

medisana

Upper Arm Blood Pressure Monitor BU 310

Instruction manual
GB Unit and LC-display



Explanation of symbols

IMPORTANT
Non-observance of these instructions can result in serious injury or damage to the device.

WARNING
These warning notes must be observed to prevent any injury to the user.

CAUTION
These notes must be observed to prevent any damage to the device.

NOTE
These notes give you useful additional information on the installation or operation.

WARNING: To avoid inaccurate results due to electromagnetic interference, portable RF communication devices (including peripherals such as antenna cables and external antennas) should not be closer than 30 cm to any part of the instrument. The performance of this device may be affected.

Device classification: type BF applied part

Temperature range

Humidity range

IP22 Ingress protection rating

Atmospheric pressure range

Non-ionizing electromagnetic radiation

LOT number

Serial number

Manufacturer

Date of manufacture

Device information:

- Internally powered equipment
- Not suitable for use in presence of flammable anesthetic mixture with air or with oxygen or nitrous oxide

Intended use

- This fully automatic over-the-counter electronic blood pressure monitor is intended for measuring human's systolic and diastolic blood pressure and heart rate by using an oscillometric technique by means of a cuff, which needs to be fitted on the upper arm. All values can be read out in one LCD panel. The useable cuff circumference is 23 to 43 cm. The device is intended for adult indoor use at home only.
- The device is able to detect irregular heartbeat and indicate this with a symbol.

Contraindication

- The device is not suitable for use on pregnant women and patients with implanted, electronic devices (e.g. pacemaker or defibrillator).

GB Safety instructions



Read the instruction manual carefully before using this device, especially the safety instructions, and keep the instruction manual for future use. Should you give this device to another person, it is vital that you also pass on these instructions for use.



- The unit is intended only for private use in the home.
- Only use the unit for its intended purpose in accordance with the instructions for use. Warranty claims become void if the unit is misused.
- The patient is an intended operator. The patient can measure data and change batteries under normal circumstances and maintain the device and its accessories according to the user manual. The applied part is the cuff.
- This blood pressure monitor is intended for adult use. The device is not suitable for measuring the blood pressure of children or infants. Ask your doctor before using it on older children.
- Please ensure that the unit is kept away from the reach of children and pets. The swallowing of small part like packaging bag, battery, battery cover and so on may cause suffocation.
- The device has sensitive components. Be careful and ensure that the operating and storage conditions are met.
- Wait at least 30 minutes after consuming caffeine or tobacco before taking a measurement.
- Before taking a measurement, rest for 5-10 minutes and do not eat, drink alcohol, smoke, do not do any physical work, do not exercise or bathe. All these factors can influence the measurement result.
- Repeated measurements cause the blood to congestion, which can lead to a false result and/or unpleasant sensations (e.g. numbness in the arm). Successive blood pressure measurements should be taken with 3-minute breaks. If the symptoms do not subside within a few minutes, contact your doctor.
- Always measure on the same upper arm (usually left). For those who have had a mastectomy or lymph node clearance, it is recommended to take a measurement on the unaffected side.
- Measure your blood pressure regularly, at the same time every day, because blood pressure changes throughout the day.
- Ensure a comfortable and relaxed position and do not tense any muscle of the arm being measured during the measurement. If necessary, use a support cushion.
- Keep calm during the measurement: do not move or speak, otherwise the measurement results may change.
- Extreme temperatures, humidity or altitude can affect the performance of the unit.
- A loose or open cuff causes an incorrect measurement.
- Do not take measurements, if any other equipment is applied to the same limb for monitoring. This could lead to disturbances or failures. This device is not suitable during intravenous injection to limbs or during dialysis treatment.
- The device is not suitable for use on pregnant women, patients with implanted, electronic devices (e.g. pacemaker or defibrillator), patients with pre-eclampsia, premature ventricular beats, atrial fibrillation, peripheral, arterial disease and patients undergoing intravascular therapy or arterio-venous shunt or people who received a mastectomy. Please consult your doctor prior to using the unit if you suffer from illnesses.
- If you suffer from circulation problems, arteriosclerosis, diabetes, liver disease, kidney disease, severe hypertension or peripheral circulation problems, consult your doctor before using the device.
- This device is intended for non-invasive measuring and monitoring of arterial blood pressure on the upper arm. It is not intended for use on extremities other than the upper arm or for functions other than obtaining a blood pressure measurement.
- Do not take any therapeutic measures on the basis of a self measurement. Never alter the dose of a medicine prescribed by a doctor. If you are taking medication, consult your physician to determine the most appropriate time to measure your blood pressure. Contact your doctor if you have any further questions about blood pressure measurement with this device.
- Irregularity of pulse or arrhythmia can lead to difficulties in recording a correct reading when measurements are taken using oscillometric blood pressure devices. This device is electronically equipped to detect irregular heartbeat, which it indicates with the icon 15. In this case, contact your physician.
- Pay attention during use and storage, that cable and air hose will not cause strangulation. To reduce the risk of strangulation, keep this product away from children and do not place the hose around the neck.
- Never bend the air hose during use as this may lead to injuries. Also never squeeze or block the air hose in any way.
- This device cannot be used with surgical equipment at the same time.
- Do not apply the cuff over a wound, otherwise it can cause further injury.
- If you experience discomfort during a measurement, such as pain in the upper arm or other complaints, press the START/STOP button 5 to release the air immediately from the cuff. Loosen the cuff and remove it from your arm.
- On the rare occasion of a fault causing the cuff to remain fully inflated during measurement, open the cuff immediately. Prolonged high pressure (cuff pressure >300 mmHg or constant pressure >15 mmHg for more than 3 minutes) applied to the arm may lead to an echymosis.
- Before use, make sure the device functions safely and is in proper working condition. Do not service or maintain while the device is in use.
- Check the device for damage. The use of a damaged device can result in injury, incorrect readings or serious hazards.
- The unit may not be operated in the vicinity of appliances that emit strong electric radiation such as radio transmitters or mobile phones. This may affect the proper functioning.
- The device and its components are suitable for use within the patient environment. If you are allergic to polyester, nylon or plastic, please don't use this device.
- Do not touch output of batteries and the patient simultaneously.
- Please do not attempt to repair the unit yourself in the event of malfunctions. Only have repairs carried out by authorised service centres.
- Only use original additional or spare parts from the manufacturer. Other parts could damage the device or could lead to personal injury.
- Please report to **medisana** if any unexpected operation or events occur.
- Only use the device under the conditions mentioned in the technical details. Otherwise, the lifespan and performance of the device could suffer.
- If you have any infectious skin disease or the device is used by users with infectious skin disease, please do not continue using the device. Before using the device, user should check the appearance of cuff. If you notice blood or other soil on cuff, please do not use this device. If there is one of above situations, please dispose of the device without reuse.
- Protect the appliance from heavy blows and do not drop it.
- If the unit is not going to be used for a long period, please remove the batteries.
- Accuracy: In case it is needed to have the device checked for calibration, please consult the service center.

