

**Europe / Middle-East / Africa**

▀ Microlife AG  
Esenstrasse 139  
9443 Widnau / Switzerland  
Tel. +41 / 71 727 70 30  
Fax +41 / 71 727 70 39  
Email admin@microlife.ch  
www.microlife.com

**Asia**

Microlife Corporation.  
9F, 431, RuiGang Road, NeiHu  
Taipei, 114, Taiwan, R.O.C.  
Tel. 886 2 8797-1288  
Fax 886 2 8797-1283  
Email service@microlife.com.tw  
www.microlife.com

**North / Central / South America**

Microlife USA, Inc.  
424 Skinner Blvd., Suite C  
Dunedin, FL 34698 / USA  
Tel. +1 727 451 0484  
Fax +1 727 451 0492  
Email msa@microlifeusa.com  
www.microlife.com



**Microlife BP A100**

<b>EN</b> → 1	<b>LT</b> → 38
<b>SV</b> → 8	<b>EE</b> → 44
<b>FI</b> → 14	<b>RU</b> → 50
<b>DA</b> → 20	<b>DE</b> → 58
<b>NO</b> → 26	<b>FR</b> → 64
<b>LV</b> → 32	<b>NL</b> → 70

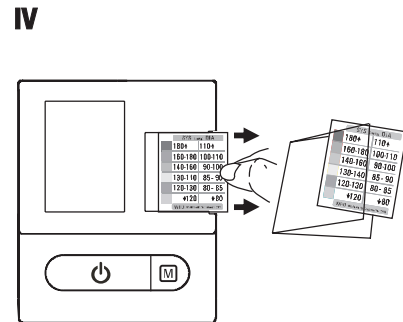
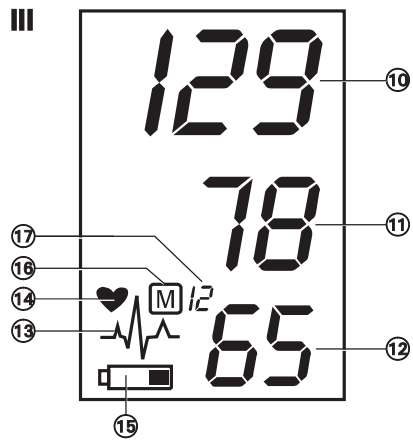
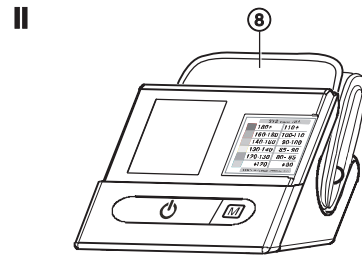
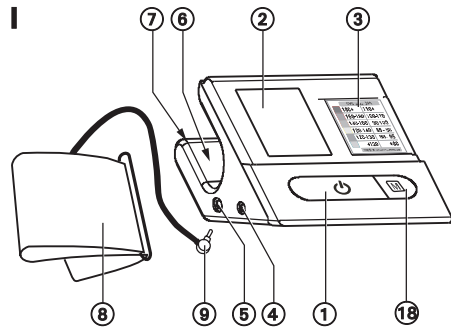


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## Microlife BP A100



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## Guarantee Card

BP A100

Name of Purchaser / Inköparens namn / Ostajan nimi / Forhandlers navn / Kjøpers navn / Pircēja vārds / Pirkėjo pavardė / Ostja nimi / Ф.И.О. покупателя / Name des Käufers / Nom de l'acheteur / Naam koper

Serial Number / Serienummer / Sarjanumero / Serienummer / Serienummer / Sērijas numurs / Serijos numeris / Seerianumber / Серийный номер / Serien-Nr. / Numéro de série / Serienummer

Date of Purchase / Inköpsdatum / Ostopäivämäärä / Købsdato / Kjøpsdato / Legādes datums / Pardavimo data / Ostukuupäev / Дата покупки / Kaufdatum / Date d'achat / Datum van aankoop

Specialist Dealer / Återförsäljare / Alan kauppias / Specialforhandler / Specialist forhandler / Speciālists - pārstāvis / Pardavusi įstaiga / Ametlik müügiesindaja / Специализированный дилер / Fachhändler / Revendeur / Specialist Dealer

microlife®

- ① ON/OFF Button
- ② Display
- ③ Slot-in Card
- ④ Cuff Socket
- ⑤ Mains Adapter Socket
- ⑥ Cuff Compartment
- ⑦ Battery Compartment
- ⑧ Cuff
- ⑨ Cuff Connector
- ⑱ M-Button (Memory)

