

osmo

Litemeter

User Manual

osmo



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Intended use of the device

This device is a digital monitor designed to measure the blood pressure and pulse of adult patients who can understand these instructions for use, with the circumference of the upper limb in the range printed on the cuff. During the measurement, the device detects an irregular heartbeat and emits a warning signal with the measurement result. It is designed primarily for general home use.

ORAVA electrical appliances are manufactured in accordance with the state of the art and recognized safety regulations. Nevertheless, incorrect and unprofessional use or use contrary to the intended purpose may create a risk of injury or endanger the life of the user or a third party, resp. damage equipment and other property.

1. VENERAL SAFETY INSTRUCTIONS AND WARNINGS



! Indicates potentially hazardous situations that could result in serious injury or death. General aspects

- Talk to your doctor if you want to use this device during pregnancy, including preeclampsia, or if you have been diagnosed with an arrhythmia or arteriosclerosis.
- Do not use the device to measure on an injured or treated arm.
- Do not place the cuff on the infused arm or during blood transfusions.

- Talk to your doctor before using this device on an arteriovenous bridge (A-V).
- Do not use this device with other ME devices at the same time.
- Do not use this device in an RF surgical environment, MRI, CT scanner, or high oxygen environment.
- Do not leave the device unattended. An air hose on the AC adapter cable can suffocate a newborn or young child.
- Do not leave the air hose plug, the battery compartment cover or the batteries unattended. If the newborn accidentally swallows these items, there is a risk of suffocation.
- Be under the constant supervision of a doctor. Self-diagnosis based on domestic measurements and related self-medication is dangerous.
- People with severe blood flow problems or general blood problems should consult a doctor before using this device, as inflating the shoulder cuff may cause less internal bleeding and subsequent bruising.
- If any abnormalities occur during the measurement, remove the cuff.
- Do not use this device to measure the blood pressure of newborns, infants or people who are unable to express their intentions.
- Do not inflate the cuff at a higher pressure than necessary.
- Do not use this device for any purpose other than measuring blood pressure.
- Use only the cuff designed for this device. Using other cuffs may give incorrect measurement results.

- Do not use a mobile phone or other devices that generate electromagnetic fields near this device. This could cause the unit to malfunction.
- Do not disassemble the monitor or cuff.
- Do not use in humid environments or places where the device may splash water. This could damage the device.
- Do not use this device in a moving vehicle (car, airplane).
- Do not perform more than the required number of measurements. Otherwise, there is a risk of internal bleeding due to impaired blood flow.
- If you have had a mastectomy, contact your doctor.

Using a network adapter (optional)

- If the device or the power cord is damaged, stop using the AC adapter. Turn off the device immediately and unplug the power cord.
- Plug the AC adapter into an socket with the specified voltage. Do not use a switchboard. Never connect or disconnect the mains lead from the mains socket with wet hands.
- Fully insert the plug.
- Do not pull on the power cord when disconnecting the plug. Hold the power cord by the plug. When handling Observe the following rules with the power cord: Do not damage it. Don't break him. Don't interfere. Do not bend or pull it forcibly. Don't twist it. Do not unwind it during use. Don't practice him. Do not place it under heavy objects

- Wipe dust off the plug.
- Disconnect the plug when the device will not be used for a long time. Disconnect the plug before starting maintenance.
- Use only the specified AC adapter of the specified type for this unit. Using other adapters may damage the device and may be dangerous.

Important safety information Battery operation

- Do not insert batteries into the device with the wrong polarity.
- Use only 4 “AAA” type alkaline or manganese batteries in this unit. Do not use other types of batteries. Do not use new and old batteries at the same time.
- If you will not be using the device for three months or more, remove the batteries.

General warnings

- Do not bend the cuff or air hose violently or excessively.
- Do not squeeze the air hose.
- To disconnect the air plug, do not pull on the hose, but on the air plug to connect to the monitor.
- Make sure that the monitor and cuff are not subjected to strong shocks and vibrations and do not fall.
- Do not inflate the cuff if it is not wrapped around the shoulder.
- Do not use this device in an environment other than the specified one. Otherwise there is a risk of incorrect results.

WHAT TO DO DURING HIGH BLOOD PRESSURE?

