

**ESH**  
Protocol Embedded

**AHA**  
Protocol Embedded

**WatchBP<sup>®</sup> home BT**

**Accurate home blood pressure  
measurements  
with the WatchBP Home BT.**

**Instruction Manual**



**microlife<sup>®</sup>**

## **Federal Communications Commission (FCC) Statement**

changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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.

**Note:** 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:

- 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.)
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Microlife WatchBP Home BT is the world's first digital blood pressure measurement device that strictly follows European Society of Hypertension (ESH) and American Heart Association (AHA) recommendations for home blood pressure measurement. Using the WatchBP Home BT device helps you collect accurate home blood pressure measurement your doctor can trust. This WatchBP Home BT device has been clinically validated according to the ESH protocol.

## Indications For Use

The Microlife Upper Arm Automatic Digital Blood Pressure Monitor, Model WatchBP Home BT (BP3MX1-1C) is a device intended to measure the systolic and diastolic blood pressure and pulse rate of an adult individual with arm cuff circumference sizes ranging from 22 -42 cm by using a non-invasive oscillometric technique in one inflatable cuff being wrapped around the upper arm. The memory data can be transferred to the PC (personal computer) running the WatchBP Analyzer Home software by connecting the monitor via cable. The device can also be used in connection with smart mobile devices running the APP and via Bluetooth. The device is intended for use by patient at home or by health care givers in primary care settings.

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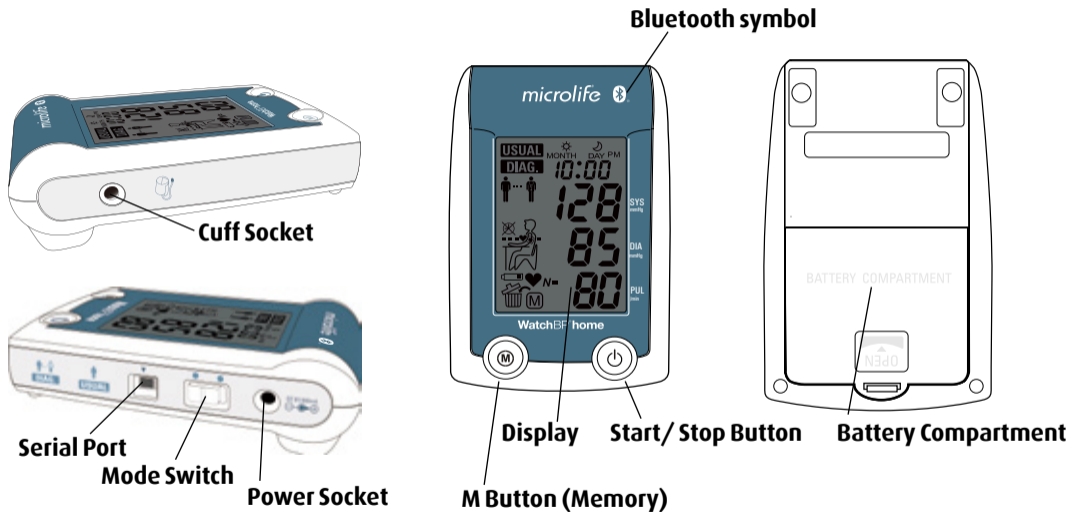
## **Eight steps for measure blood pressure properly**

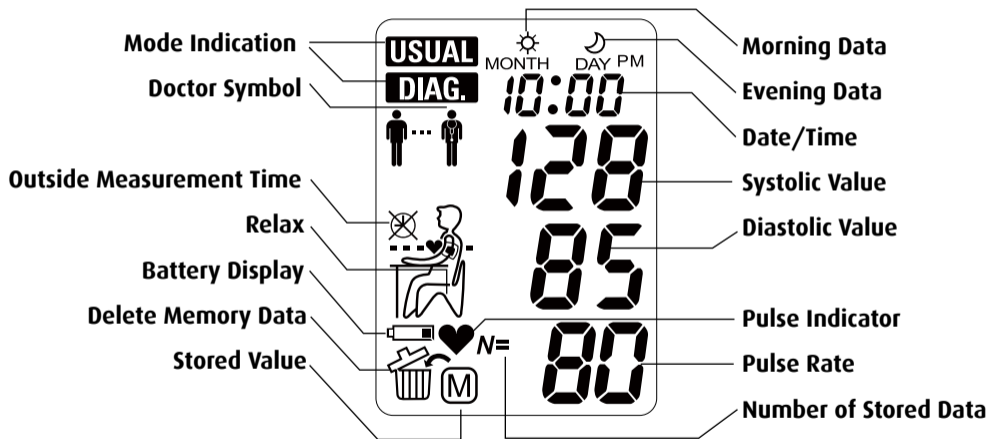
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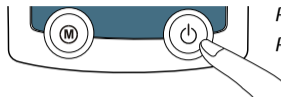


# Before using WatchBP Home BT for the first time

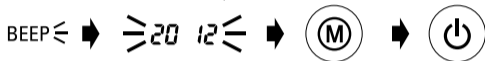
## Activating the Device

Open the battery compartment on the rear of the device and insert 4x AA alkaline batteries according to the battery polarities (+ / -) and close the compartment.