## Display

- ⑩ Systolic Value
- ⑪ Diastolic Value
- ⑫ Pulse
- ⑬ Heart Arrhythmia Indicator
- ⑭ Pulse Rate
- ⑮ Battery Display
- ⑯ Stored Value
- ⑰ Memory Number

Dear Customer,

Your new Microlife blood pressure monitor is a reliable medical instrument for taking measurements on the upper arm. It is simple to use, accurate and comes highly recommended for blood pressure monitoring in your home. This instrument was developed in collaboration with physicians and clinical tests prove its measurement accuracy to be very high.\*

Please read through these instructions carefully so that you understand all functions and safety information. We want you to be happy with your Microlife product. If you have any questions, problems or want to order spare parts, please contact Microlife-Customer Service. Your dealer or pharmacy will be able to give you the address of the Microlife dealer in your country. Alternatively, visit the Internet at [www.microlife.com](http://www.microlife.com) where you will find a wealth of invaluable information on our products.

Stay healthy – Microlife AG!

*\* This instrument uses the same measuring technology as the award winning «BP 3BTO-A» model tested according to the British Hypertension Society (BHS) protocol.*



Type BF applied part



Read the instructions carefully before using this device.

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**Guarantee Card (see Back Cover)**

## 1. Important Facts about Blood Pressure and Self-Measurement

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- **Blood pressure** is the pressure of the blood flowing in the arteries generated by the pumping of the heart. Two values, the **systolic** (upper) value and the **diastolic** (lower) value, are always measured.
- The instrument also indicates the **pulse rate** (the number of times the heart beats in a minute).
- **Permanently high blood pressure values can damage your health and must be treated by your doctor!**
- Always discuss your values with your doctor and tell him/her if you have noticed anything unusual or feel unsure. **Never rely on single blood pressure readings.**
- Enter your readings in the enclosed **blood pressure diary**. This will give your doctor a quick overview.
- There are many causes of excessively **high blood pressure values**. Your doctor will explain them in more detail and offer treatment where appropriate. Besides medication, relaxation techniques, weight loss and exercise can also lower your blood pressure.
- **Under no circumstances should you alter the dosages of any drugs prescribed by your doctor!**
- Depending on physical exertion and condition, blood pressure is subject to wide fluctuations as the day progresses. **You should therefore take your measurements in the same quiet conditions and when you feel relaxed!** Take at least two measurements per day, one in the morning and one in the evening.
- It is quite normal for two measurements taken in quick succession to produce significantly **different results**.
- **Deviations** between measurements taken by your doctor or in the pharmacy and those taken at home are quite normal, as these situations are completely different.
- **Several measurements** provide a much clearer picture than just one single measurement.
- **Leave a small break** of at least 15 seconds between two measurements.
- If you are **pregnant**, you should monitor your blood pressure very closely as it can change drastically during this time!

- If you suffer from an **irregular heartbeat** (arrhythmia, see «Section 4.»), measurements taken with this instrument should only be evaluated after consultation with your doctor.
- **The pulse display is not suitable for checking the frequency of heart pacemakers!**

### How do I evaluate my blood pressure?

Table for classifying blood pressure values in adults in accordance with the World Health Organisation (WHO) in 2003. Data in mmHg.

Range	Systolic	Diastolic	Recommendation
blood pressure too low	↓ 100	↓ 60	Consult your doctor
1. blood pressure optimum	100 - 120	60 - 80	Self-check
2. blood pressure normal	120 - 130	80 - 85	Self-check
3. blood pressure slightly high	130 - 140	85 - 90	Consult your doctor
4. blood pressure too high	140 - 160	90 - 100	Seek medical advice
5. blood pressure far too high	160 - 180	100 - 110	Seek medical advice
6. blood pressure dangerously high	180 ▲	110 ▲	Urgently seek medical advice!

The higher value is the one that determines the evaluation. Example: a readout value between **150/85** or **120/98** mmHg indicates «blood pressure too high».

The slot-in card ③ on the front of the instrument shows ranges 1-6 in the Table.

## 2. Using the Instrument for the First Time

### Activating the fitted batteries

Pull out the protective strip projecting from the battery compartment ⑦.

### Selecting the correct cuff

Microlife offers 3 different cuff sizes: S, M and L. Select the cuff size to match the circumference of your upper arms (measured by

close fitting in the centre of the upper arm). M is the correct size for most people.

Cuff size	for circumference of upper arm
S	17 - 22 cm (6.75 - 8.75 inches)
M	22 - 32 cm (8.75 - 12.5 inches)
L	32 - 42 cm (12.5 - 16.5 inches)

☞ Only use Microlife cuffs.