BATTERY SAFETY INFORMATION

- Do not disassemble batteries!
- Renew the batteries when the battery icon appears on the display.
- Remove discharged batteries from the device immediately, because they can leak and damage the device!
- Increased risk of leakage, avoid contact with skin, eyes and mucous membranes! If battery acid comes in contact with any of these parts, rinse the affected area with copious amounts of fresh water and seek medical attention immediately!
- If a battery has been swallowed seek medical attention immediately!
- Replace all of the batteries simultaneously!
- Only replace with batteries of the same type, never use different types of batteries together or used batteries with new ones.
- Insert the batteries correctly, observing the polarity!
- Keep batteries out of children's reach!
- Do not attempt to recharge batteries, do not short-circuit and do not throw into a fire! **There is a danger of explosion!**
- Do not throw used batteries into the household refuse; put them in a hazardous waste container or take them to a battery collection point, at the shop where they were purchased!

AC ADAPTER (OPTIONAL ACCESSORY) SAFETY INFORMATION

- Please fully plug the AC adapter into the power socket.
- When unplugging the AC adapter from the power socket, please pull out safely through the AC adapter. Do not pull the plug out by the wire.
- Do not damage or tamper with wiring.
- Unplug the AC adapter when not using this product.
- Unplug the AC adapter before cleaning this product.
- No batteries are needed when operating with an AC adapter.
- Date and time will be reset if AC adapter is plugged in / unplugged.

Unit and LC-Display

- | | | |
|--------------------------|---|--------------------------------------|
| 1 Cuff | 2 Air hose | 3 Battery compartment (on backside) |
| 4 Connector for the hose | 5 START/STOP button | 6 M-button |
| 7 "+" button | 8 Time (Hours : Minutes) | 9 Average of the last 3 measurements |
| 10 Systolic pressure | 11 Diastolic pressure | 12 Irregular heartbeat |
| 13 Pulse frequency | 14 Blood Pressure Indicator (green - yellow - orange - red) | |
| 15 Pulse symbol | 16 Movement detected / cuff incorrectly applied | |
| 17 Battery symbol | 18 Measurement unit | 19 Date (Month : Day) |

Scope of supply

Please check first of all that the device is complete and is not damaged in any way. In case of doubt, do not use it and contact your dealer or your service centre.
The following parts are included:

- 1 **medisana** blood pressure monitor BU 310
- 4 batteries (type AAA, LR03) 1.5V
- 1 instruction manual
- 1 cuff with air tube
- 1 storage pouch

Please contact your supplier if you notice any transport damage on unpacking the unit.

WARNING - Please ensure that the polythene packing is kept away from the reach of children! Risk of suffocation!

How is blood pressure measured?

This **medisana** blood pressure monitor is a device, which is used to measure blood pressure at the upper arm. The measurement is carried out by a microprocessor - already during the inflating process of the cuff. The device detects the systole and the measurement is completed earlier than using conventional measurement methods. As a result, an unnecessarily excessive inflation pressure in the cuff is prevented.

Blood pressure classification

systolic mmHg	diastolic mmHg		Bloodpressure indicator 14
≥ 180	≥ 110	serious hypertension	red
160 - 179	100 - 109	medium hypertension	orange
140 - 159	90 - 99	mild hypertension	yellow
130 - 139	85 - 89	high-normal blood pressure	green
120 - 129	80 - 84	normal blood pressure	green
< 120	< 80	optimal blood pressure	green

WARNING - Blood pressure that is too low represents just as great a health risk as blood pressure that is too high! Fits of dizziness may lead to dangerous situations arising (e.g. on stairs or in traffic)!

Influencing and evaluating readings

- Measure your blood pressure several times, then record and compare the results. Do not draw any conclusions from a single reading.
- Your blood pressure readings should always be evaluated by a doctor who is also familiar with your personal medical history. When using the unit regularly and recording the values for your doctor, you should visit the doctor from time to time to keep him updated.
- When taking readings, remember that the daily values are influenced by several factors. Smoking, consumption of alcohol, drugs and physical exertion influence the measured values in various ways.
- Measure your blood pressure before meals.
- Before taking readings, allow yourself at least five minutes rest.
- If the systolic and diastolic readings seem unusual (too high or too low) on several occasions, despite correct use of the unit, please inform your doctor. This also applies to the rare occasions when an irregular or very weak pulse prevents you from taking readings.