1) **Set the year** – Upon removing the protective strip or installing new batteries, the Year number flashes in the display. Use the M Button to select the Year. Press the Start/ Stop Button to confirm your selection.



Press M Button to make selection  
Press Start/ Stop Button to confirm



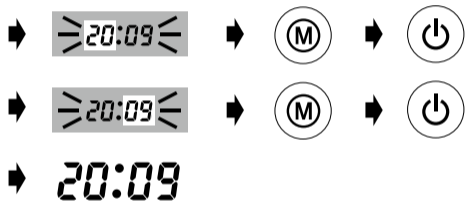
2) **Set the month** – Press the M Button to set the Month. Press the Start/ Stop Button to confirm.



3) **Set the day** – Press the M Button to set the Day. Press the Start/ Stop Button to confirm.



4) **Set the time** – Once you have set the Hour and Minutes and pressed the Start/ Stop Button, the date and time are set, and the current time is displayed.

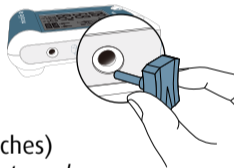


5) If you want to change the date and time, take out one battery from the battery compartment briefly and put it back. The Year number will flash. Complete the process as described above.

## Selecting the correct cuff

The WatchBP Home BT device is available with different cuff sizes. If the cuff provided with the device is an unsuitable size, please consult your doctor.

*\* please use only Microlife cuffs!*



### **M (Medium size)**

22 - 32 cm (8.7 - 12.6 inches)

*M is the correct size for most people.*



### **L (Large size)**

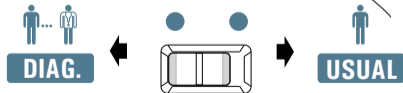
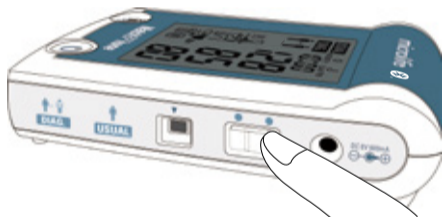
32 - 42 cm (12.6 - 16.5 inches)



# Taking measurements using WatchBP Home BT

Prior to each measurement, use the Mode Switch on the right side of the device to select the proper measurement mode. The two options include:

«**DIAG.**» (Diagnostic) or «**USUAL**» (Usual) mode.

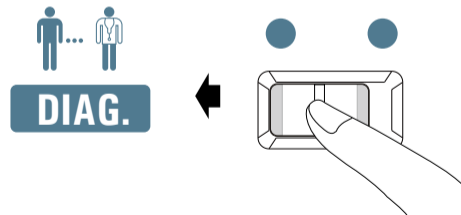


## «**DIAG.**» Mode

The «**DIAG.**» mode should be selected as requested by your doctor when blood pressure is measured in accordance with the measurement guidelines of the European Society of Hypertension (ESH).

### ESH

Protocol Embedded



## No measurements on non-work days

In «**DIAG.**» mode, blood pressure measurements are taken **on 7 consecutive working days** (or normal week days). **No readings should be taken on «non-working» days** (or particularly relaxing days) in this mode!



**7** working days

## Two sets of measurements per day

ESH guidelines recommend one double measurement taken in the morning between 06:00 - 09:00 and one in the evening between 18:00 - 21:00. **Always perform measurements before taking your medication, unless otherwise directed by your doctor.**



ESH Guidelines

## Taking measurements using WatchBP Home BT (cont.)

### Extended measurement period

WatchBP Home BT has an extended measurement period and allows morning measurements between 04:00 - 12:00 and evening measurements between 18:00 - 24:00.



Extended Time



Outside these times, measurements cannot be taken and the symbol on the right will be displayed on the screen.

### Evaluation

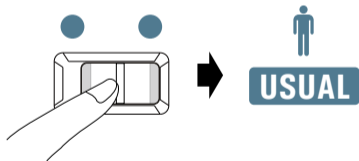
After measurements have been carried out for a total of 7 working days, take the device to your doctor for evaluation of your home blood pressure data.



When measurements have been carried out for the full 7 days, the doctor symbol will flash on the screen.

## «USUAL» Mode

The «**USUAL**» mode is selected for regular blood pressure measurement. In «**USUAL**» mode, three consecutive measurements are taken automatically at 30 seconds interval in default. The results are averaged and displayed. The averaged readings are automatically stored for later evaluation by your doctor.