- Change your way of life, create your own ladder of values so that health comes first.
- Reduce mental stress – reduce too many activities, do not perform more than one at a time, avoid time constraints, always have sufficient time reserve when meeting deadlines. Increase the support of your immediate surroundings, especially in the family, with friends and colleagues.
- Increase relaxation activities – include in your program regular walks, passive rest and enough sleep, warm and bubble baths, self-relaxation techniques, recreational sports, non-stressful hobbies.
- Include in your weekly program at least 3 x 40 minutes of endurance exercise (brisk walking, swimming, cycling, cross-country skiing) at a pulse rate of 50–70% of the maximum, in the presence of other diseases as recommended by a doctor.
- Do not smoke.
- Reduce the salt content of the food, avoid foods and beverages with a high salt content such as e.g. sausages, preserved and instant meals or certain mineral waters.
- In your diet, prefer foods high in fiber and vitamins, especially fruits, raw and cooked vegetables, whole grains, low-fat dairy products (cheeses with a fat content of less than 30% in dry matter), reduce the intake of animal fats (butter, lard, red meat and fishery products), increase the intake of fish and fishery products, do not fry, steam. When overweight, reduce caloric intake and increase energy expenditure.

- With a high alcohol intake, reduce its consumption to a maximum of 2–3 dl of wine per day, or 0.3 – 0.5 l of beer, or 0.04 dl of distillate.
- Make lifestyle changes gradually, not all at once. Focus on one or two changes and only when they are fixed, focus on the next.
- Take your blood pressure regularly at home at the same time in the morning and in the evening, calculate the average values from the measured values. The aim is to achieve average values lower than or equal to 135/85 mmHg. Use only approved pressure gauges type.

INTRODUCTION

Thank you for the trust you have shown in the purchase of the Litemeter automatic electronic blood pressure monitor. Please read this instruction manual carefully before using it. The operation of the device is based on the oscillometric principle with the so-called „Fuzzy arithmetic“ for measuring blood pressure, which achieves high accuracy and repeatability.

An integrated silicone pressure sensor is used to ensure long-term stability. Hooking, draining and fast draining are fully automatic and a constant draining speed is controlled in order to increase the accuracy of the measured results and reduce the measurement time.

The device is practical, has a perfect shape and low weight.

WARNING

Please read this manual carefully before operating the equipment.

Keep this manual for future reference. Contact your doctor for more information about your blood pressure.

This manual and the product do not replace medical care and advice. This manual and the product cannot be used treatments and consider them as a form of medical assistance. In case of health problems, you must contact your doctor immediately.

Using the pressure gauge:

The sphygmomanometer measures human systolic, diastolic blood pressure and pulse in the arteries in the shoulder. It uses an oscillometric measuring method.

We recommend that only persons over the age of 18 use the device. The device is intended for domestic use.

It is not intended for professional clicker use.

BLOOD PRESSURE INFORMATION

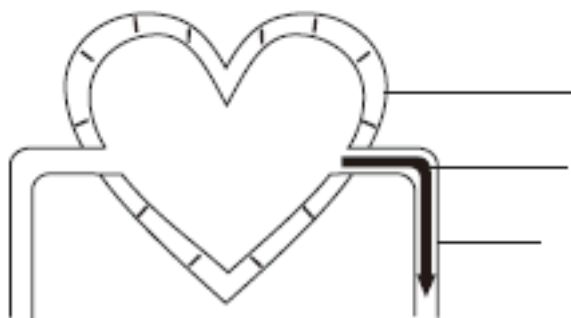
Blood pressure

The heart works like a pump, and it pumps blood that flows through the arteries all the time. The result is blood pressure on the walls of the arteries. When blood flows out of the heart, we talk about systolic blood pressure, and when blood returns to the heart, we talk about diastolic blood pressure.

Blood pressure fluctuations:

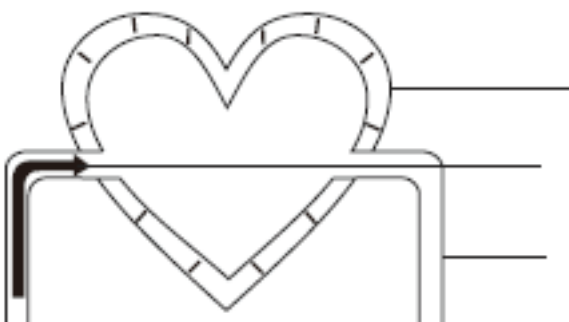
Blood pressure fluctuates during the day. Its value is higher during the day than in the evening. The lowest value is around midnight. Blood pressure starts to rise again around 3 o'clock in the morning and reaches its highest value during the day, so it is not possible to measure the same data every time.

Systolic blood pressure:



Heart muscle contraction
Blood squeezing
Blood is expelled into the arteries
Higher pressure (systolic)

Diastolic blood pressure:



Relaxation of the heart muscle
Return (suction) of blood to the heart
Blood flows from the arteries
Lower pressure (diastolic)

Knowledge of blood pressure

There are a number of factors, such as body conditions or measurement problems, that can affect blood pressure. For example, some people may be nervous when they see a doctor, which causes their blood pressure to rise. This case is well known as „white coat hypertension“. Random measurements do not determine the overall blood pressure level and therefore there is no reason to worry at isolated higher or lower blood pressure levels. The most important thing is to monitor the development of your blood pressure by long-term measurement.