Getting started - Inserting/changing batteries

You must insert the batteries provided before you can use your unit. The lid of the battery compartment 3 is located on the underside of the unit. Open it, remove it and insert the 4 x 1.5 V batteries, type AAA / LR03 supplied. Ensure correct polarity when inserting the batteries (as marked inside the battery compartment). Close the battery compartment. Replace the batteries if the change battery symbol 17 appears on the display or if nothing appears on the display after the unit has been switched on.

Settings - Setting date and clock

Press the START/STOP button 5 to switch on the device. The device will automatically turn to standby mode. Under standby mode, press "+" button 7 for 3 seconds, then the year flashes and you can adjust with the M-button 6. Then press "+" button again to confirm the entry and to move to the next setting option.

Fitting the cuff

- Connect the air hose to the connector 4 on the left side of the device.
- Slide the open end of the cuff through the metal bracket so that the Velcro fastener is on the outside and it becomes a cylindrical form (Fig.1). Slide the cuff over your left upper arm.
- Position the air hose in the middle of your arm in line with your middle finger (Fig.2) (a). The lower edge of the cuff should be 2 - 3 cm above the crease of the elbow. (b). Pull the cuff tight and close the Velcro fastener (c).
- Tighten the end of the cuff so that it wraps evenly around your arm, leaving room for 2 fingers between the cuff and your arm.
- Measure the blood pressure on your bare arm.
- Only position the cuff on the right arm if it cannot be used on the left arm. Always carry out measurements on the same arm.
- Correct measuring position for sitting (Fig.3). Make sure that the cuff does not slip during measurement and that the printed arrow points to the crook of the arm.



User memory setting

The **medisana** blood pressure monitor features 2 separate memories, each with a capacity of 120 memory slots. Press the "+" button 7 to select user memory 1 (display: **no 1**) or 2 (**no 2**).

Taking a blood pressure measurement

- After applying the cuff and setting the user memory, press the START/STOP button 5.
- All display characters are shown (display test). This test can be used to check that the display is indicating properly and in full. The unit is ready for measurement and "00" appears.
- The device then automatically inflates the cuff slowly in order to measure your blood pressure. The rising pressure in the cuff is shown on the display.
- When the device detects the signal, the heart symbol 15 on the display starts to flash. If a result is determined, the device slowly will release the air from the cuff. The systolic and diastolic blood pressure and the pulse value appear on the display.
- The blood pressure indicator 14 appears next to the relevant coloured bar depending on the blood pressure classification.
- If the unit has detected an irregular heartbeat, the irregular heartbeat display 12 appears additionally. To stop the measurement, press START/STOP button 5. The cuff will deflate immediately after the button is pressed.
- The readings are automatically saved in the selected memory (1 or 2).
- After about 1 minute without further operation, the machine switches off automatically.

Displaying stored results

This unit features 2 separate memories, each with a capacity of 120 memory slots. Results are automatically stored in the memory selected by the user. To call up the stored measured values, press the "+" button 7 to select user memory 1 (display: **no 1**) or 2 (**no 2**). Then press the M-button 6. The average values of the last 3 measurements 9 appear on the display. If you now press the M-button 6 again, the last measurement taken appears on the display. Press the M-button 6 again to scroll through the measured values. By pressing the START/STOP button 5 you can leave the memory recall mode at any time and at the same time the device switches to standby mode. If 120 measured values are stored in the memory and a new value is saved, the oldest value is deleted.

Deleting stored values

Enter the memory recall mode as described above, then press and hold the M- button 6 and the "+" button 7 at the same time. The memory is cleared ("CLA" appears).

Troubleshooting

Display	Cause	Solution
No display	Batteries do not have enough voltage or are inserted incorrectly.	Insert new batteries. Insert the batteries according to the instructions.
EE	Blood pressure too high or too low or effective pulse too low.	Switch the device off and on again. Then repeat the measurement in correct way.
E1	Airflow abnormally. The air hose may not be connected correctly.	Check the connection of the air hose. Repeat the measurement.
E2	Inflation pressure over 300 mmHg.	Switch the device off and on again. Then repeat the measurement.
E3	Measurement unsuccessful. Cuff not correctly applied or movement or speech during measurement.	Wrap the cuff properly. Remeasure in correct way. Do not speak or move during the measurement.
	Motion or speech detected during measurement. Cuff may not be correctly applied. Measurement values may be incorrect.	Wrap the cuff properly. Remeasure in correct way. Do not speak or move during the measurement.
	Cuff not correctly applied (e.g. too tight or too loose).	Wrap the cuff properly. Remeasure in correct way.
EP	Contact the customer service.	

Cleaning and maintenance

Remove the batteries before cleaning the unit. Clean the unit using a soft cloth lightly moistened with a mild soapy solution. Never use abrasive cleaning agents, alcohol, naptha, thinner or gasoline etc. Never immerse the unit or any component in water. Be cautious not to get any moisture in the main unit. Do not wet the cuff or attempt to clean the cuff with water. Using a dry cloth, gently wipe away any excess moisture that may remain on the cuff. Lay the cuff flat in an unrolled position and allow the cuff to air dry. Do not expose the unit to direct sunlight; protect it against dirt and moisture. Do not expose the unit to extreme hot or cold temperatures. Keep the device in the storage case when not in use. Store the unit in a clean and dry location.

