ESH
Protocol Embedded

AHA
Protocol Embedded

WatchBP®

Office blood pressure measurement device with Afib detection

Instruction Manual

EN → 1

microlife®

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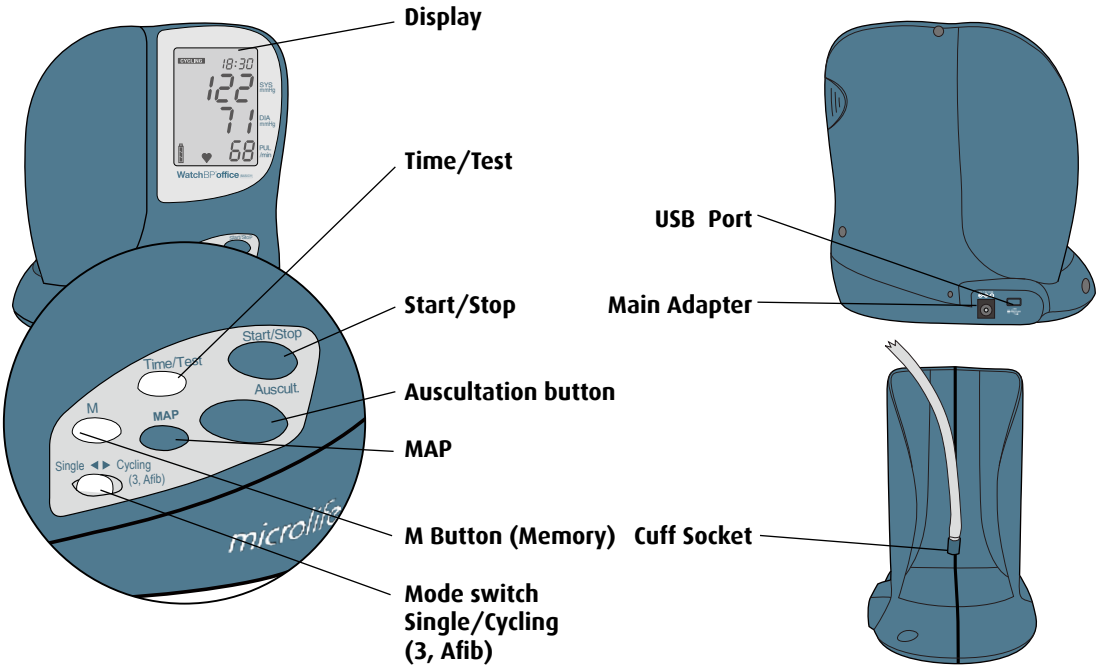
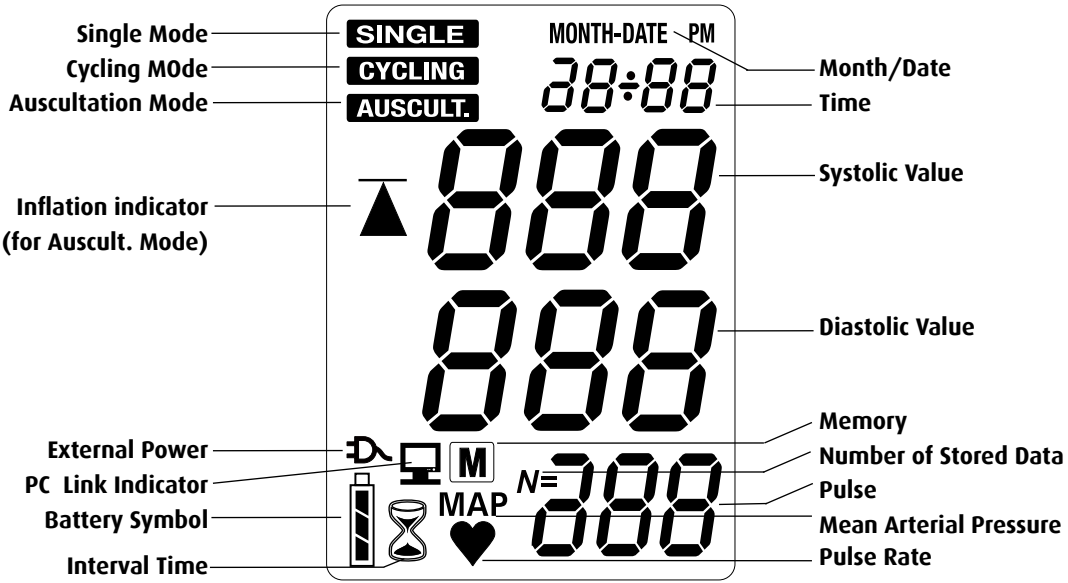
Product description

