. Any piece of clothing which does 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 the tube is not kinked.
- f) Remain seated quietly for two 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.

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



5.4. Measuring procedure

After the cuff has been appropriately positioned the measurement can begin:

- a) Press START. After a series of short beeps, the pump begins to inflate the cuff. On the display, the increasing cuff pressure is continually shown.
- b) After automatically reaching an individual pressure, the pump stops and the pressure slowly falls. The cuff pressure is displayed during the measurement.
- c) When the device has detected your pulse, the heart symbol in the display begins to blink.
- d) 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.
- e) The measurement results are displayed until you switch the device off by locking the touch screen.
- f) When the unit is set to the MAM (measurement 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 before the next reading begins.

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.

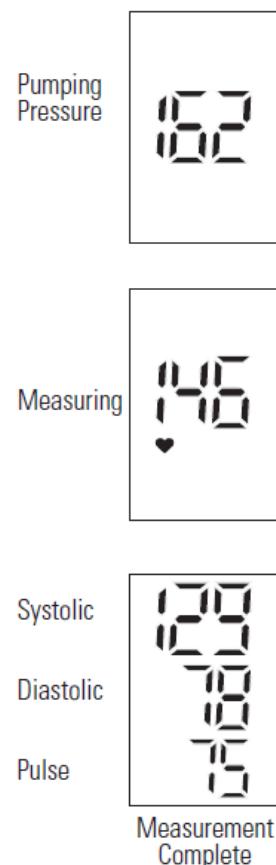
5.5. Memory – displaying the last 120 measurements

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, press "M." The display first shows "A," then shows an average of all measurements stored in the unit. Please note: Measurements for each user are averaged and stored separately. Be certain that you are viewing the measurements for the correct user.

Pressing "M" again displays the previous value. Repeat to scroll to that stored reading. To move out of viewing memories, press STOP.



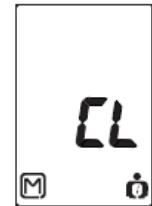
Memory full

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". If you do not want to clear the values, press STOP. To permanently clear the memory, press "M" while "CL" is flashing.



Individual values cannot be cleared.

5.6. Discontinuing a measurement

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

5.7. Setting the medication reminder

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

1. To set an alarm time, the instrument must be in standby mode (unlit screen) and time/date must be set (see section 4.4). Press and hold the word "TIME" for approximately 7 seconds, until the bell symbol appears in the bottom left of the display. Release the buttons. The flashing "1" in the display indicates that the first alarm time can now be set. To confirm, press enter.

TIME

8:00

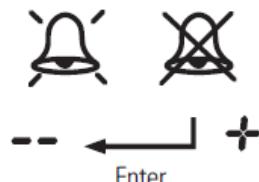


To set a second alarm time, proceed as above but press plus to toggle to alarm "2." To confirm, press enter.

2. The hour display will now flash. Use plus and minus to select the alarm hour. To confirm and then set the minute, press enter.



3. Please follow the instructions above to set the minute.
4. Once the minute is set, the bell symbol will flash. Use the minus and plus buttons to set the alarm as active (bell) or inactive (crossed-out bell). To confirm, press enter.



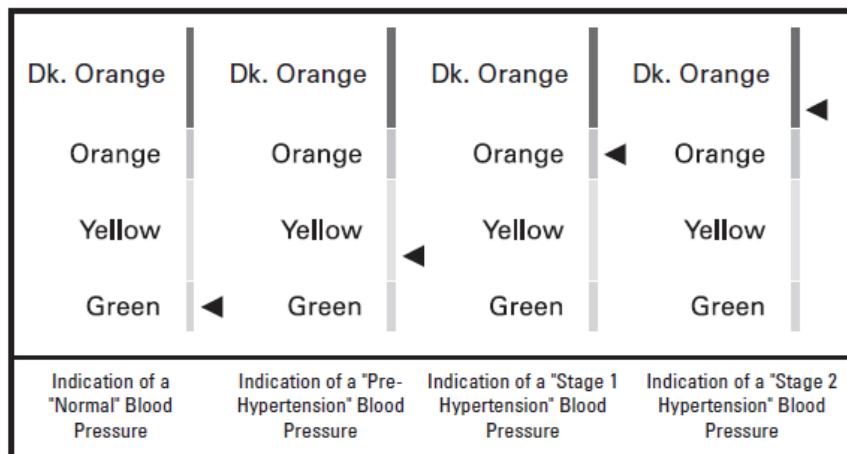
- An active alarm time is indicated by the bell symbol in the display.
- The alarm will sound at the set time every day.
- To switch off the alarm when it is sounding, press STOP.
- To permanently switch off the alarm, proceed as above (steps 1-4) and select the crossed-out bell symbol. The bell will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

5.8. Hypertension risk indicator

The bars on the left-hand edge of the display show you the range within which the indicated blood pressure value lies. Depending on the position of the triangle indicator, the readout value is either within the normal (green), borderline (yellow) or danger (orange, dark orange) range.