Disinfection

- If used by yourself in a home environment, wipe the cuff once a month with a commercially available cotton cloth with 75% alcohol for more than 30 seconds at a time for disinfection in addition to the normal cleaning routine.
- If used for more than one person (home use), wipe the cuff once a week with a commercially available cotton cloth with 75% alcohol for more than 30 seconds at a time for disinfection in addition to the normal cleaning routine.
- After cleaning/disinfection and before use, make sure that there are no blood stains or dirt on the display, the device or the cuff. If there are blood spots or dirt that cannot be removed, please dispose of the device without reusing it.
- If used in a complex environment (e.g. in a hospital) or by persons outside your own family, replace the cuff with a new one after use.

Disposal

This product must not be disposed of together with domestic waste. All users are obliged to hand in all electrical or electronic devices, regardless of whether or not they contain toxic substances, at a municipal or commercial collection point so that they can be disposed of in an environmentally acceptable manner. Remove the batteries before disposing of the device/unit. Do not dispose of old batteries with your household waste, but at a battery collection station at a recycling site or in a shop. Consult your local authority or your supplier for information about disposal.

Guidelines / Standards

This blood pressure monitor meets the requirements of the EU standard for noninvasive blood pressure monitors. It is certified in accordance with EC Guidelines and carries the CE symbol (conformity symbol) "CE 0197". The blood pressure monitor corresponds to European standards EN 60601-1, EN 60601-1-2, EN 1060-3, EN 1060-4, EN 81060-1, EN 81060-2 and EN 80601-2-30. The specifications of EU Guideline "93/42/EEC of the Council Directive dated 14 June 1993 concerning medical devices" are met.

Technical specifications

Name and description:	medisana Upper arm blood pressure monitor BU 310
Display system / Memory slots:	Digital display / 2 x 120
Measuring method / Mode of operation:	Oscillometri
Power supply:	4 x 1.5V ≙ AAA "LR03" alkaline battery, adapter 5V / 1.2A
Rated cuff pressure:	0 - 300 mmHg
Measurement pressure:	40 - 280 mmHg
Pulse measuring range:	40 - 199 beats per minute
Maximum error tolerance for static pressure:	± 3 mmHg
Maximum error tolerance for pulse rate:	± 5 % of the value
Pressure generation:	Automatic with pump
Deflation:	Automatic
Shelf life (batteries):	3 years (Temperature 20 ± 2°C; rel. humidity 65 ± 20 %)
Battery life:	Approx. 300 measurements
Product life span:	Approx. 5 years with 4 times daily use
Operating conditions:	+5°C to +40°C, 15 to 93 % relative humidity, non-condensing, 700-1060 hPa atmospheric pressure
Storage / Transportation conditions:	-25°C to +70°C, relative humidity ≤ 93 %
Dimensions / Cuff:	Approx. 140 x 110 x 56.5 mm / 23 - 43 cm (9" - 17")
Weight (main unit):	Approx. 265 g ± 5 g without batteries
Item number:	48792
EAN number:	40155 88 48792 7
Accessories (optional):	Power adaptor for BU 300, BU 310, BU 320 connect Art. No. 48133 / EAN 40155 88 48133 8 Cuff for BU 300, BU 310, BU 320 connect (Size: Medium, circumference 23-33 cm) Art. No. 48132 / EAN 40155 88 48132 1

In accordance with our policy of continual product improvement, we reserve the right to make technical and visual changes without notice.

Warranty and repair terms

Please contact your supplier or the service centre in case of a claim under the warranty. If you have to return the unit, please enclose a copy of your receipt and state what the defect is. The following warranty terms apply:

- The warranty period for **medisana** products is 5 years from date of purchase. In case of a warranty claim, the date of purchase has to be proven by means of the sales receipt or invoice.
- Defects in material or workmanship will be removed free of charge within the warranty period.
- Repairs under warranty do not extend the warranty period either for the unit or for the replacement parts.
- The following is excluded under the warranty:
 - All damage which has arisen due to improper treatment, e.g. nonobservance of the user instructions.
 - All damage which is due to repairs or tampering by the customer or unauthorised third parties.
 - Damage which has arisen during transport from the manufacturer to the consumer or during transport to the service centre.
 - Accessories which are subject to normal wear and tear.
- Liability for direct or indirect consequential losses caused by the unit are excluded even if the damage to the unit is accepted as a warranty claim.