- ❖ *The number of measurements, countdown time, measurement interval time and average feature are flexible and programmable. Contact Microlife for detail.*

## 250 measurements safely stored

The WatchBP Home BT device can store up to 250 averaged measurement readings in «**USUAL**» mode.



- ❖ *When memory is full, each new reading will automatically overwrite the earliest measurement.*
- ❖ *To review the last three individual measurements, press and hold the M button until a “1” is displayed on the screen. The values of the last three individual measurements are displayed sequentially.*

# Eight steps for measure blood pressure properly

## Step 1

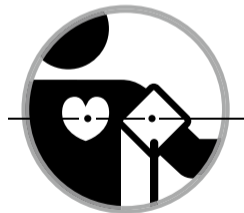
Avoid taking measurements directly after eating, drinking or smoking. Allow at least one hour between these activities and measurement of your blood pressure.



**1 Hour Before**

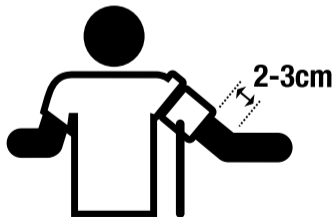
## Step 2

Prepare a chair and table for the measurement. The chair should have a vertical back-rest and the table should allow your upper arm to rest at the same height as your heart.



### Step 3

Remove all clothing covering or constricting the arm to be measured. Apply the cuff. Make sure the lower edge of the cuff is exactly 2–3cm from the inner fold of your arm. The tube connecting the cuff to the device should be placed on the inside of the arm. (*Additional visual instruction can be found on the cuff*)



### Step 4

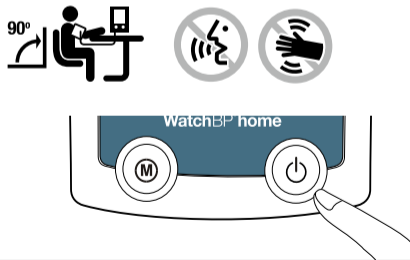
Sit down and relax for at least five minutes prior to the measurement.



## Eight steps for measure blood pressure properly (cont.)

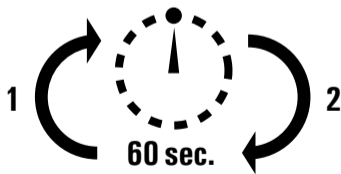
### Step 5

Sit upright and lean comfortably against the chair's backrest. Press the start button. The device will initiate a 60-second countdown in «**DIAG.**» mode or a 15-second countdown in «**USUAL**» mode. During the measurement do not move, cross your legs, or tense your arm muscles. Breathe normally and do not talk.



### Step 6 (in «**DIAG.**» mode)

One measurement cycle includes two measurements. Once the first measurement is complete, continue to relax as you wait for the second measurement. The second measurement will start after 60-seconds. During this time avoid any movement.



### Step 7 (in «DIAG.» mode)

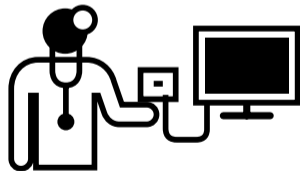
Once the two readings are complete, measurement data is automatically stored for future reference by your doctor. If an error displays after the readings, please repeat the first six steps once again.



**Automatically stored**

### Step 8 (in «DIAG.» mode)

When seven days of measurements have been collected, the Doctor Symbol will flash on the display. Do not forget to take your WatchBP Home BT device with you on your next visit to the doctor. (*Note: the doctor symbol is only displayed for measurements in «DIAG.» Mode.*)

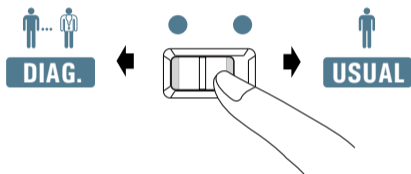




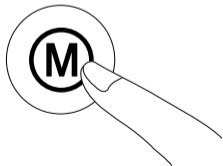
# Viewing, deleting and transferring measurements

## Viewing measurements

- 1) Use the Mode switch to first select the type of measurements you wish to view.



- 2) Then press the M Button.



## In «DIAG.» Mode

- 1) When the M Button is pressed, it briefly displays the total number of measurements stored, e.g. N=20 and then switches to the average of all readings.



→ N= 20



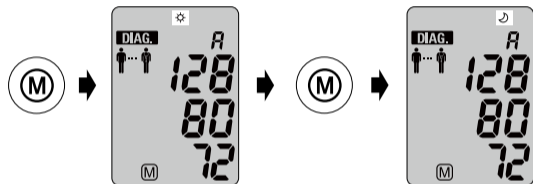
※ «A» is displayed when the number shown is the average of all data.



※ «- -» will display when the number of measurements is less than 12.