Name of parts



Display


Single Mode
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Auscultation Mode
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External Power
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Battery Symbol
Interval Time
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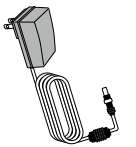
AUSCULT.
MONTH-DATE
PM
Month/Date
Time
Systolic Value
Diastolic Value
Memory
Number of Stored Data
Pulse
Mean Arterial Pressure
Pulse Rate
M
MAP
N=

Product and components

Blood Pressure Device X 1



AC Adaptor X 1

(Input100 - 240V~ 50/60Hz 0.48A;
Output+7.5V 2A)

USB Cable

Cuff for upper arm

M size (22cm~32cm) X 1
L size (32cm~42cm) X 1

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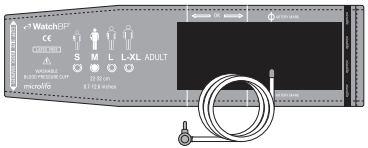
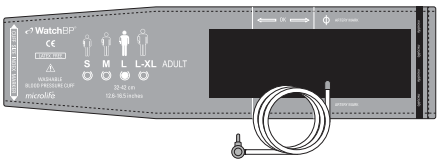
Before using the device

Selecting the correct cuff

Two different cuff sizes are provided with the device: Medium and Large. Use the cuff marker to select the cuff size that best matches the circumference of the patient's upper arm.



M (Medium size)
22 - 32 cm (8.7 - 12.6 inches)



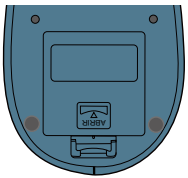
L (Large size)
32-42 cm (12.6 - 16.5 inches)

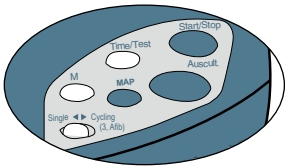
Use the device for the first time

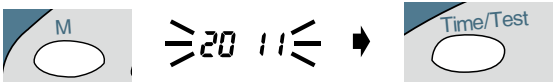
Activating the Device

Open the cover of the battery compartment then plug in the rechargeable battery socket.

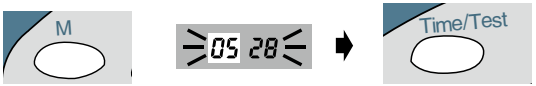
1) Set the year – When the power is on, the Year number flashes in the display. Press the M Button to select the Year. Press the Time/Test Button to confirm. The Month number flashes after.





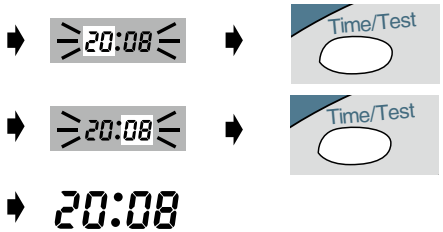


2) **Set the month** – Use the M Button to select the Month. Press the Time/Test Button to confirm. The Day number flashes after.

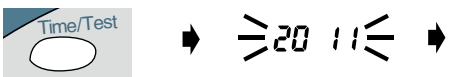


3) **Set the day** – Press the M Button to select the Day. Press the Time/Test Button to confirm. The Hour number flashes after.

4) **Set the time –** Press the M Button to select the time then press the Time/Test Button to confirm. The set time is displayed on the screen.



5) If you want to change the year, date and time, just press the Time/Test Button then repeat the process as instructed above.



Select the correct cuff

Two different cuff sizes are provided with the device: Medium and Large. Use the cuff marker to select the cuff size that best matches the circumference of the patient's upper arm.