The classification is based on standards established by the National Institutes of Health JNC7, 2003.

Refer to the chart in section 2.2 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 your triangle is in the green zone, your measurement is "Normal," according to NIH standards.
- If your triangle is in the yellow zone, your measurement is "Pre-Hypertension."
- If your triangle is in the orange zone, it is "Stage 1 Hypertension."
- If your triangle is in the dark orange zone, it is "Stage 2 Hypertension."

5.9. Irregular heartbeat detector

The appearance of the irregular heartbeat 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.

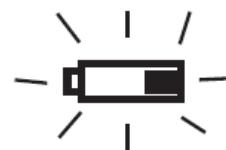
If pulse irregularities occur during the measurement, the irregular heartbeat symbol is displayed with the measurement.

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.

5.10. Battery charge 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 (if at least one of the batteries still has some charge). 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 further measurements and must replace the batteries.



1. Open the battery compartment on the bottom of the instrument.
2. Replace the batteries – ensure they are correctly connected, as shown on the symbols in the compartment.
3. The memory retains all values although date and time (and possibly 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 4.4.

Note:

Use four new, Long-Life 1.5 V AAA 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.

Using rechargeable batteries

You can also operate this instrument using rechargeable batteries.

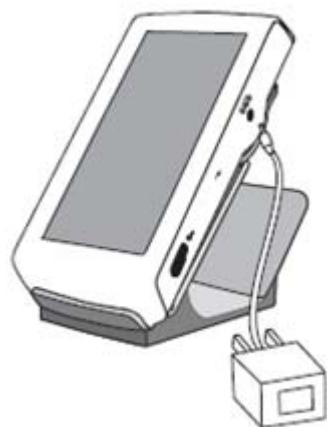
- Please use only type "NiMH" reusable batteries.
- If the battery symbol () appears, the batteries must be removed and recharged. They must not remain inside the instrument, as they may become damaged through total discharge even when switched off. The batteries must NOT be discharged in the blood pressure monitor. If you do not intend to use the instrument for a week or more, always remove the rechargeable batteries.
- Recharge these batteries using an external charger and follow manufacturer's instructions carefully.

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

Use only the included AC Adapter to avoid damaging the unit.

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

When the AC adapter is connected, no battery current is consumed.



6. 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. The App can be executed on a number of mobile platforms with the following specifications:



Compatibility:

- Apple® devices running iOS 8.0 or higher on iPhone®, iPad®, and iPod touch®.
- Android® phones running Android® 4.4.2 or higher.

Questions?

- To access the tutorial, go to the App home screen (Microlife Connected Health) and press the "Settings" button.
- Press "Tutorial" and select your topic.

6.1 Bluetooth® Icon Indicator

The bluetooth® icon indicator on your blood pressure monitor, located in the upper left portion of the screen, is designed to provide information about the connection between your device and the monitor. Please note the following:

- The bluetooth® icon on your blood pressure monitor will flash initially when ready to pair with a device, and continue flashing for 2 minutes until pairing occurs,
- If pairing does not occur within 2 minutes, the Bluetooth® function on the monitor will automatically turn off.
- If the bluetooth® icon flashes for 10 seconds and then turns off, there is a problem with the connection.
- The icon will remain unblinking on the monitor when data is uploading to the App.



Bluetooth
Icon

Troubleshooting: Bluetooth® connection:

- Monitor: Turn off and wait for 1 minute.
- Device (eg. phone): Return to the Main Menu and reselect Download Data again.

6.2 iOS devices:**Setting up your iOS device:**

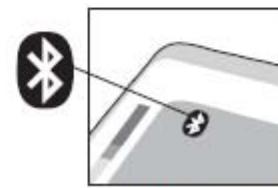
- In the settings menu, turn Bluetooth® “ON”
- Select the Microlife Connected Health App
- Select “User Profiles”
- Select “+” at the top of the screen to create a new user profile.
- Review the terms of service, and select “Accept” to proceed.
- Enter your information and select the check mark to confirm.

Pairing the devices for the first time:*On your device:*

- Open the Microlife Connected Health App and select “Settings.”
- Select “Pair Device.”

On your blood pressure monitor:

- Press and hold the power button on your monitor for 5 seconds. Once connected, a Bluetooth® icon will appear on the blood pressure monitor’s screen.
- “OK” will be displayed if the pairing is successful.