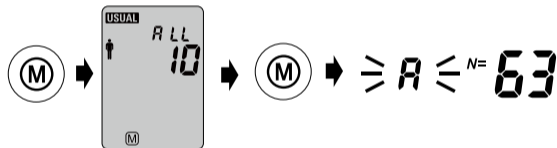
- 2) Press the M Button again to display the average of all morning data. Press the M Button once again to show the average of all evening data.



- 3) Press the M Button repeatedly to review all the individual readings one by one.  
 4) The daily average is displayed after the individual readings of the day.

### In «USUAL» Mode

- 1) When the M Button is pressed, it briefly displays the total number of measurements stored, e.g. N=63, followed immediately by the average of all measurements stored in memory.



- 2) All individual readings can be viewed by repeatedly pressing the M Button.

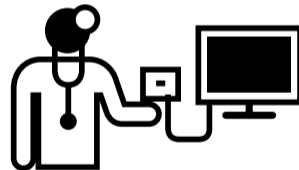


## Viewing, deleting and transferring measurements (cont.)

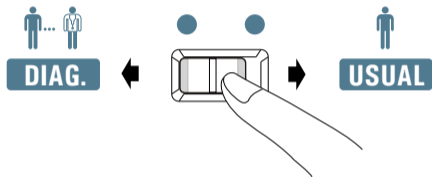
### Deleting measurements

Data from «**DIAG.**» and «**USUAL**» can be deleted independent of each other.

※ Only delete the stored measurements when you are sure that you no longer need the data.



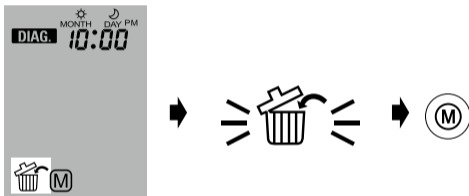
1) Use the Mode switch to select the mode of measurements you want to delete.



2) Press the M Button and hold it for 7 seconds until the Delete symbol flashes.



3) Release the M Button and press it once more while the Delete symbol flashes. The deleting is confirmed by the beep sound.



※ Only measurements in the selected mode will be deleted.

## Viewing, deleting and transferring measurements (cont.)

### Installation of the software program

The latest WatchBP Analyzer Software is available from the Microlife website.

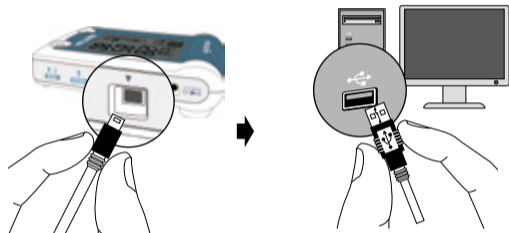
<https://www.microlife.com/support/software-professional-products>

Double click the download installer and simply follow the instructions provided in the installation window on the PC screen.

*❖ System Requirements for Software: 1GHz CPU. 512MB Memory, 4.5GB free hard disk space, Microsoft Windows 10/11.*

## Transferring data to the computer

- 1) Start the software program and connect the device to the computer using the cable supplied.
- 2) The date and time on the device automatically synchronize with the date and time on the PC when successfully connected with WatchBP Analyzer Home PC software.
- 3) Click **<Download>** button in the WatchBP Analyzer to transfer the measurement data on the device to a PC.



❖ See instruction manual of the WatchBP Analyzer for details.

## Viewing, deleting and transferring measurements

### Bluetooth connectivity

The measurement data in «**DIAG.**» and «**USUAL**» can be transferred to a Bluetooth enabled cell phone (android, iphone). Make sure that the phone has Bluetooth turned on before transferring measurements. Before connecting with the phone, please check if Bluetooth pairing is necessary.

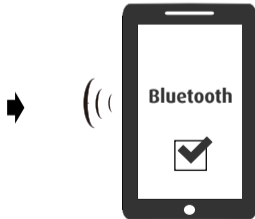
*Please download the «Microlife WatchBP Home» App. (referred to as App in this document) from Apple's App Store® or Google Play® before connecting your devices.*



Press and hold the M button for around 5 seconds, the unique 6-digit device ID of the unit is displayed. Open the «Microlife WatchBP Home» app on your smartphone. Go to «Dashboard». Click «Sync data» icon. Connect the device and confirm pairing. The measurement data on the device will upload to smartphone automatically when the connection is established.

#### WatchBP Home App Compatibility:

iPhone 6 or above running iOS 12.0 or higher. Android phones running Android 8 or above.



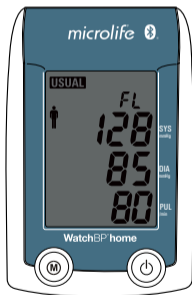
#### Questions?