⁘ *please use only Microlife cuffs!*

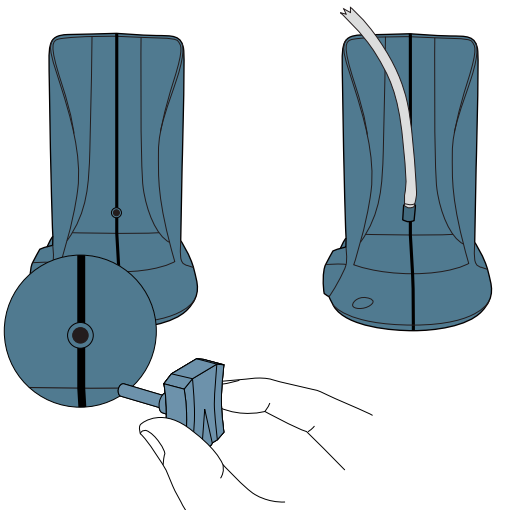
M (Medium size)
22 - 32 cm (8.7 - 12.6 inches)

L (Large size)
32-42 cm (12.6 - 16.5 inches)

Before using the device (cont.)

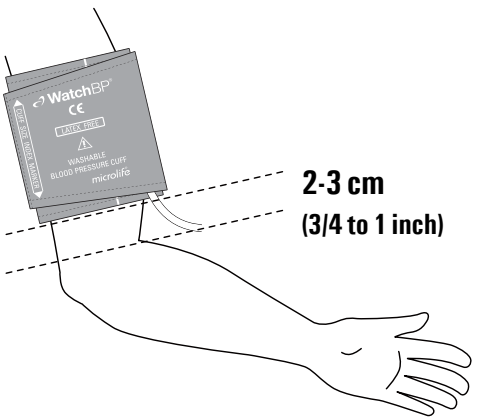
Connect the cuff to the device

Connect the cuff to the device by inserting the cuff connector into the cuff connector socket.



Fitting the cuff properly

1) Place the cuff over the left (right) upper arm so that the air tube and artery mark arrow point towards the lower arm.
2) Put the cuff around the arm. Make sure that the lower edge of the cuff lies approximately 2 to 3cm (¾ to 1 inch) above the elbow.

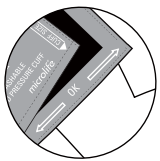


3) Wrap and tighten the cuff around the arm.

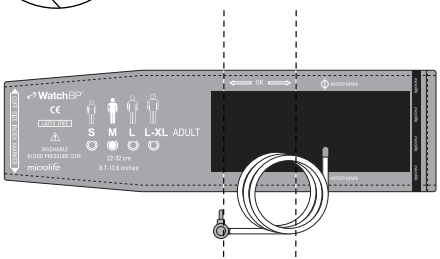
4) Leave a little free space between the arm of the patient and the cuff. It must be possible to fit 2 fingers between the arm and the cuff. Clothing must not restrict the arm. Remove all clothing covering or constricting the arm to be measured.

5) It may result in incorrect blood pressure readings if the cuff does not fit properly. Use a different size cuff if the range index at the end of the cuff does not fall into the range specified by the range stripes.

6) Apply the same steps to the other arm if a measurement of the other arm is required.



※ *When the cuff is wrapped around the arm, the edge of the cuff should be in the range which is marked "OK".*

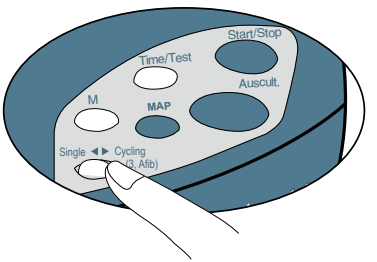


Three operation modes: Single, Cycling or Auscultation mode

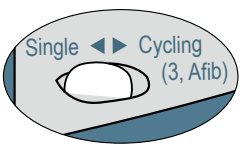
Select an operation mode

There are three measuring modes can be used.
Slide the switch to seletct **Single mode** (standard single measurement) or **Cycling mode** (automatic triple measurements).

Press and hold «**Auscult.**» button to start auscultation measurement.