- ▶ Contact Microlife Service if the enclosed cuff ⑧ does not fit.
- ▶ Connect the cuff to the instrument by inserting the cuff connector ⑨ into the cuff socket ④ as far as it will go.

## 3. Taking a Blood Pressure Measurement using this Instrument

### Checklist for taking a reliable measurement

1. Avoid activity, eating or smoking immediately before the measurement.
2. Sit down for at least 5 minutes before the measurement and relax.
3. Always measure on the same arm (normally left).
4. Remove close-fitting garments from the upper arm. To avoid constriction, shirt sleeves should not be rolled up - they do not interfere with the cuff if they are laid flat.
5. Always ensure that the cuff is positioned correctly, as shown in the pictures illustrated on the short instruction card.
  - Fit the cuff closely, but not too tight.
  - Make sure that the cuff is 2 cm (0.75 inch) above your elbow with the tube on the inside of your arm.
  - Support your arm so it is relaxed.
  - Ensure that the cuff is at the same height as your heart.
6. Press the ON/OFF button ① to start the measurement.
7. The cuff will now pump up automatically. Relax, do not move and do not tense your arm muscles until the measurement result is displayed. Breathe normally and do not talk.
8. When the correct pressure is reached, the pumping stops and the pressure falls gradually. If the required pressure was not reached, the instrument will automatically pump some more air into the cuff.

9. During the measurement, the heart symbol ⑭ flashes in the display and a beep sounds every time a heartbeat is detected.
10. The result, comprising the systolic ⑩ and the diastolic ⑪ blood pressure and the pulse ⑫ is displayed and longer beep is heard. Note also the explanations on further displays in this booklet.
11. When the measurement has finished, remove the cuff and pack it into the instrument as shown in **Fig. II**.
12. Enter the result in the enclosed blood pressure pass and switch off the instrument. (The monitor does switch off automatically after approx. 1 min.).

 You can stop the measurement at any time by pressing the ON/OFF button (e.g. if you feel uneasy or an unpleasant pressure sensation).

#### 4. Appearance of the Heart Arrhythmia Indicator for early Detection

This symbol ⑬ indicates that certain pulse irregularities were detected during the measurement. In this case, the result may deviate from your normal blood pressure – repeat the measurement. In most cases, this is no cause for concern. However, if the symbol appears on a regular basis (e.g. several times a week with measurements taken daily) we advise you to tell your doctor. Please show your doctor the following explanation:

##### Information for the doctor on frequent appearance of the Arrhythmia indicator

This instrument is an oscillometric blood pressure monitor that also analyses pulse frequency during measurement. The instrument is clinically tested.

The arrhythmia symbol is displayed after the measurement, if pulse irregularities occur during measurement. If the symbol appears more frequently (e.g. several times per week on measurements performed daily) we recommend the patient to seek medical advice.

The instrument does not replace a cardiac examination, but serves to detect pulse irregularities at an early stage.

#### 5. Data Memory

At the end of each measurement, this instrument automatically stores the result.

##### Viewing the stored values


Press the M-button ⑮ briefly, when the instrument is switched off. The display first shows the last stored result.

Pressing the M-button again displays the previous value. Pressing the M-button repeatedly enables you to move from one stored value to another.

##### Memory full

 When the memory has stored 30 results, the memory is full. From this point onwards, a new measured value is stored by **overwriting the oldest value**.

##### Clearing all values

 All memory data are cleared when batteries are taken out of the instrument.

#### 6. Replacing the Slot-in Card

You can replace the slot-in card ③ by pulling it out to the side, as shown in **Fig. IV** and replacing the paper insert.

It may be helpful to have your doctor note down the medication dosage or an emergency telephone number on the card. Extra cards are supplied with the instrument for this purpose.

#### 7. Battery Indicator and Battery change

##### Low battery

When the batteries are approximately  $\frac{3}{4}$  empty the battery symbol ⑮ will flash as soon as the instrument is switched on (partly filled battery displayed). Although the instrument will continue to measure reliably, you should obtain replacement batteries.




##### Flat battery – replacement

When the batteries are flat, the battery symbol ⑮ will flash as soon as the instrument is switched on (flat battery displayed). You cannot take any further measurements and must replace the batteries.

1. Open the battery compartment ⑦ at the back of the instrument by pushing inwards at the two arrows and pulling out the battery compartment cover.