*To access the tutorial, go to the App home screen (Microlife WatchBP Home) and press the "Settings and help" button. Press "Tutorial" and select your topic.*

After the finish of a blood pressure measurement, the Bluetooth also turns on and displays the 6-digit device ID awaiting the connection.

The screen will show “FL” if the connection fails.

*Bluetooth is not active when the blood pressure monitor device is recording data. The blood pressure monitor device will not sound any alarm with or without Bluetooth. The Bluetooth is used only to transfer data from point A to point B.*





# Batteries and power adaptor

## Battery indicator

When the batteries have ¼ power supply left, the Battery Symbol will flash each time the device is switched on.



## Replacing low batteries

When the batteries need to be replaced, the Battery Symbol will flash each time the device is switched on.

- 1) Open the battery compartment at the back of the device.
- 2) Replace the batteries – ensure correct polarity as shown by the symbols in the compartment.
  - ❖ Use 4 new, 1.5V, size AA alkaline batteries.
  - ❖ Do not use batteries beyond their date of expiry.
  - ❖ Remove batteries, if the device will not be used for a prolonged period.

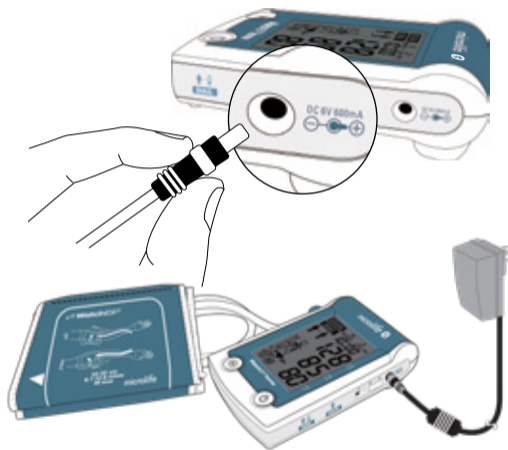
## Using a power adaptor

The WatchBP Home BT device can also be operated using a Microlife power adaptor (DC 6V, 600mA).

❖ *Only use Microlife branded power adaptors.*

- 1) Plug the adaptor cable into the Power Plug in the WatchBP Home BT device.
- 2) Plug the adaptor plug into the wall socket. When the power adaptor is connected, no battery power is consumed.

❖ *External power adaptor shall be fulfilled in compliance with the requirements of IEC 60601-1:2005.*



# Safety, care, accuracy test and disposal



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

## Safety and protection

This device may be used only for the purpose described in this booklet. The device comprises of sensitive components and must be treated with caution. The manufacturer cannot be held liable for damage caused by incorrect application.

**Caution:** Federal law restricts this device to sale by or on the order of a physician.



- Strangulation due to cables and hoses, particularly due to excessive length. Inhalation or swallowing of small parts, if some parts are small enough to be swallowed.
- Only activate the pump when cuff is installed.
- Do not use the device if you think it is damaged or if anything appears unusual.
- Read the further safety instructions in the individual sections of the instruction manual.
- Do not connect the device to a computer until prompted to do so by the computer software.

Observe the storage and operating conditions described in the “Technical specifications” section of this manual.



**Protect the device from water and moisture**



**Protect the device from direct sunlight**



**Protect the device from extreme heat and cold**



**Do not use this device close to strong electromagnetic fields such as mobile telephones or radio installations. maintain a minimum distance of 3.3m from such devices when using this unit.**



**Never open device**



**Protect device from impact and drops**

## Device cleaning and disinfecting

Use a soft cloth with one of the following recommended cleaning solutions to wipe the exterior of the device:

- Isopropyl alcohol (70% solution)



## Accuracy test

We recommend the WatchBP Home BT device be tested for accuracy every 2 years or after mechanical impact (e.g. being dropped). Please contact Microlife to arrange for an accuracy test.

## Cuff cleaning and disinfecting

DO NOT wash the cuff. DO NOT iron the cuff cover.

Wipe the cuff with 70% ethyl or isopropyl alcohol. Do not immerse hose. Allow to air-dry thoroughly before next use.



**Do not wash the cuff!**



**Do not iron the cuff!**

## Disposal

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

## Error messages

If an error occurs during measurement, the measurement is interrupted and an error message «Er» is displayed.



- *Please consult microlife, if this or any other problem occurs repeatedly.*
- *If you think the results are unusual, please read through the information in this instruction manual carefully.*

Error	Description	Potential cause and remedy
«Er 1»	<b>Signal too weak</b>	The pulse signals on the cuff are too weak. Re-position the cuff and repeat the measurement.
«Er 2»	<b>Error signal</b>	During the measurement, error signals were detected by the cuff, caused for instance by movement or muscle tension. Repeat the measurement, keeping your arm still.