«**Single** »

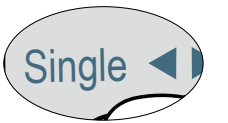


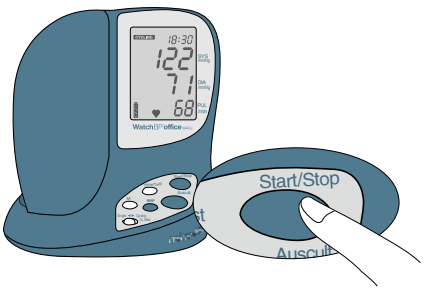
«**Cycling**»

«Single» Mode (standard single measurement)

Select «**Single**» Mode then press «**Start/Stop**» button to perform single blood pressure measurement. The measurement reading is displayed and saved after the measurement.

«**Single** »

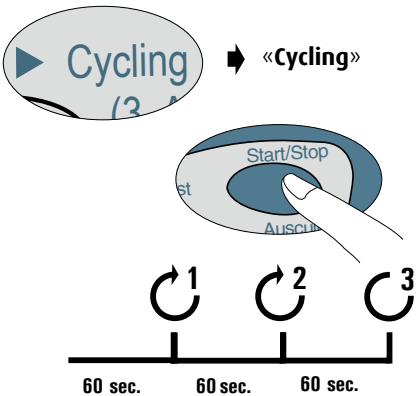




⁘ *Press «Start/Stop» Button to terminate the measurement when inflating or deflating.*

«Cycling» Mode (automatic triple measurements)

Select «**Cycling**» Mode then press «**Start/Stop**» button to perform automatic triple blood pressure measurement with 60 seconds intervals. The average reading measurement readings is displayed and saved after the measurements.

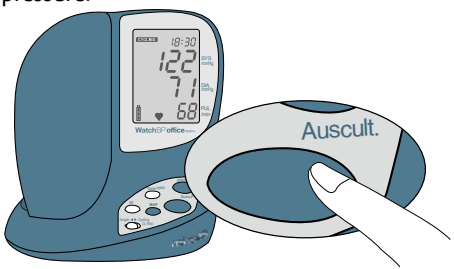


⁘ *User can set measurement intervals at 15 or 60 seconds in Cycling Mode. Press «Start/Stop» Button for 3 seconds then press «Auscult.» Button to select 15 or 60. Press «Start/Stop» Button to confirm the selection.*

«AUSCULTATION» Mode

«**AUSCULTATION**» Mode is used for blood pressure measurement of patients to confirm if a patient is suitable for the oscillometric method.

Press and hold «**Auscult.**» button to start pumping. Release the button when it reaches the needed pressure. Press and hold the «**Auscult.**» button to repump during deflaing; press «**Start/Stop**» button to release pressure during deflating. There is no measurement readings displayed in this mode. The user has to use with a stethoscope to determine the blood pressure.



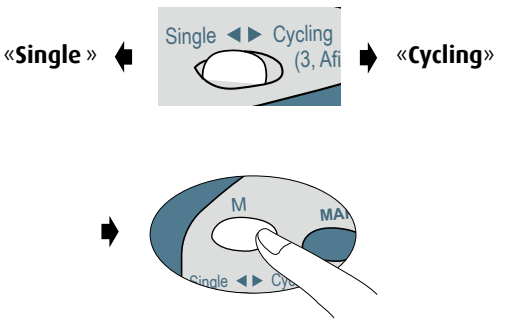
⁘ *The device will automatically return to 'Single' or 'Cycling' mode if there is no operation for one minute after the auscultation operation.*

Viewing the stored values

Viewing the stored values

The device stores only the blood pressure values of the last measurement procedure in Single mode and Cycling mode. Press the M Button in Single mode or Cycling mode to review the stored readings.

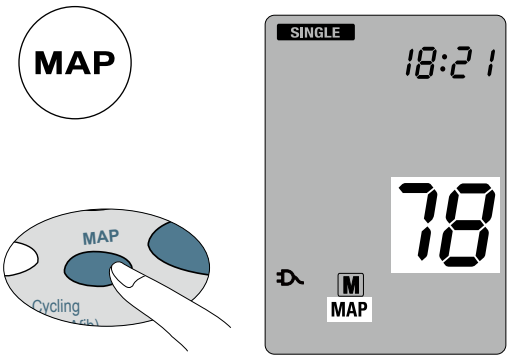
In Cycling mode, the average is displayed first. Press M Button repeatly to review the indevidual readings of the 3 measurements in Cycling mode.



