Microlife WatchBP Home A

EN

The Microlife WatchBP Home A is designed to provide reliable and unbiased blood pressure measurement results, and strictly follows European Society of Hypertension (ESH) and American Heart Association (AHA) recommendations for out-of-office blood pressure measurement.[1]
The WatchBP Home A device has been clinically validated according to the ESH protocol.

[1] O'Brien E, Asmar R, Beilin L, Imai Y, et al. European Society of Hypertension recommendations for conventional, ambulatory and home blood pressure measurement. European Society of Hypertension Working Group on Blood Pressure Monitoring. J Hypertens 2003;21:821-848.

Read the instructions carefully before using this device.

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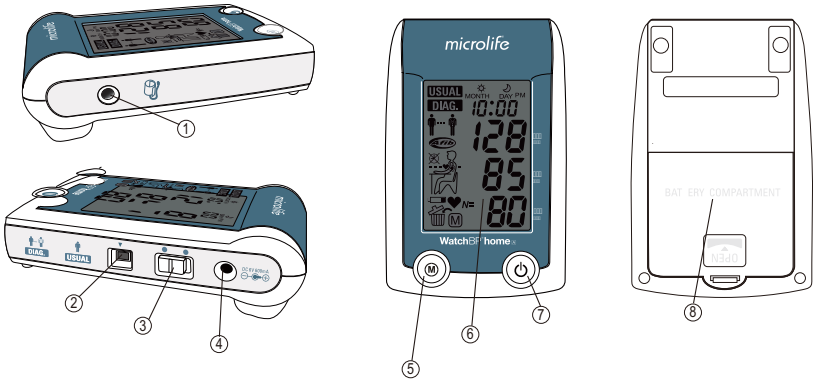
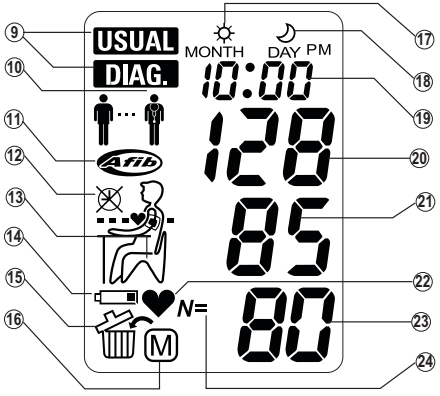
Name of parts and display



① Cuff socket
② Serial port
③ Mode switch
④ Power socket
⑤ M button (Memory)
⑥ Display
⑦ ON/OFF button
⑧ Battery compartment

Display



⑨ Mode indication
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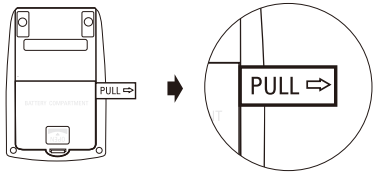
⑲ Date/Time
⑳ Systolic value
㉑ Diastolic value
㉒ Pulse indicator
㉓ Pulse rate
㉔ Number of stored data

2. Before using WatchBP Home A for the first time

Activating the device
Pull out the protective strip from the battery compartment.

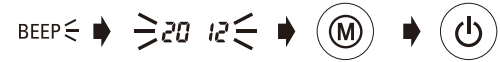


Setting the date and time
Upon removing the protective strip or installing new batteries, the year number flashes in the display.

1. **Set the year:** Use the M button to select the year. Press the ON/OFF button to confirm your selection.

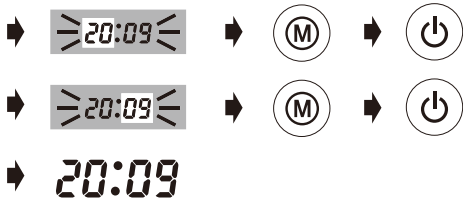
Press M button to make selection.

Press ON/OFF button to confirm.



2. **Set the month:** Use the M button to set the month. Press the ON/OFF button to confirm.
3. **Set the day:** Press M button to set the day. Press the ON/OFF button to confirm.

4. **Set the time:** Once you have set the hour and minutes and pressed the ON/OFF 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 in previous steps.

Selecting the correct cuff

The WatchBP Home A device is available with different cuff sizes. If the cuff provided with the device is an unsuitable size, please contact Microlife.

☞ Please use only Microlife cuffs!

S (Small size)

17 - 22 cm (6.75 - 8.75 inches)

M (Medium size)

22 - 32 cm (8.7 - 12.6 inches)
M is the correct size for most people.