«Er 3»	<b>No pressure in the cuff</b>	An adequate pressure cannot be generated in the cuff. A leak may have occurred. Replace the batteries if necessary. Repeat the measurement.
«Er 5»	<b>Abnormal result</b>	The measuring signals are inaccurate and no result can therefore be displayed. Read through the for performing reliable measurements and then repeat the measurement.

«HI»	<b>Pulse or cuff pressure too high</b>	The pressure in the cuff is too high (over 300 mmHg) OR the pulse is too high (over 200 beats per minute). Relax for 5 minutes and repeat the measurement.
«LO»	<b>Pulse too low</b>	The pulse is too low (less than 40 beats per minute). Repeat the measurement.

# Important facts about blood pressure and home measurements

Are home blood pressure measurements valuable?

Yes. The American Heart Association and European Society of Hypertension have demonstrated that home blood pressure measurements are important in determining accurate blood pressure.

- **Blood pressure** is the pressure of the blood flowing in the arteries generated by the pumping of the heart. Two data readings, the **systolic** (upper) value and the

**diastolic** (lower) value, are always measured.

- The **pulse rate** is the number of times the heart beats in a minute.
- **Permanent high blood pressure can damage your health and therefore must be treated!**
- Always discuss your home blood pressure measurement data with your doctor and tell him/her if you have noticed anything unusual or feel unsure. **Never rely on single blood pressure readings.**
- There are many causes of excessively **high blood pressure**. Your doctor will explain them in more detail and offer treatment when appropriate.
- Blood pressure is subject to wide fluctuations as the day progresses, and can be impacted by emotions, physical exertion and other conditions .

## Evaluating blood pressure data

The table on the right classifies blood pressure data for adults in accordance to the guidelines of the European Society of Hypertension (ESH). (Data in mmHg)

The higher value is the one that determines the evaluation. Example: a readout value between **150/85** or **120/98** mmHg indicates «Grade 1 Hypertension».

Category	Systolic	Diastolic
Optimal	< 120	< 80
Normal	120 - 129	80 - 84
High normal	130 - 139	85 - 89
Grade 1 Hypertension	140 - 159	90 - 99
Grade 2 Hypertension	160 - 179	100 - 109
Grade 3 Hypertension	≥ 180	≥ 110
Isolated Systolic Hypertension	≥ 140	< 90



# Technical specifications

<b>Operating condition:</b>	<ul style="list-style-type: none"> <li>• 10 to 40 °C (50 to 104 °F)</li> <li>• 15 - 90 % relative maximum humidity, Air pressure 700 to 1040 hPa.</li> </ul>
<b>Storage condition:</b>	<ul style="list-style-type: none"> <li>• -20 to 55 °C (-4 to 131 °F)</li> <li>• 15 - 90 % relative maximum humidity</li> </ul>
<b>Weight:</b>	• 385 g (including batteries)
<b>Dimensions:</b>	• 150 x 100 x 50 mm
<b>Measuring procedure:</b>	• Oscillometric, corresponding to Korotkoff
<b>Method:</b>	• Phase I systolic, Phase V diastolic
<b>Measurement range:</b>	<ul style="list-style-type: none"> <li>• SYS: 60~255 mmHg</li> <li>• DIA: 30~200 mmHg</li> <li>• 40 - 199 beats per minute – pulse</li> </ul>
<b>Cuff pressure display:</b>	<ul style="list-style-type: none"> <li>• Range: 0 - 299 mmHg</li> <li>• Resolution: 1 mmHg</li> <li>• Static accuracy: pressure within <math>\pm 3</math> mmHg</li> <li>• Pulse accuracy: <math>\pm 5</math> % of the readout value</li> </ul>
<b>Voltage source:</b>	<ul style="list-style-type: none"> <li>• 4 x 1.5 V Batteries; size AA</li> <li>• Mains adapter DC 6V, 600 mA (optional)</li> </ul>

<b>Battery life:</b>	Approximately 250 measurements
<b>Reference to standards:</b>	<ul style="list-style-type: none"> <li>• Device corresponds to the requirements of the standard for noninvasive blood pressure monitor.</li> <li>IEC 60601-1; IEC 60601-1-2; IEC 60601-1-11, ANSI/AAMI/ISO 81060-2</li> <li>ANSI/AAMI/IEC 80601-2-30</li> </ul>
<b>Electromagnetic compatibility:</b>	• Device fulfills the stipulations of the standard IEC 60601-1-2.
<b>Expected service life:</b>	• 5 years (batteries and cuff are not included.
<b>Cuff service life:</b>	• Approximately 2 years
<b>IP20:</b>	Protected against solid foreign particles with a diameter of more than 12.5 mm, no protection against water.



Type BF  
applied part

Microlife reserves the right to alter technical specifications without prior written notice.