medisana®

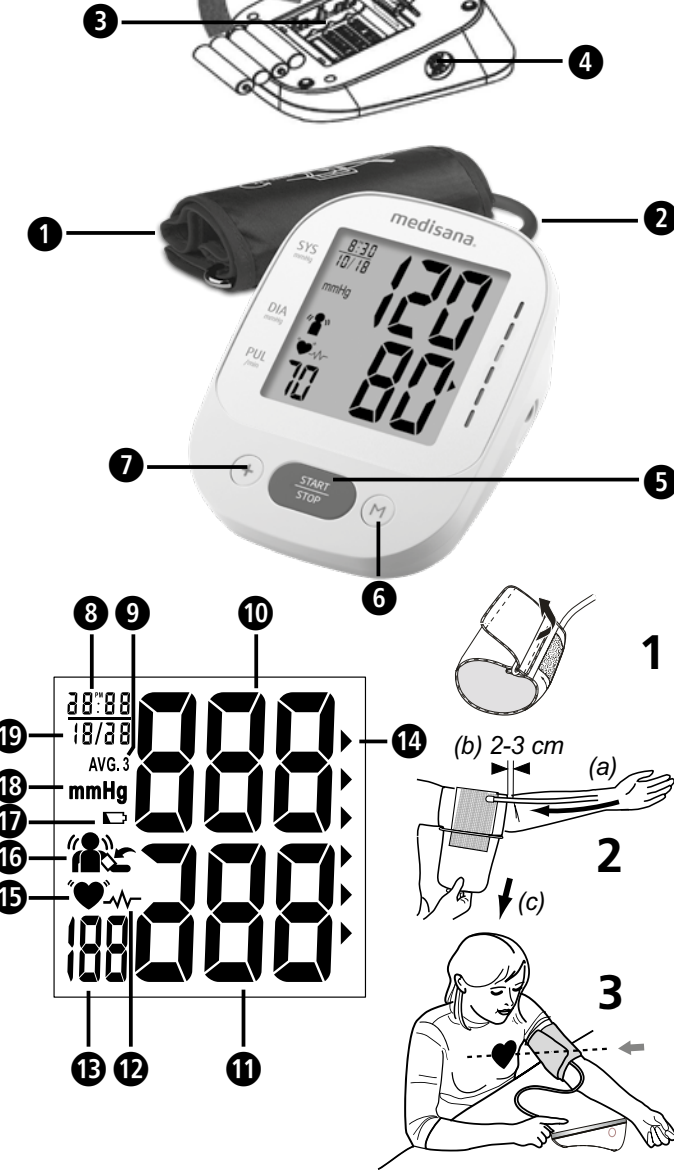
"馬德保康"手臂式電子血壓計

"medisana" Upper Arm Blood Pressure Monitor

衛部醫器陸輸字第001388號

說明書

TW 儀器和液晶螢幕



標誌說明

	重要 不遵守這些說明可能會嚴重損害或損壞儀器。
	警告 必須遵守這些警告說明，以防對用戶造成任何傷害。
	小心 必須遵守這些說明，以防對儀器造成任何損壞。
	注意 這些說明提供關於安裝或操作的有用附加訊息。
	警告： 為避免因電磁干擾造成結果不準確，便攜式頻通通信設備（包括天線電纜和外部天線等外圍設備）與儀器任何部分的距離不應低於 30 cm。本產品的性能可能受到影響。
	儀器分類： BF 型應用部件
	溫度範圍
	濕度範圍
	IP22 外殼保護等級
	大氣壓力範圍
	非電離電磁輻射
	批號
	序列號
	製造業者
	製造日期

儀器訊息：

- 內部供電設備
- 不適合在混有空氣或氧氣或一氧化二氮的易燃麻醉劑混合物中使用

預期用途

- 這款全自動電子血壓計用於測量人體的收縮壓和舒張壓以及心率，通過佩戴在上臂的壓脈帶震動進行測量。在一塊液晶螢幕上即可看到所有測量值。壓脈帶可用圓長為 23 至 43 cm。本產品僅供成人在家庭室內使用。
- 本產品能夠檢測到心律不整，並顯示相應標誌。