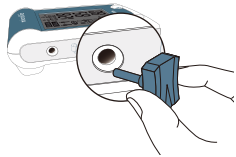
L (Large size)

32 - 42 cm (12.6 - 16.5 inches)

XL (X-Large size)

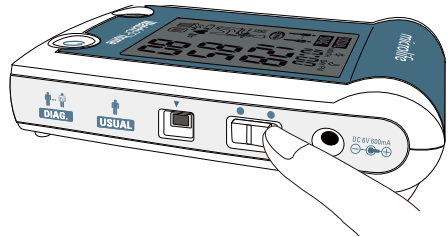
32 - 52 cm (12.6 - 20.5 inches)

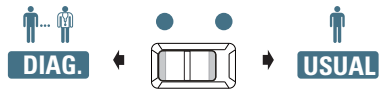
Connect the cuff to the device by inserting the cuff connector into the cuff socket as far as it will go.



3. Selecting the operation mode

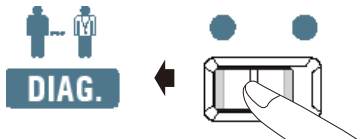
Prior to each measurement, use the Mode switch on the side of the device to select the proper measurement mode.
Choose out of 2 measurement modes:
«DIAG.» (Diagnostic) or «USUAL» (Usual) mode.





«DIAG.» mode

- **Recommended by doctors:** Blood pressure is measured in accordance with the measurement guidelines of the European Society of Hypertension (ESH).



- **7 consecutive working day-measurements:** Blood pressure measurements are taken on 7 consecutive working days (or normal week 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.

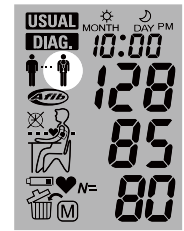
ESH Guidelines

- **Extended measurement period:** WatchBP Home A 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.

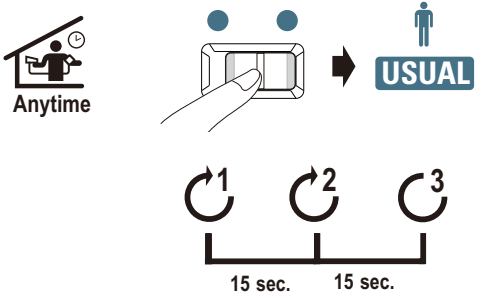
- **Evaluation:** After measurements have been carried out for a total of 7 working days, take the device to your doctor for evaluation of your home blood pressure data.



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

«USUAL» mode

- **With Afib detection:** In «USUAL» mode, three consecutive measurements are taken automatically at 15 second intervals. The results are averaged and displayed. The averaged readings are automatically stored for later evaluation by your doctor.

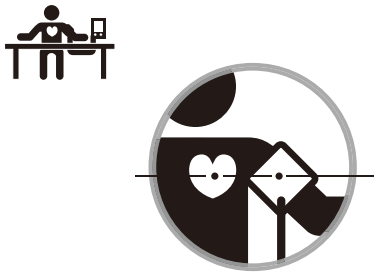


4. Taking measurements using WatchBP Home A

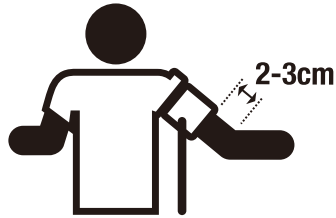
Easy steps for measuring blood pressure properly

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

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.

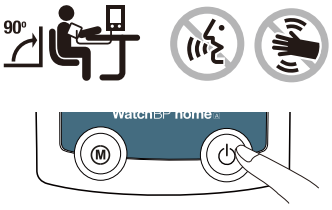


3. Remove all clothing covering or constricting the arm to be measured. Apply the cuff. Make sure the lower edge of the cuff is exactly 2-3 cm from the inner fold of your arm. The tube connecting the cuff to the device should be placed on the inside of the arm. (Additional visual instruction can be found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



4. Sit down and relax for at least 5 minutes prior to the measurement.

5. Sit upright and lean comfortably against the chair's backrest. Press the ON/OFF button.



The device will initiate a 60-second countdown in «DIAG.» mode and has no countdown in «USUAL» mode.

- During the measurement do not move, cross legs, or tense arm muscles. Breath normally and do not talk.
- In «USUAL» mode the device automatically measures three times in row.
- **Taking less than three measurements in «USUAL» mode:** the measurement sequence can be stopped at any time by pressing the ON/OFF button after which the average blood pressure value will be shown on the LCD screen.

Following steps are in «DIAG.» mode only

6. 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.

7. Once the two readings are complete, measurement data is automatically stored for future reference.

Automatically stored

☞ If an error displays after the readings, please repeat the first 6 steps once again.