# Appendix

Manufacturer's Declaration of the Product (Altogether 4 pages)

Guidance and manufacturer's declaration – electromagnetic emission – for all EQUIPMENT AND SYSTEMS

Row

1	<b>Guidance and manufacturer's declaration – electromagnetic emission</b>		
2	The model WatchBP Home BT (BP3MX1-1C) is intended for use in the electromagnetic environment specified below. The customer or the user of the model Home BT (BP3MX1-1C) should assure that it is used in such an environment.		
3	Emissions test	Compliance	Electromagnetic environment – guidance
4	RF emissions CISPR 11	Group 1	The Model WatchBP Home BT (BP3MX1-1C) 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.
5	RF emissions CISPR 11	Class B	
6	Harmonic emissions IEC 61000-3-2	A	
7	Voltage fluctuations/ flicker emissions IEC 61000-3-3	Complies	

## Guidance and manufacturer's declaration – electromagnetic immunity –for all EQUIPMENT and SYSTEMS

Guidance and manufacturer's declaration – electromagnetic immunity			
The Model WatchBP Home BT(BP3MX1-1C) are intended for use in the electromagnetic environment specified below. The customer or the user of the Model WatchBP Home BT(BP3MX1-1C) should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment -guidance
Electrostatic discharge (ESD) IEC 61000-4-2	± 8 kV contact ±2 kV, ±4 kV, ±8 kV, ±15 kV air	± 8 kV contact ±2 kV, ±4 kV, ±8 kV, ±15 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 %.
Electrostatic transient / burst IEC 61000-4-4	± 2 kV for power supply lines 100 kHz repetition frequency± 1 kV for input/output lines	± 2 kV for power supply lines 100 kHz repetition frequency	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	± 0.5 kV, ± 1 kV differential mode line-line	± 0.5 kV, ± 1 kV differential mode line-line	Mains power quality should be that of a typical commercial or hospital environment.


<p>Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11</p>	<p>0 % UT (100 % dip in UT )for 0.5 cycle at 0°, 45°, 90°, 135°,180°, 225°, 270°, and 315°</p> <p>0 % UT (100 % dip in UT ) for 1 cycle at 0°</p> <p>70 % UT (30 % dip in UT )for 25/30 cycles at 0°</p> <p>0 % UT(100 % dip in UT ) for 250/300 cycle at 0°</p>	<p>0 % UT (100 % dip in UT )for 0.5 cycle at 0°, 45°, 90°, 135°,180°, 225°, 270°, and 315°</p> <p>0 % UT (100 % dip in UT ) for 1 cycle at 0°</p> <p>70 % UT (30 % dip in UT )for 25/30 cycles at 0°</p> <p>0 % UT(100 % dip in UT ) for 250/300 cycle at 0°</p>	<p>Mains power quality should be that of a typical commercial or hospital environment. If the user of the models WatchBP Home BT(BP3MX1-1C) product name requires continued operation during power mains interruptions, it is recommended that the models WatchBP Home BT(BP3MX1-1C) be powered from an uninterruptible power supply or a battery.</p>
<p>Power frequency (50/60 Hz) magnetic field IEC 61000-4-8</p>	<p>30 A/m, 50/60Hz</p>	<p>30 A/m, 50/60Hz</p>	<p>Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.</p>
<p>NOTE: UT is the a. c. mains voltage prior to application of the test level.</p>			

Guidance and MANUFACTURER'S declaration – electromagnetic IMMUNITY – for ME EQUIPMENT and ME SYSTEMS that are not LIFE-SUPPORTING

**Guidance and manufacturer's declaration – electromagnetic immunity**

The WatchBP Home BT(BP3MX1-1C) is intended for use in the electromagnetic environment specified below. The customer or the user of the WatchBP Home BT(BP3MX1-1C) should assure that it is used in such an environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
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<p>Conducted RF IEC 61000-4-6</p>	<p>3 Vrms 150 kHz to 80 MHz 6 Vrms 150 kHz to 80 MHz outside ISM bands</p>	<p>3 Vrms 150 kHz to 80 MHz 6 Vrms 150 kHz to 80 MHz outside ISM bands</p>	<p>Portable and mobile RF communications equipment should be used no closer to any part of the Models WatchBP Home BT (BP3MX1-1C), including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.</p> <p>Recommended separation distance</p> $d = \left[ \frac{3.5}{V_1} \right] \sqrt{P}$ $d = \left[ \frac{3.5}{E_1} \right] \sqrt{P} \quad 80 \text{ MHz to } 800 \text{ MHz}$ $d = \left[ \frac{7}{E_1} \right] \sqrt{P} \quad 800 \text{ MHz to } 2.7 \text{ GHz}$ <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>Radiated RF IEC 61000-4-3</p>	<p>3 V/m 80 MHz to 2.7 GHz</p>	<p>3 V/m</p>	<p>Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey,<sup>a</sup> should be less than the compliance level in each frequency range<sup>b</sup></p> <p>Interference may occur in the vicinity of equipment marked with the following symbol: </p>