Special Functions

MAP (Mean Arterial Pressure)

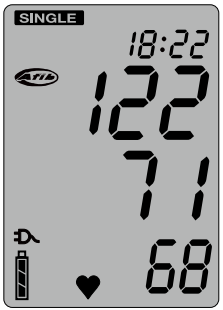
The device measures the true mean arterial pressured (MAP) of the patient. Each measurement includes a single MAP value. The average measurement will display the average MAP value. Press the "MAP" button to view the MAP when the measurements is displayed or when viewing the memory.



⁘ *The Mean Arterial Pressure MAP in this device is determined from the maximum peak of the oscillometric envelope curve.*

Appearance of the atrial fibrillation indicator for early detection

The device is designed to detect asymptomatic atrial fibrillation during blood pressure measurements in the «**CYCLING**» Mode. If two out of three measurements detect atrial fibrillation, the Afib icon is displayed. This device is able to detect atrial fibrillation with high sensitivity of 97% and specificity of 89%.* If the atrial fibrillation icon is displayed after the measurement, it is recommended to visit a doctor.



* *Joseph Wiesel, Lorenzo Fitzig, Yehuda Herschman and Frank C. Messineo. Detection of Atrial Fibrillation Using a Modified Microlife Blood Pressure Monitor. American Journal of Hypertension 2009; 22, 8, 848–852. doi:10.1038/ajh.2009.98*

* *This device detects atrial fibrillation, a major cause of stroke. 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. People with pacemakers or defibrillators should not use this device to detect atrial fibrillation.*

About Atrial Fibrillation

Atrial fibrillation is a common heart rhythm problem. It affects more than 2 million people in North America. It is more common in older age and it is found in 10% of people over 80 years old. It is a common cause of major strokes. About 15% 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, weeks or even years. Atrial fibrillation can cause blood clots in the upper chambers of the heart (the atria). These clots can break off and flow to the brain causing a 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 Afib by using an ECG. Sometimes Afib is present incidentally. Therefore, a doctor may not see it on regularly scheduled visits.

One method of detecting Afib is by mean of palpations. This method is not very reliable. Failure of detecting Afib may in the end lead to the occurrence of a stroke; whereas early detection may lead to early treatment that can significantly reduce the chances of a stroke.

Atrial Fibrillation Detector

The device can screen for atrial fibrillation during blood pressure measurement.

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

Sometimes the device might falsely detect atrial fibrillation which can have two 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 other arrhythmia (irregular heart beat) than atrial fibrillation might be present.

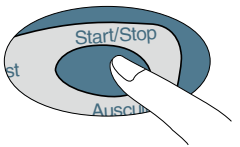
For people with pacemakers or defibrillators it is not recommended to use the device for detecting Atrial Fibrillation.

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, we suggest to perform another measurement 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 EKG performance is suggested for determining the exact rhythm abnormality.

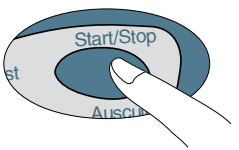
Skipping the countdown time

The 15 seconds countdown before measurement in **«CYCLING»** Mode can be skipped by pressing the «**Start/Stop**» button. The device will immediately begin the next measurement.



Skip the countdown time and begin measurement.

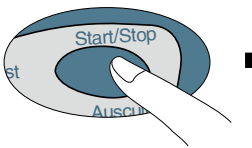
⁘ *The device goes into stand-by by pressing the «Start/Stop» button after the measurements completed. The device will automatically switch to stand-by if left unattended for one minutes.*



Stand by mode

Taking fewer than Three measurements

In **«CYCLING»** Mode , the measurement sequence can be stopped at anytime by pushing the «**Start/Stop**» button. The device enters stand-by and remaining measurements are cancelled. Data from the measured blood pressure can be viewed by pushing the M Button.

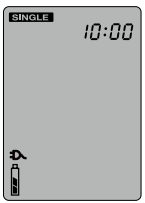


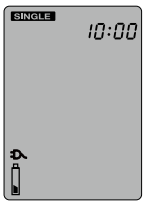
Cancel remaining measurements at anytime during the measurement sequence.