8. When seven days of measurements have been collected, the doctor symbol will flash on the display.

☞ The doctor symbol is only displayed for measurements in «DIAG.» mode.

☞ Always take this device with you when you see your doctor.

5. Data Memory

The WatchBP Home A can store up to 250 averaged measurement readings in «USUAL» mode.
In «DIAG.» mode the memory is full after the schedule has been completed.

⚠ When memory is full, each new reading will automatically overwrite the earliest measurement.

Review the last 3 individual measurements
Press and hold the M button until «1» is displayed on the screen. The values of the last 3 individual measurements are displayed sequentially.

6. Atrial fibrillation detection (Afib)

This device is designed to screen for atrial fibrillation during blood pressure measurements both in «USUAL» and «DIAG.» mode.*
If atrial fibrillation is detected during all readings of the triple measurements in «USUAL» mode or all four readings of one day in «DIAG.»mode, the Afib icon is displayed.

* *Joseph Wiesel, et al. Detection of Atrial Fibrillation Using a Modified Microlife Blood Pressure Monitor. American Journal of Hypertension 2009; 22, 8, 848–852.*

Important facts about atrial fibrillation
Atrial fibrillation is a common heart rhythm problem and a common cause of major strokes. It affects more than 2 million people in North America. It is more common in old age and found in 10% of people over 80 years old.
About 20% of all strokes are caused by atrial fibrillation. The elderly, or those with high blood pressure, diabetes or heart disease are more likely to get a stroke if they have atrial fibrillation.
Atrial fibrillation is a rhythm problem that can last from a few minutes, to days or weeks and even years. Atrial fibrillation can lead to the formation of blood clots in the upper chambers of the heart (the atria). These clots can break off and flow to the brain causing stroke. The use of blood thinners, such as warfarin, can lower the risk of stroke in patients with atrial fibrillation.
A doctor can confirm the presence of atrial fibrillation by using an EKG. Atrial fibrillation can sometimes come and go. So a doctor may not see its symptoms on regularly scheduled visits.
One sign of atrial fibrillation is palpitations. But, many people don't feel anything. These people can still get a stroke and should be checked for atrial fibrillation regularly. Diagnosing atrial fibrillation earlier and followed by treatment can lower the chances of getting a stroke.

Frequent screening on multiple days

Use this device regularly, once per week, or once per month to screen for atrial fibrillation.

Some people may have atrial fibrillation occasionally that lasts longer than a day. In this situation this device allows frequent screening on multiple days for optimal diagnosis of atrial fibrillation.

Sometimes this device might falsely detect atrial fibrillation which can have 2 causes:

1. The arm has moved during blood pressure measurement. For this reason it is of essential importance that the arm is kept still during the measurement.
2. Some arrhythmia (irregular heart beat) other than atrial fibrillation might be present. In such a case it is still recommended to pay a visit to the doctor.

Afib icon is displayed

- If atrial fibrillation is detected during all readings of the triple measurements in «USUAL» mode, at both readings of two measurements or all four readings of one day in «DIAG.» mode then atrial fibrillation is most likely present.
- When atrial fibrillation is detected, another measurement session should be done approximately one hour later. If this last reading shows atrial fibrillation, contact your doctor.

☞ Not all risk factors for stroke, including atrial flutter, may be detected by this device.

☞ This device may not detect atrial fibrillation in people with pacemakers or defibrillators.

☞ For detection of atrial fibrillation in «USUAL» mode a minimum of 2 measurements is required.

Information for the doctor

This device is designed to detect atrial fibrillation and false negative readings are very rare. Though it is programmed to specifically detect atrial fibrillation, frequent premature beats, marked sinus arrhythmia or other rhythm abnormalities might cause false positive readings. If atrial fibrillation is detected by the device at home, we suggest another reading done in the doctor's office. If the atrial fibrillation icon is not displayed then the previous abnormal readings may have been due to transient atrial fibrillation. If the atrial fibrillation icon is displayed then it is suggested to perform an EKG to determine the exact rhythm abnormality.

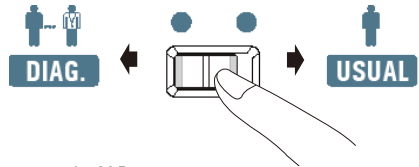
7. Installation of the software program

1. Put the CD in the CD-ROM drive of your computer. Alternatively click on «setup.exe» in the CD's directory.
2. Follow the instructions provided in the installation window on the computer screen.
3. When the installation is finished, be sure to restart the computer before using the program.