**Setting up your blood pressure monitor:**

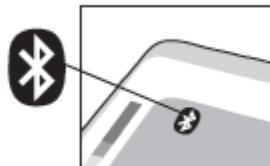
Confirm the correct user is selected on your blood pressure monitor:

- Confirm the user icon on the bottom right hand side of the monitor screen is set to user 1 or 2.
- 

Saving a measurement automatically (iOS):

- Open the Microlife Connected Health App
- Select “Download data.”
- Take your blood pressure.
- Once complete, the blood pressure monitor will automatically activate a Bluetooth® connection with your iOS device. A Bluetooth® icon will appear on the monitor’s screen when connected. (The devices must have been previously paired, and be in range).
- An image of a blood pressure monitor and a phone connecting will appear, and the readings will transfer.
- To save your data and return to the main menu, select the check mark in the upper right hand corner.

Your measurements will now be available for review through the “View Data” button on the home screen.



Bluetooth icon



Data Download



User Profiles



Download data



Your measurements will now be available for review through the “View Data” button on the home screen.

Saving readings stored on your monitor (iOS):

- Open the Microlife Connected Health App
- Select the profile which you would like to upload. Once selected, the profile will be highlighted, and check mark will appear to its left.
- On your blood pressure monitor: Press and hold the power button for 5 seconds. Once connected, a Bluetooth® icon will appear on the blood pressure monitor’s screen.
- Follow steps 4 & 5 in “saving measurements manually”

6.3 Android OS Phones

Setting up your phone:

- In the settings menu, turn Bluetooth® “ON”
- Select the Microlife Connected Health App
- Select “User Profile”
- Select “+” at the top of the screen to create a new user profile.
- Review the terms of service, and select “Accept” to proceed.
- Enter your information and select the check mark to confirm.

On your blood pressure monitor:

- Confirm the correct user is selected on your blood pressure monitor by checking the icon on the bottom right hand side of the monitor screen is set to your preference (user 1 or 2).



7. Error messages/troubleshooting

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

**Err
2**

Error No.	Possible cause(s)/Solutions
ERR 1	The tube may have loosened, or no pulse was detected*. Ensure cuff connections are tight with proper cuff placement. See section 5.3.
ERR 2	Unnatural pressure impulses influenced the measurement result. Reason: The arm was moved during the measurement (artefact). Repeat measurement, keeping still and quiet.
ERR 3	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.
ERR 5	The measured readings indicated an unacceptable difference between systolic and diastolic pressures. Take another reading following directions carefully. Contact your doctor if you continue to get unusual readings.

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.**

Touch screen troubleshooting

- 1) If the touch screen display "locks up" (functions are disabled), disconnect the power (unplug AC adapter or remove batteries), wait for 15 seconds, and then reconnect the power to restore the device to its normal functionality.
- 2) Do not touch the screen while powering on (unlocking side switch) to ensure no lost touch screen sensitivity (a temporary condition).
- 3) Ensure touch screen is dry before powering on the device.

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:

Malfunction	Remedy
The display remains blank when the instrument is switched on although the batteries are in place.	1. Check batteries for the correct polarity. 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. 2. Measure blood pressure again in peace and quiet, carefully following the details in Section 5.

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 5.2 " Common sources of error. " Repeat the measurement. Please note: Blood pressure fluctuates continually so successive measurements will show some variability.
Blood pressure values differ from those measured by my doctor.	Record the daily development of the measured values and consult your doctor. Please note: Individuals visiting their doctor frequently experience anxiety which can result in a higher reading than at home under resting conditions.
After the instrument has inflated the cuff the pressure falls very slowly, or not at all. (No reasonable measurement possible.)	1. Check cuff connections. 2. Ensure the unit has not been tampered with.

8. Care and maintenance

- a) Do not expose the device to either extreme temperatures, humidity, dust or direct sunlight.
- b) The cuff contains a sensitive airtight bubble. Handle this cuff carefully and avoid all types of stress through twisting or buckling.
- c) Clean the device with a soft, dry cloth. Do not use gas, thinners or similar solvents. Spots on the cuff can be removed carefully with a damp cloth and soapsuds. **The cuff must not be washed in a dishwasher, clothes washer or submerged in water.**
- d) Handle the tube carefully. Do not pull on it. Do not allow the tubing to kink and keep it away from sharp edges.
- e) Do not drop the monitor or treat it roughly in any way. Avoid strong vibrations.
- f) **Never open the monitor.** This invalidates the manufacturer's warranty.



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



☞ Further information

Blood pressure is subject to fluctuations, even in healthy people.