禁忌

- 本產品不適用於孕婦和有植入性電子裝置（如心臟節律器或除顫器）的患者。

TW 安全說明



請在使用本產品之前仔細閱讀本說明書，尤其是安全說明，並保留說明書以備將來使用。如果您要將本產品轉交給其他人，務必同時移交本說明書。

使用前請務必詳閱原廠之使用說明書並遵照指示使用。



- 本產品僅供家庭使用。
- 僅可根據使用說明將本產品用於其預期用途。如果濫用本產品，保修索賠將失效。
- 患者是目標操作者。患者可以在正常情況下測量數據和更換電池，並根據用戶說明書維護儀器及其配件。使用的部分是壓脈帶。
- 此電子血壓計供成人使用。本產品不適用於測量兒童或嬰兒的血壓。請在用於大齡兒童前諮詢醫師。
- 請確保將本產品放在兒童和寵物不能接觸的地方。吞嚼包裝袋、電池、電池蓋等小零件可能導致窒息。
- 本產品包含敏感零件。小心操作並確保操作和存放條件符合要求。
- 在攝入了咖啡因或煙草後，至少要等 30 分鐘才能進行測量。
- 在測量前，應休息 5 至 10 分鐘，不要進食、飲酒和吸煙，不要做任何體力勞動，不要運動或洗澡。以上這些因素都會影響測量結果。
- 反復測量會導致充血，這可能引起測量結果錯誤和/或不適的感覺（如手臂麻木）。連續測量血壓時，每次測量應間隔 3 分鐘。如果症狀在幾分鐘內沒有消退，請聯繫醫師。
- 始終測量同一側上臂（通常為左臂）。對於做過乳房切除術或淋巴結清除術的患者，建議在非手術側進行測量。
- 在每日的同一時間定期測量血壓，因為血壓在一天中是波動的。
- 在測量過程中確保姿勢舒適放鬆，不要緊繃被測手臂的任何肌肉。如有必要，可使用支撐墊。
- 在測量過程中保持冷靜；不要動或說話，否則測量結果可能會改變。
- 極端溫度、濕度或高度可能會影響儀器的性能。
- 壓脈帶鬆動或鬆開會導致測量結果不準確。
- 若已使用任何其他儀器監測同一個肢體，請勿進行測量。這可能導致干擾或失敗。本產品不適合在四肢靜脈注射或透析治療期間使用。
- 本產品不適用於孕婦、植入電子裝置（如心臟節律器或除顫儀）的患者、患有子癇前症、室性早搏、房顫、周圍動脈疾病的患者和接受血管內治療或動脈分流的患者或接受乳房切除術的患者。如果您患有疾病，請在使用本產品之前諮詢您的醫師。
- 如果您患有血液循環問題、動脈硬化、糖尿病、肝病、腎病、重度高血壓或周邊血液循環問題，請在使用本產品前諮詢醫師。
- 本產品用於無創測量和監測上臂的動脈血壓。本產品不用於上臂以外的其他肢體，也不用於血壓測量以外的用途。
- 請勿基於自測採取任何治療措施。切勿更改醫師規定的藥物劑量。如果您正在服用藥物，請諮詢醫師以確定測量血壓的最佳時間。如果您對本產品測量血壓還有其他問題，請聯繫您的醫師。
- 在使用示波法血壓計進行測量時，心律不整可能導致難以記錄正確讀數。本產品具有電子設備，可檢測到心律失常，並以圖標 顯示。若出現此情況，請聯繫您的醫師。
- 在使用和存放過程中請注意，不要被電線和空氣軟管勒住。為降低這一風險，請將本產品放在遠離兒童的地方，不要將軟管繞在脖子上。
- 使用時請勿彎曲空氣軟管，否則可能導致受傷。另外，請勿以任何方式擠壓或堵塞空氣軟管。
- 本產品不能與手術設備同時使用。
- 請勿將壓脈帶套在傷口上，否則會造成進一步傷害。
- 如果您在測量期間感覺不舒服，例如上臂疼痛或其他不適，請按 START/STOP（啟動/停止）按鈕 讓壓脈帶立即放氣。鬆開壓脈帶並將其從您的手臂上取下。
- 在測量期間，如果故障導致壓脈帶保持完全充氣的罕見情況，請立即解開壓脈帶。長時間的高壓（壓脈帶壓力 >300 mmHg 或持續壓力 >15 mmHg 超過 3 分鐘以上）施加在手臂上可能會導致瘀斑。
- 使用前，請確保儀器安全運行並處於正常工作狀態。儀器在使用過程中請勿進行維修或維護。
- 檢查儀器是否受損。使用受損的儀器可能導致受傷、讀數不準或嚴重危險。
- 請勿在無線電發射器或移動電話等發出強電磁輻射的設備附近操作本產品。否則可能影響儀器的正常功能。
- 本產品及其配件適合在患者環境中使用。如果您對聚醯胺、尼龍或塑料過敏，請勿使用本產品。
- 請勿同時接觸電池的輸出端和患者。
- 若發生故障，請勿嘗試自行維修本產品。只能由授權服務中心執行維修。
- 僅可使用製造業者提供的原裝附件或備件。其他零件可能會損壞儀器或導致人身傷害。
- 如果發生任何意外操作或事件，請向原廠報告。
- 僅在技術詳情中所規定的條件下使用本產品。否則，儀器的使用壽命和性能將受到影響。
- 如果您患有任何傳染性皮膚病，或者本產品被患有該病的患者使用過，請勿繼續使用本產品。使用儀器前，用戶應先檢查壓脈帶的外觀。如果發現壓脈帶上有血跡或其他污物，請勿使用本產品。如果出現上述情況之一，請將儀器廢棄，不再使用。
- 避免本產品受到重擊，切勿令其掉落。
- 如果長時間不使用本產品，請取出電池。
- 準確度：如需對儀器進行校準檢查，請諮詢服務中心。

電池安全訊息

- 請勿拆解電池！
- 當螢幕上出現電池圖標時，請更換電池。
- 立即從儀器中取出放電的電池，因為它們可能會漏液並損壞儀器！
- 洩漏風險增加，避免接觸皮膚、眼睛和黏膜！如果電池酸液接觸其中任何部位，請使用大量的清水沖洗受影響區域並立即就醫！
- 如果吞嚥了電池，應立即就醫！
- 同時更換所有電池！
- 僅更換為相同類型的電池，切勿將不同類型的電池一起使用或新舊混用！
- 正確插入電池，正負極不要接反！
- 將電池保管在兒童不能接觸的地方！
- 請勿嘗試為電池充電，請勿使電池發生短路，以及請勿將電池扔向火中！存在爆炸危險！
- 請勿將使用過的電池扔進生活垃圾中；應將它們放入危險廢物箱或帶到電池售賣商店的電池收集點！

變壓器（可選購配件）安全訊息

- 請使用本產品專用變壓器
- 請將變壓器完全插入電源插座
- 拔下變壓器時，請勿拉扯線材，請透過變壓器安全拔出
- 請勿損壞或擅自改動接線
- 請勿拆解或嘗試修理變壓器
- 不使用本產品時請拔下變壓器
- 清潔本產品時請拔下變壓器
- 使用變壓器操作本產品時不需要插入電池
- 插入或拔下變壓器皆會重置本產品的日期及時鐘設定

儀器和液晶螢幕

- | | | | | | |
|--|-------------------|--|----------------------------|--|---------------|
| | 1 壓脈帶 | | 2 空氣軟管 | | 3 電池盒（在背面） |
| | 4 軟管接頭 | | 5 START/STOP（啟動/停止）按鈕 | | 6 M-按鈕 |
| | 7「+」按鈕 | | 8 時間（小時：分鐘） | | 9 最近 3 次測量平均值 |
| | 10 收縮壓 | | 11 舒張壓 | | 12 心律不整 |
| | 13 脈搏頻率 | | 14 血壓指標（綠色 - 黃色 - 橙色 - 紅色） | | 15 脈搏標誌 |
| | 16 檢測到移動/壓脈帶佩戴不正確 | | 17 電池標誌 | | 18 測量單位 |
| | 19 日期（月：日） | | | | |

產品內容物

請首先檢查儀器是否完整以及是否存在任何形式的損壞。如果存在疑問，請勿使用它並聯繫您的經銷商或服務中心。

包括以下零件：

- 1 個馬德保康電子血壓計
- 4 顆電池（AAA，LR03 型）1.5V
- 1 本說明書
- 1 個帶空氣管的壓脈帶
- 1 個收納盒

如果您注意到未打開包裝的儀器上有任何運輸損壞，請聯繫您的供應商。

警告——請確保將聚乙烯包裝放在兒童不能接觸的地方！窒息風險！

血壓是如何測量的？

本產品是一種用於測量上臂血壓的儀器。測量通過微處理器進行——已在壓脈帶充氣過程中進行測量。該儀器能檢測到收縮壓，比使用傳統測量方法更快完成測量。因而，可防止壓脈帶出現不必要的過高充氣壓力。