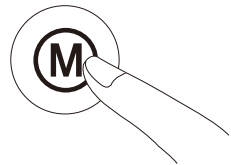
8. Viewing, deleting and transferring measurements

Viewing measurements

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

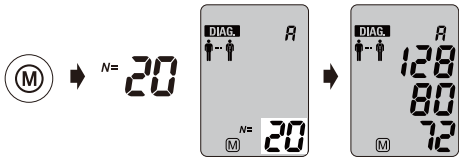


2. Then press the M Button.



In «DIAG.» mode

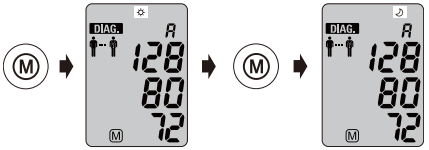
1. When the M button is pressed, it briefly displays the total number of measurements stored, e.g. N=20 and then switches to the average of all readings.



«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.

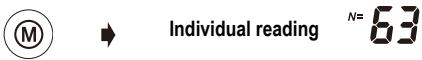


3. Press the M button repeatedly to review all the individual readings one by one.
4. The daily average is displayed after the individual readings of the day.

In «USUAL» mode

1. When the M button is pressed, the number of readings. detected with Afib are displayed.
2. Press M button again, the number of total readings stored, e.g. N=63, is displayed; followed immediately by the average of all measurements stored in memory.

3. All individual readings can be viewed by repeatedly pressing the M button.

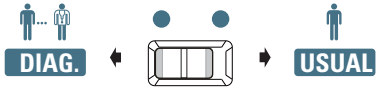


Deleting measurements

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

Ask your doctor if the measurement data is still required, before deleting data. Only delete the stored measurements when you are sure that you no longer need the data.

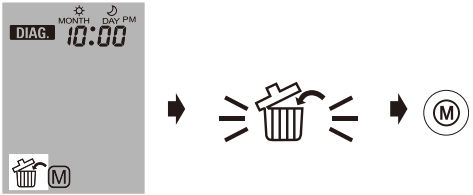
1. Use the Mode switch to select the mode of measurements you want to delete.



2. Press the M button and hold it for 7 seconds until the delete symbol flashes.

Press and hold for 7 seconds

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.

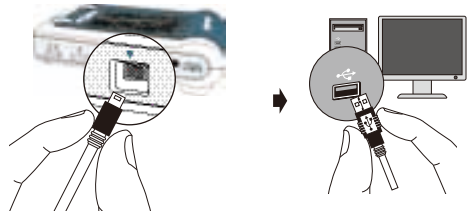
Transferring measurements

Transferring data to the computer the following system requirements are needed:

550MHz CPU. 256MB Memory, 1024x768 pixel resolution, 256 color, CD-ROM drive, 1 free USB port, 40MB free hard disk space, Microsoft Windows XP / Vista / Win7 / Win8

☞ Or download the latest version from: www.watchbp.com.

1. Start the software program and connect the device to the computer using the cable supplied.
2. A successful connection is displayed by «Connected» on the computer screen.
3. Enter name, identity number (if required), and date of birth to create a new record.



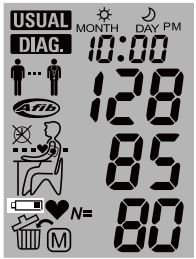
Software commands	Refer to the software user manual for detailed information and instructions
Transfer «DIAG.» mode data	Click «Download»
Corresponding value	You can remove the check mark and the corresponding value will not be used to calculate the average.
Store data	Click «Save», the file name is formed automatically from the patient's identity number and the suffix «Dmode.xls».
View the data	Click «Patient Files»
Store the «USUAL» mode data	Click «Download Usual Mode Data», the file name is formed automatically from the patient's identity number and the suffix «Umode.xls».
Print the data sheet	Click «Print»
Delete the memories	Click «Clear memory»
Close the program	Click «Exit»

☞ Please store the data before using «Clear memory» or «Exit».

9. Battery indicator and battery change

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

1. Open the battery compartment (8) at the back of the device.
2. Replace the batteries – ensure correct polarity as shown by the symbols in the compartment.

☞ Use 4 new, long-life 1.5V, size AA batteries.

☞ Do not use batteries beyond their date of expiry.

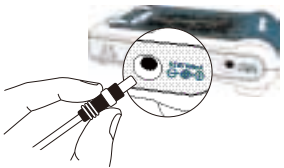
☞ Remove batteries, if the device will not be used for a prolonged period.

Using a power adaptor

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

1. Plug the adaptor cable into the power plug in the device.
2. Plug the adaptor plug into the wall socket. When the power adaptor is connected, no battery power is consumed.