Rechargeable battery and power adaptor

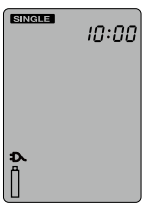
Rechargeable Battery

The device features a built-in, rechargeable Ni-MH battery pack that delivers up to 400~500 measurement cycles. The battery can be recharged between use with the power adaptor provided. Battery charging indicator is displayed when the rechargeabe battery is being charged. Empty battery indicator is displayed when battery is weak.





※ Battery is being charged.

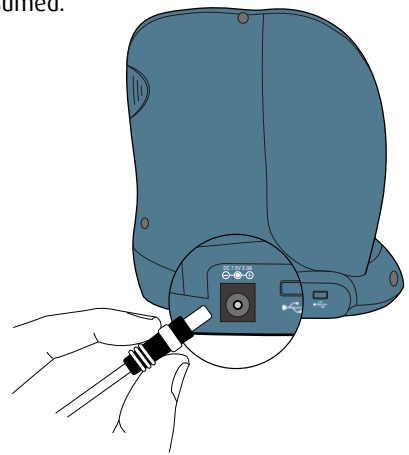


※ Battery is weak.

Using a power adaptor

Please only use the Microlife adaptor supplied with the device to recharge the device.

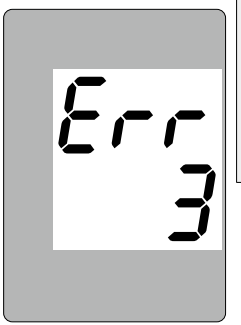
1) Plug the adapter cable into the Power Plug of the device.
2) Plug the adaptor plug into the wall socket. When the power adaptor is connected, no battery power is consumed.



Error messages

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

- *Please contact your local Microlife service center if the error persists.*
- *If you think the results are unusual, please read through the information in this instruction manual carefully.*



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.

«**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.

Safety, care, accuracy test and disposal

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.

- Ensure that children do not use the device unsupervised; 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

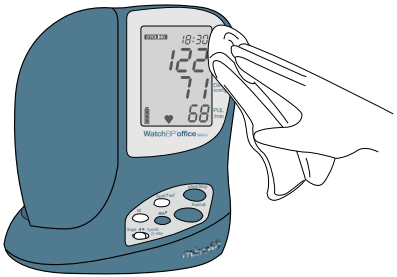
Avoid proximity to electromagnetic fields, such as those produced by mobile phones

Never open device

Protect device from impact and drops

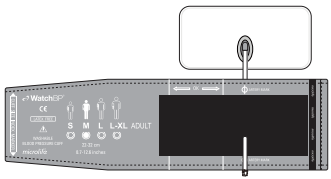
Device care

Clean the device with a soft, dry cloth.



Cleaning the cuff

Take out the bladder. Fold and place the cuff cover inside a washing bag. Wash cuff cover with warm water and a mild detergent in washing machine. Air dry the cuff. DO NOT iron the cuff cover



Do not iron the cuff!

Accuracy test

We recommend the 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.

Disposal

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

Technical specifications

Operation temperature:	• 10 to 40 °C (50 to 104 °F)
Storage temperature/ humidity:	• -20 to 55 °C (-4 to 131 °F) • 15 - 90 % relative maximum humidity
Weight:	• 625 g (including rechargeable battery pack)
Dimensions:	• 110 x 177 x 175 mm
Measuring method:	• Oscillometric, corresponding to Korotkoff
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:	• Rechargeable battery pack; 4.8V, 2400 mAh • Mains adapter DC 7.5V, 2 A

Reference to Standards:	• Device corresponds to the requirements of the standard for noninvasive blood pressure monitor. EN 1060-1 EN 1060-3 EN 1060-4 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.

Type BF applied part

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

Guarantee card

WatchBP®

This device is covered by a two-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 and cuff are not covered by this guarantee.

Name: _____

Address: _____

_____

Date: _____

Telephone: _____

Email: _____

Product: WatchBP Office BASIC+

Product Number: BP3AJ1-7A

Date:

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

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