警告——過低的血壓就像過高的血壓一樣代表嚴重的健康風險！陣陣眩暈可能導致危險情況出現（例如在樓梯上或在行駛途中）！

影響及評估讀數

- 多次測量您的血壓，然後記錄並比較結果。不要從單個讀數得出任何結論。
- 您的血壓讀數應始終由熟悉您的個人病歷的醫師來評估。定期使用本產品並為您的醫師記錄值時，您應不時拜訪醫師以讓其瞭解最新情況。
- 獲取讀數時，請記住，每天的值都會受到若干因素的影響。吸煙、喝酒和強體力活動會以多種方式影響測量值。
- 在餐前測量您的血壓。
- 測取讀數之前，請至少休息 5 分鐘。
- 在正確使用本產品的情況下，如果多次出現收縮壓和舒張壓異常（過高或過低），請通知您的醫師。這也適用於心律不整或脈搏極弱導致您無法獲取讀數的罕見情況。

開始使用——插入/更換電池

必須插入所提供的電池，然後才能使用您的儀器。電池盒的蓋子 位於儀器的底側。將其打開並取下，然後插入所提供的 4 顆 AAA/LR03 型 1.5 V 電池。插入電池時確保極性正確（標記在電池盒內）。關閉電池盒。如果螢幕上出現更換電池標誌 或打開儀器後螢幕上不顯示任何訊息，請更換電池。

設置 – 設置日期和時鐘

按 START/STOP 按鈕 開啟儀器，儀器會自動進入待機模式。於待機模式下，按 "+" 按鈕 3 秒，年份閃爍，再按 M-按鈕 進行設定。然後再按 "+" 按鈕確認設定，並進行下一個設定選項。

安裝壓脈帶

將空氣軟管連接到儀器左側的接頭 處。

- 通過金屬支架滑動壓脈帶的開口端，確保尼龍搭扣在外側，並且壓脈帶變為圓柱形(圖 1)。將壓脈帶套到您的左上臂。
- 將空氣管定位在您手臂中間與中指對齊的位置(圖 2)(a)。壓脈帶的下緣應在肘彎上方 2–3 cm 處 (b)。拉緊壓脈帶並扣上尼龍搭扣 (c)。
- 拉緊壓脈帶末端，使其均勻地包裹住手臂，在壓脈帶和手臂之間留出 2 個手指的空隙。
- 在您的裸臂上測量血壓。
- 僅當無法在左臂上使用時才將壓脈帶綁在右臂上。始終在同一手臂上執行測量。
- 糾正測量坐姿(圖 3)。確保壓脈帶在測量過程中不會滑落，並且印刷的箭頭指向臂彎處。

用戶記憶體設置

本產品具有 2 個獨立用戶記憶體，每個記憶體為 120 個記憶容量。按下「+」按鈕 選擇用戶記憶體 1（顯示：no 1）或 2（no 2）。

測量血壓

- 佩戴壓脈帶並設置用戶記憶體後，按 START/STOP（啟動/停止）按鈕 。
- 螢幕將顯示所有字符(顯示測試)。此測試可用於檢查螢幕指示是否正確和完整。儀器已為測量做好準備，並顯示「00」。
- 然後儀器自動對壓脈帶充氣以測量您的血壓，螢幕上顯示壓脈帶中不斷上升的壓力。
- 儀器發現訊號時，脈搏標誌 開始在螢幕上閃爍。如果結果確定，儀器會緩慢釋放壓脈帶中的空氣。收縮壓和舒張壓以及脈搏值出現在螢幕上。
- 血壓指標 在相應的彩條旁邊閃爍，該指標參照血壓分類。
- 如果儀器檢測到心律不整，將額外出現心律不整顯示 。如需停止測量，按下 START/STOP 按鈕 。按下按鈕後，壓脈帶將立即放氣。
- 讀數會自動儲存在此前選擇的用戶記憶體中（1 或 2）。
- 如果約 1 分鐘後沒有進一步操作，本產品將自動關機。

顯示存儲的結果

本產品具有 2 個獨立記憶體，每個記憶體的容量為 120 個記憶位置。結果會自動存儲在用戶選擇的記憶體中。按下「+」按鈕 選擇用戶記憶體（顯示：no 1）或 2（no 2）。然後按下 M-按鈕 。螢幕上將顯示最後 3 次測量的平均值 。如果再次按下 M-按鈕 ，螢幕上將顯示上一次的測量結果。再按一下 M-按鈕 ，可以滾動瀏覽測量值。按下 START/STOP（啟動/停止）按鈕 ，您可以立即退出記憶調用模式，同時，儀器會切換到待機模式。如果記憶體中已存滿 120 個測量值，新存入值將覆蓋最早存入的值。