☞ Only use *Microlife* branded power adaptors.



10. Safety, care, accuracy test and disposal

- This device may be used only for the purpose described in this booklet. The manufacturer cannot be held liable for damage caused by incorrect application.
- The device comprises of sensitive components and must be treated with caution.
- Only activate the pump when cuff is installed.
- Do not use the device if you think it is damaged or if anything appears unusual.
- Do not connect the device to a computer until prompted to do so by the computer software.
- Read the further safety instructions in the individual sections of the instruction manual.
- Observe the storage and operating conditions described in the «Technical specifications» section of this manual.

Ensure that children do not use the device unsupervised; some parts are small enough to be swallowed.

Protect the device from water and moisture.

Protect the device from direct sunlight.

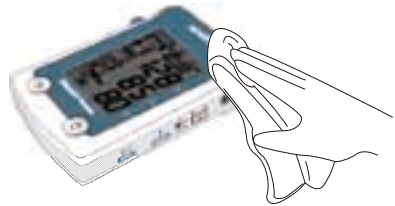
Protect the device from extreme heat and cold.

Avoid proximity to electromagnetic fields, such as those produced by mobile phones.

Never open device.

Protect device from impact and drops.

Device care
Clean the device with a soft, dry cloth.



Accuracy test
We recommend the WatchBP Home A 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.

Cleaning the cuff
Carefully remove spots on the cuff with a damp cloth and soapsuds.

Do not wash the cuff!

Do not iron the cuff!

Disposal

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

11. Error messages

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

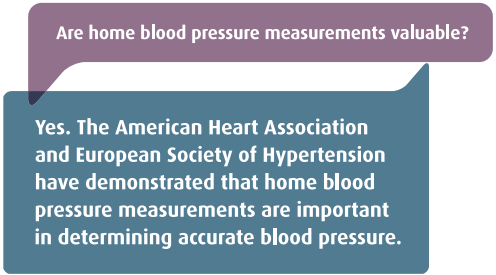
Error	Description	Potential cause and remedy
«ERR 1»	**Signal too weak**	The pulse signals on the cuff are too weak. Re-position the cuff and repeat the measurement.
«ERR 2»	**Error signal**	During the measurement, error signals were detected by the cuff, caused for instance by movement or muscle tension. Repeat the measurement, keeping your arm still.
«ERR 3»	**No pressure in the cuff**	An adequate pressure cannot be generated in the cuff. A leak may have occurred. Replace the batteries if necessary. Repeat the measurement.
«ERR 5»	**Abnormal result**	The measuring signals are inaccurate and no result can therefore be displayed. Read through the checklist for performing reliable measurements and then repeat the measurement.*

Error	Description	Potential cause and remedy
«HI»	**Pulse or cuff pressure too high**	The pressure in the cuff is too high (over 300 mmHg) OR the pulse is too high (over 200 beats per minute). Relax for 5 minutes and repeat the measurement.*
«LO»	**Pulse too low**	The pulse is too low (less than 40 beats per minute). Repeat the measurement.*

** Please contact 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.

12. Important facts about blood pressure and home measurements



- 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.

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

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».

13. Technical specifications

Operating temp.:	10 - 40 °C / 50 -104 °F 15 - 90 % relative maximum humidity
Storage temp.:	-20 - +50 °C / -4 - +131 °F 15 - 90 % relative maximum humidity
Weight:	385 g (including batteries)
Dimensions:	150 x 100 x 50 mm
Measuring procedure:	Oscillometric, corresponding to Korotkoff
Method:	Phase I systolic, Phase V diastolic
Measurement range:	30 - 280 mmHg – blood pressure 40 - 200 beats per minute – pulse
Cuff pressure display:	Range: 0 - 299 mmHg Resolution: 1 mmHg Static accuracy: pressure within ± 3 mmHg Pulse accuracy: ± 5 % of the readout value
Voltage source:	4x 1.5 V batteries; size AA Mains adapter DC 6V, 600 mA (optional)

Reference to standards:	Device corresponds to the requirements of the standard for noninvasive blood pressure monitor: EN 1060-1 /-3 /-4; IEC 60601-1; IEC 60601-1-2
Electromagnetic compatibility:	Device fulfills the stipulations of the standard: IEC 60601-1-2.
CE 0044	The stipulations of the EU Directive 93/42/EEC for Medical. Devices Class IIa have been fulfilled.

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


Type BF applied part

Reference number

Serial number


Manufacturer

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.

	Product: WatchBP Home A **Product Number:** BP 3MX1-3 **Serial Number:** **Date:**

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Date:

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