NOTE 1 At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

<sup>a</sup> The ISM (industrial, scientific and medical) bands between 0,15 MHz and 80 MHz are 6,765 MHz to 6,795 MHz; 13,553 MHz to 13,567 MHz; 26,957 MHz to 27,283 MHz; and 40,66 MHz to 40,70 MHz. The amateur radio bands between 0,15 MHz and 80 MHz are 1,8 MHz to 2,0 MHz, 3,5 MHz to 4,0 MHz, 5,3 MHz to 5,4 MHz, 7 MHz to 7,3 MHz, 10,1 MHz to 10,15 MHz, 14 MHz to 14,2 MHz, 18,07 MHz to 18,17 MHz, 21,0 MHz to 21,4 MHz, 24,89 MHz to 24,99 MHz, 28,0 MHz to 29,7 MHz and 50,0 MHz to 54,0 MHz.

<sup>b</sup> The compliance levels in the ISM frequency bands between 150 kHz and 80 MHz and in the frequency range 80 MHz to 2,7 GHz are intended to decrease the likelihood that mobile/portable communications equipment could cause interference if it is inadvertently brought into patient areas. For this reason, an additional factor of 10/3 has been incorporated into the formulae used in calculating the recommended separation distance for transmitters in these frequency ranges.

<sup>c</sup> 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 WatchBP Home BT(BP3MX1-1C) is used exceeds the applicable RF compliance level above, the WatchBP Home BT(BP3MX1-1C) should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the WatchBP Home BT(BP3MX1-1C).

<sup>d</sup> Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

Recommended separation distances between portable and mobile RF communications equipment and the EQUIPMENT or SYSTEM

Recommended separation distances between portable and mobile RF communications equipment and the model WatchBP Home BT(BP3MX1-1C)

The Model WatchBP Home BT(BP3MX1-1C) is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the Model WatchBP Home BT(BP3MX1-1C) can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the Model WatchBP Home BT(BP3MX1-1C) as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output of transmitter W	Separation distance according to frequency of transmitter m		
	150 kHz to 80 MHz	80 MHz to 800 MHz	800 MHz to 2.7 GHz
0.01	$0.12 d = \left[\frac{3.5}{V_1}\right]\sqrt{P}$	$0.12 d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$	$0.23 d = \left[\frac{7}{E_1}\right]\sqrt{P}$
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.


NOTE 1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

## Recommended separation distances between RF wireless communications equipment

The device is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the device can help prevent electromagnetic interference by maintaining a minimum distance between RF wireless communications equipment and the device as recommended below, according to the maximum output power of the communications equipment.

Frequency MHz	Maximum Power W	Distance	IEC 60601 Test Level	Compliance Level	Electromagnetic Environment - Guidance
385	1.8	0.3	27	27	RF wireless communications equipment should be used no closer to any part of the device, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. <b>Recommended separation distance</b> $E = \frac{6}{d} \sqrt{P}$ 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 meters (m).
450	2	0.3	28	28	
710	0.2	0.3	9	9	
745					
780					
810	2	0.3	28	28	
870					
930					

1720	2	0.3	28	28	Field strengths from fixed RF transmitter, as determined by an electromagnetic site survey, should be less than the compliance level in each frequency range. Interference may occur in the vicinity of equipment marked with the following symbol: 
1845					
1970					
2450	2	0.3	28	28	
5240	0.2	0.3	9	9	
5500					
5785					
Note 1: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.					

**WARNINGS!**

- This device should not be used in the vicinity or on the top of other electronic equipment such as cell phone, transceiver or radio control products. If you have to do so, the device should be observed to verify normal operation.
- The use of accessories and power cord other than those specified, with the exception of cables sold by the manufacturer of the equipment or system as replacement parts for internal components, may result in increased emissions or decreased immunity of the equipment or system.



## Guarantee card

This device is covered by a five-year guarantee from the date of purchase. This guarantee is valid only on presentation of the guarantee card completed by the owner confirming date of purchase or purchase receipt. Batteries, cuff and wearing parts are not covered by this guarantee.

**Name:** \_\_\_\_\_

**Address:** \_\_\_\_\_  
\_\_\_\_\_

**Date:** \_\_\_\_\_

**Telephone:** \_\_\_\_\_

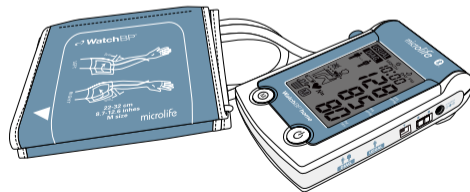
**Email:** \_\_\_\_\_



**Model:** WatchBP Home BT

**ERP Model Number:** BP3MX1-1C

**Date:**



**Distributed by:**

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