刪除存儲的數據

按上述步驟進入記憶調用模式，同時按住 M-按鈕 和「+」按鈕 ，相關用戶記憶體內資料被清除（顯示「CLA」）。

故障排除顯示	原因	解決方案
無顯示	電池沒有足夠的電壓或者沒有正確插入電池。	插入新電池。 根據說明插入電池。
EE	血壓過高或過低，或者有效脈搏過低。	關閉儀器，然後重啟。按正確方式重複測量。
E1	氣流異常。空氣軟管可能沒有正確連接。	檢查空氣軟管的連接。重複測量。
E2	充氣壓力超過 300 mmHg。	關閉儀器，然後重啟。再次測量。
E3	測量不成功。測量時，沒有正確佩戴壓脈帶，出現了移動或說話。	正確纏繞壓脈帶。按正確方式再次測量。測量期間請勿說話或移動。
	測量過程中出現了移動或說話。沒有正確佩戴壓脈帶。測量值可能不準。	正確纏繞壓脈帶。按正確方式再次測量。測量期間請勿說話或移動。
	壓脈帶沒有正確佩戴（例如過緊或過鬆）。	正確纏繞壓脈帶。按正確方式再次測量。
EP	聯繫客戶服務中心。	

清潔和保養

清潔儀器前，取下電池。使用微微浸潤中性肥皂液的軟布來清潔儀器。切勿使用具有腐蝕性的清潔劑、酒精、石腦油、稀釋劑或汽油等。切勿將儀器或任何部件浸入水中。小心不要讓主機進水。不要弄濕壓脈帶或嘗試用清水清潔壓脈帶。使用乾布，輕輕擦除可能留在壓脈帶上的任何多餘水分。將壓脈帶展開開放，通風乾燥。不要將本產品暴露在直射陽光下；防止其沾染灰塵和受潮。不要將本產品暴露在極熱或極冷的溫度下。不使用时將本產品保存在存儲盒中。將本產品存放在清潔、乾燥的地方。

消毒

- 如果是在家庭環境中自己使用，除了正常的清潔程序外，每月用市面上購買的棉布蘸上 75% 的酒精擦拭壓脈帶一次，每次擦拭 30 秒以上來進行消毒。
- 如果供多人使用（家庭使用），除了正常的清潔程序外，每周用市面上購買的棉布蘸上 75% 的酒精擦拭壓脈帶一次，每次擦拭 30 秒以上來進行消毒。
- 清潔/消毒後和使用前，請確保螢幕、儀器或壓脈帶上没有血跡或污垢。如果有無法擦除的血跡或污垢，請將儀器廢棄，不再使用。
- 如果在複雜的環境中（如醫院）或由自己家庭以外的人使用，使用後應更換新的壓脈帶。

廢棄處置

本產品不得隨一般垃圾一起處理。所有使用者都有義務將所有電氣或電子設備（無論它們是否包含有害物質）上交到收集點，以便按照環保的方式處理。處理本電子血壓計之前，請取下電池。舊電池不得隨家庭垃圾一起處理，而應送至回收站或商店的電池收集站。有關處理的資訊，請諮詢您的當地政府或供應商。

指南/標準

本電子血壓計符合歐盟針對無創電子血壓計的標準要求。它通過了歐共體指南的認證並攜帶 CE 標誌(符合性標誌)「CE 0197」。本電子血壓計符合歐洲標準 EN 60601-1、EN 60601-1-2、EN 1060-3、EN 1060-4、EN 81060-1、EN 81060-2 和 EN 80601-2-30。符合歐盟指南「1993 年 6 月 14 日有關醫療器械的委員會指令 93/42/EEC」的規範。

技術規格

名稱和描述：	"馬德保康"手臂式電子血壓計
顯示系統/記憶容量：	數字螢幕/2x120
測量方法/操作模式：	示波法
電源：	4 顆電池 (AAA 型，LR03)，1.5V，或專用變壓器 5V / 1.2A
壓脈帶額定壓力：	0 – 300 mmHg
測量壓力：	40 – 280 mmHg
脈搏測量範圍：	心跳 40 – 199 次/分鐘
最大靜壓容差：	± 3 mmHg
最大脈搏容容差：	值的 ± 5 %
壓力產生：	使用泵自動產生
放氣：	自動
保質期（電池）：	3 年（溫度 20±2°C；相對濕度 65±20%）
電池續航時間：	約 300 次測量
操作環境溫度：	溫度 +5°C 至 +40°C，相對濕度 15–93%，非冷凝 700–1060 hPa 大氣壓

存放溫度：	溫度 –25°C 至 +70°C，相對濕度 ≤ 93%
尺寸/壓脈帶：	約 140 x 110 x 56.5 mm mm / 23 – 43 cm (9" – 17")
重量（主機）：	約 265 g ± 5 g（不含電池）
產品編號：	48792
配件（另選購）：	BU 300, BU 310, BU 320 connect 變壓器 產品編號 48133 / EAN 編號 40155 88 48133 8 BU 300, BU 310, BU 320 connect 壓脈帶 (M碼，周長 23–33 cm) 產品編號 48132 / EAN 編號 40155 88 48132 1

保固和維修條款

如果在保固範圍內提出維修需求，請聯繫您的經銷商或服務中心。如果您必須退回本血壓計，請附上您的收據副本並說明具體缺陷。以下保固條款將適用：

- 產品的保固期為從購買之日起的五年。如果有保固維修，則必須通過銷售收據或發票證明購買日期。
- 如有材料或工藝缺陷，保固期內將予以免費排除。
- 保固期內的維修不會延長本血壓計或更換零件的保固期。
- 以下情況不在保固範圍之內：
 - 由於使用不當（例如不遵守使用者說明）而導致的所有損壞。
 - 由於客戶未經授權的第三方維修或篡改而導致的所有損壞。
 - 在從製造業者向消費者運輸或到服務中心的運輸期間出現的損壞。
 - 正常磨損的零件。

"馬德保康"手臂式電子血壓計
產品貨號: 48792
型號: HL858A1
目錄編號: BU 310
中國製造

製造業者名稱：Living Science Co., Ltd.
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