Comparable measurements always require the same conditions (quiet conditions). If fluctuations in readings are larger than 15 mmHg, and/or you hear irregular pulse tones, consult your doctor.

Never attempt to repair the instrument yourself.

Any unauthorized opening of the instrument invalidates all warranty claims.

9. Warranty

Your blood pressure monitor is **guaranteed for five years** against manufacturer defects for the original purchaser only, from date of purchase. The warranty does not apply to damage caused by improper handling, accidents, professional use, not following the operating instructions or alterations made to the instrument by third parties.

Five year warranty only applies to the instrument. All accessories including the cuff, AC adapter, cable, cradle and software are guaranteed for one year.

There are no user serviceable parts inside. Batteries or damage from old batteries is not covered by the warranty.

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

10. Certifications

Device standard:	Device corresponds to the requirements of the standard for non-invasive blood pressure monitors: AAMI/ANSI SP10 IEC 60601-1 IEC 60601-1-2
Electromagnetic compatibility:	Device fulfills the stipulations of the International standard IEC 60601-1-2
Clinical testing:	Clinical performance tests were carried out in the US according to ANSI/AAMI SP10 standard.

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

Keep Dry. 

Clinical testing: Testing per the ESH Protocol and ISO 81060-2:2013 was conducted on blood pressure units using the same measurement technology.

Expected Service Life:

Monitor:	5 years
Cuff:	2 years.

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.

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

FCC Compliance:

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 verified 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 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 on and off, the user is encouraged to try to correct the interference by increasing the distance between the product and the affected device; or if applicable, reorientation the receiving antenna, or moving the product's power plug to another receptacle.or consult the dealer or an experienced radio/TV technician for help.

Models with wireless comply with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. For body worn operation, this device has been tested and meets FCC RF exposure guidelines. When used with an accessory that contains metal may not ensure compliance with FCC RF exposure guidelines.

11. Technical specifications

1. Weight:326 g(with batteries)
2. Size:82x160x35 mm
3. Storage/ transportation Condition: Temperature: -20°C ~ +55°C (Humidity: 15% - 90% RH; non-condensed)
4. Operation Condition: Temperature: 10°C ~ 40°C (Humidity: 15% ~ 90% RH; non-condensed)
5. Display: LCD-Display(Liquid Crystal Display)
6. Measuring method: Oscillometric
7. Pressure sensor: Capacitive
8. Measuring range:
 - Pressure (SYS/DIA): 20 to 280 mmHg
 - Pulse: 40 to 200 beats/per min
9. Cuff pressure display range:0-299 mmHg
10. Memory: Automatically stores the last 120 measurements for 2 users(total 240)
11. Measuring resolution: 1 mmHg
12. Accuracy: Pressure within ± 3 mmHg; Pulse ± 5% of the reading
13. Power source: a) 4 AAA batteries, 1.5 V ; b) Certificated AC adapter 6 V DC 600 mA(voltage 4.5 V DC to 6 V DC)
14. Accessories:
 - Wide range cuff for arm circumference 22-46 cm (8.7"-18.1")
 - Cradle
 - Storage case
15. Adaptor Vendor: Deevan
16. Adaptor model: DSA-6E-05
17. atmospheric pressure: (80-105) KPa

Operating instructions

- 1) comfortably seated
- 2) legs uncrossed
- 3) feet flat on the floor
- 4) back and arm supported
- 5) middle of the CUFF at the level of the right atrium of the heart



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.

***Not for use on children 12 years of age or younger.**

12. How to contact us

Microlife USA, Inc.

1617 Gulf to Bay Blvd

2nd Floor

Clearwater, FL 33755

Toll Free Customer Support Line: 1-800-568-4147

Email: custserv@microlifeusa.com

Fax: (727) 451-0492

www.microlifeusa.com

safety warning:

1. To avoid accidental strangulation, keep this product away from children and baby.
2. If this equipment is modified, appropriate inspection and testing must be conducted to ensure continued safe use of equipment
3. Only use accessories provided with the equipment. Otherwise erroneous results will be recorded.
4. regarding the effect of blood flow interference and resulting harmful injury to the PATIENT caused by continuous CUFF pressure due to connection tubing kinking;
5. indicating that too frequent measurements can cause injury to the PATIENT due to blood flow interference;
6. regarding the application of the CUFF over a wound, as this can cause further injury;
7. regarding the application of the CUFF and its pressurization on any limb where intravascular access or therapy, or an arterio-venous (A-V) shunt, is present because of temporary interference to blood flow and could result in injury to the PATIENT;
8. regarding the application of the CUFF and its pressurization on the arm on the side of a mastectomy;
9. regarding the information that pressurization of the CUFF can temporarily cause loss of function of simultaneously used monitoring ME EQUIPMENT on the same limb;
10. regarding the need to check (for example, by observation of the limb concerned) that operation of the AUTOMATED SPHYGMOMANOMETER does not result in prolonged impairment of the circulation of the blood of the PATIENT.