2. Replace the batteries – ensure correct polarity as shown by the symbols in the compartment.

#### Which batteries and which procedure?

-  Use 4 new, long-life 1.5V, size AA batteries.
-  Do not use batteries beyond their date of expiry.
-  Remove batteries if the instrument is not going to be used for a prolonged period.



#### Using rechargeable batteries

You can also operate this instrument using rechargeable batteries.

-  Only use «NiMH» type reusable batteries.
-  Batteries must be removed and recharged when the flat battery symbol appears. They should not remain inside the instrument as they may become damaged (total discharged as a result of low use of the instrument, even when switched off).
-  Always remove the rechargeable batteries if you do not intend to use the instrument for a week or more.
-  Batteries cannot be charged in the blood pressure monitor. Recharge batteries in an external charger and observe the information regarding charging, care and durability.

### 8. Using a Mains Adapter

You can operate this instrument using the Microlife mains adapter (DC 6V, 600mA).

-  Only use the Microlife mains adapter available as an original accessory appropriate for your supply voltage, e.g. the «Microlife 230V adapter».
-  Ensure that neither the mains adapter nor the cable are damaged.

1. Plug the adapter cable into the mains adapter socket ⑤ in the blood pressure monitor.
2. Plug the adapter plug into the wall socket.


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

### 9. Error Messages

If an error occurs during the measurement, the measurement is interrupted and an error message, e.g. «ERR 3», 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. Check that the cuff is correctly connected and is not too loose. 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.*

\* Please consult your doctor, if this or any other problem occurs repeatedly.

-  If you think the results are unusual, please read through the information in «Section 1.» carefully.

## 10. Safety, Care, Accuracy Test and Disposal

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### Safety and protection

- This instrument may be used only for the purpose described in this booklet. The manufacturer cannot be held liable for damage caused by incorrect application.
- This instrument comprises sensitive components and must be treated with caution. Observe the storage and operating conditions described in the «Technical Specifications» section!
- Protect it from:
  - water and moisture
  - extreme temperatures
  - impact and dropping
  - contamination and dust
  - direct sunlight
  - heat and cold
- The cuffs are sensitive and must be handled with care.
- Only pump up the cuff once fitted.
- Do not use the instrument close to strong electromagnetic fields such as mobile telephones or radio installations.
- Do not use the instrument if you think it is damaged or notice anything unusual.
- Never open the instrument.
- If the instrument is not going to be used for a prolonged period the batteries should be removed.
- Read the additional safety instructions in the individual sections of this booklet.



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

### Instrument care

Clean the instrument only with a soft, dry cloth.

### Cleaning the cuff

You can machine wash the **cuff cover** at 30°C (do not iron!).



**WARNING:** Under no circumstances, however, may you wash the inner bladder! Always remove the sensitive bladder from the sleeve before washing and replace it carefully again afterwards.

### Accuracy test

We recommend this instrument is tested for accuracy every 2 years or after mechanical impact (e.g. being dropped). Please contact Microlife-Service to arrange the test (see foreword).

### Disposal



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

## 11. Guarantee

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This instrument is covered by a **5 year guarantee** from the date of purchase. The guarantee is valid only on presentation of the guarantee card completed by the dealer (see back) confirming date of purchase or the receipt.

- Batteries, cuff and wearing parts are not included.
- Opening or altering the instrument invalidates the guarantee.
- The guarantee does not cover damage caused by improper handling, discharged batteries, accidents or non-compliance with the operating instructions.

Please contact Microlife-Service (see foreword).

## 12. Technical Specifications

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<b>Operating temperature:</b>	10 - 40 °C / 50 - 104 °F 15 - 95 % relative maximum humidity
<b>Storage temperature:</b>	-20 - +55 °C / -4 - +131 °F 15 - 95 % relative maximum humidity
<b>Weight:</b>	610 g (including batteries)
<b>Dimensions:</b>	160 x 125 x 98 mm
<b>Measuring procedure:</b>	oscillometric, corresponding to Korotkoff method: Phase I systolic, Phase V diastolic
<b>Measurement range:</b>	30 - 280 mmHg – blood pressure 40 - 200 beats per minute – pulse
<b>Cuff pressure display range:</b>	0 - 299 mmHg
<b>Resolution:</b>	1 mmHg
<b>Static accuracy:</b>	pressure within $\pm 3$ mmHg
<b>Pulse accuracy:</b>	$\pm 5$ % of the readout value
<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>Reference to standards:</b>	EN 1060-1 /-3 /-4; IEC 60601-1; IEC 60601-1-2 (EMC)

This device complies with the requirements of the Medical Device Directive 93/42/EEC.

Technical alterations reserved.