Guidance and manufacturer's declaration-electromagnetic emissions		
<p>The <u>BP3GT1-6B</u> is intended for use in the electromagnetic environment specified below.</p> <p>The customer or the user of the <u>BP3GT1-6B</u> should assure that it is used in such an environment.</p>		
Emission test	Compliance	Electromagnetic environment-guidance
RF emissions CISPR 11	Group 1	The <u>BP3GT1-6B</u> uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class B	The <u>BP3GT1-6B</u> is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations /flicker emissions IEC 61000-3-3	Compliance	

Guidance and manufacturer's declaration-electromagnetic immunity			
The <u>BP3GT1-6B</u> is intended for use in the electromagnetic environment specified below.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment-guidance
Electrostatic discharge(ESD) IEC 61000-4-2	± 6 kV contact ± 8 kV air	± 6 kV contact ± 8 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%
Electrical fast transient/burst IEC 61000-4-4	± 2kV for power supply lines ± 1kV for input/output lines	± 2kV for power supply lines Not applicable	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	± 1kV line(s) to line(s) ± 2kV line(s) to earth	± 1kV differential mode Not applicable	Mains power quality should be that of a typical commercial or hospital environment.
Voltage Dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	<5% UT(>95% dip in UT) for 0,5 cycle 40% UT(60% dip in UT) for 5 cycles 70% UT(30% dip in UT) for 25 cycles <5% UT(>95% dip in UT) for 5 s	<5% UT(>95% dip in UT) for 0,5 cycle 40% UT(60% dip in UT) for 5 cycles 70% UT(30% dip in UT) for 25 cycles <5% UT(>95% dip in UT) for 5 s	Mains power quality should be that of a typical commercial or hospital environment. If the user of the <u>BP3GT1-6B</u> requires continued operation during power mains interruptions, it is recommended that the <u>BP3GT1-6B</u> be powered from an uninterruptible power supply or a battery.
Power frequency(50, 60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	The <u>BP3GT1-6B</u> power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
NOTE UT is the a.c. mains voltage prior to application of the test level.			

Guidance and manufacturer's declaration-electromagnetic immunity			
The <u>BP3GT1-6B</u> is intended for use in the electromagnetic environment specified below.			
The customer or the user of the <u>BP3GT1-6B</u> should assure that is used in such and environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment-guidance
<p>Conducted RF IEC 61000-4-6</p> <p>Radiated RF IEC 61000-4-3</p>			
			<p>Portable and mobile RF communications equipment should be used no closer to any part of the <u>BP3GT1-6B</u> including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.</p> <p>Recommended separation distance:</p> <p>Conducted RF</p> $d = 1,2 \sqrt{P}$ <p>IEC 61000-4-6</p> $d = 1,2 \sqrt{P} \quad 80\text{MHz to } 800 \text{ MHz}$ $d = 2,3 \sqrt{P} \quad 800\text{MHz to } 2,5 \text{ GHz}$ <p>Radiated RF</p> <p>Where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in metres (m).</p> <p>IEC 61000-4-3</p> <p>Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey,^a should be less than the compliance level in each frequency range.^b</p> <p>Interference may occur in the vicinity of equipment marked with the following symbol:</p> 
<p>NOTE1 At 80 MHz and 800 MHz, the higher frequency range applies.</p> <p>NOTE2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.</p>			
<p>a Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the <u>BP3GT1-6B</u> is used exceeds the applicable RF compliance level above, the <u>BP3GT1-6B</u> should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the <u>BP3GT1-6B</u>.</p> <p>b Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.</p>			

**Recommended separation distance between
portable and mobile RF communications equipment and the BP3GT1-6B**

The BP3GT1-6B is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the BP3GT1-6B can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the BP3GT1-6B as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter W	Separation distance according to frequency of transmitter m		
	150 kHz to 80 MHz $d = 1,2\sqrt{P}$	80 MHz to 800 MHz $d = 1,2\sqrt{P}$	800 MHz to 2,5 GHz $d = 2,3\sqrt{P}$
0,01	0,12	0,12	0,23
0,1	0,38	0,38	0,73
1	1,2	1,2	2,3
10	3,8	3,8	7,3
100	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in metres (m) can be estimated using the equation applicable to the frequency of the transmitter, where p is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.