In Western countries, people measure their blood pressure at home and pass the results on to their doctor so that they can better assess their high and low blood pressure. You can obtain baseline values by measuring over several days at the same time of day. These data are called “baseline blood pressure”.

Mean arterial blood pressure values (mmHg)

Age	Men Systol./Diastol. pressure	Woman Systol./Diastol. pressure
11-15	114/72	109/70
16-20	115/73	110/70
21-25	115/73	110/71
26-30	115/75	112/73
31-35	117/76	114/74
36-40	120/80	116/77
41-45	124/81	122/78
45-50	128/82	128/79
51-55	134/84	134/80
56-60	137/84	139/82
61-65	148/88	145/83

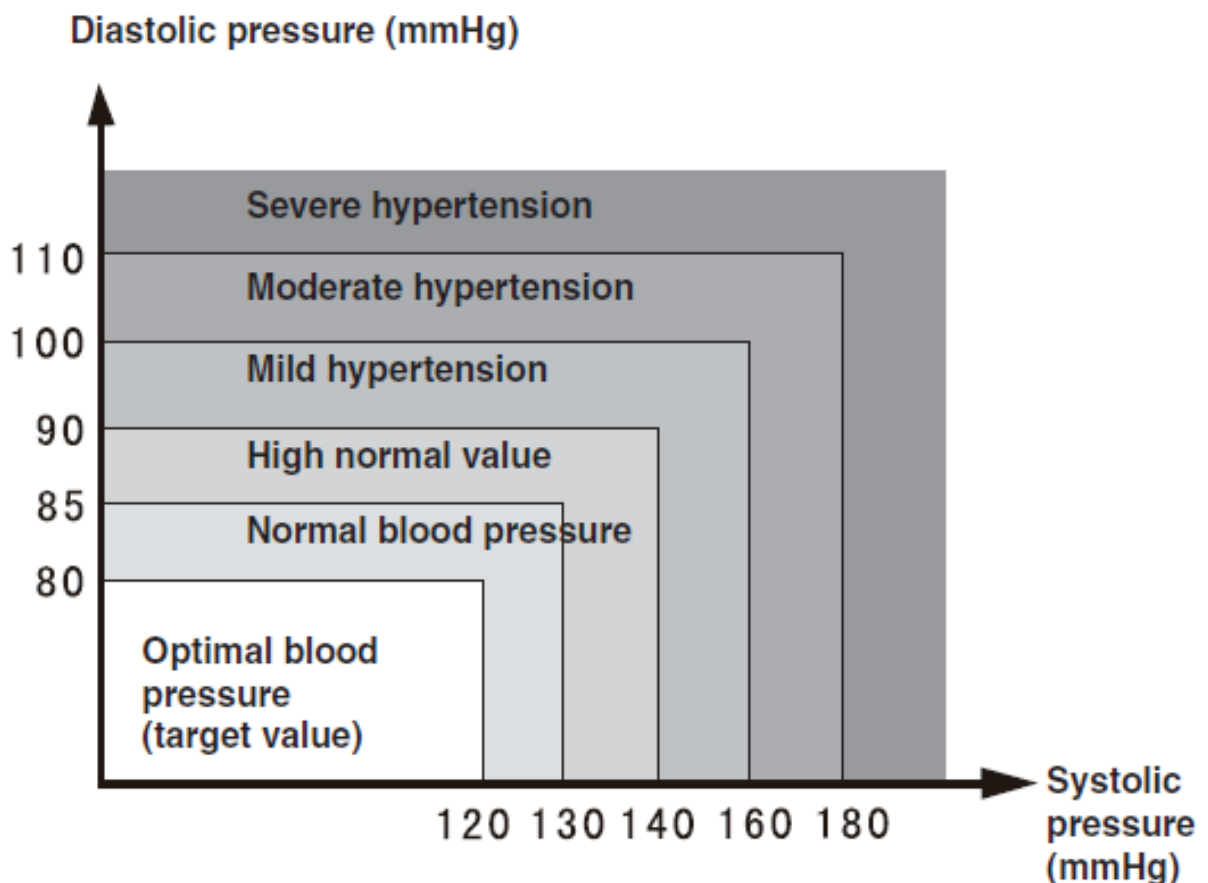
Hypertension:

Hypertension can be caused by various cardiovascular diseases, kidney diseases and endocrinopathies. Long-term hypertension can lead to pathological changes in the heart, brain and kidneys.

These changes can lead to hypertensive complications known as “hidden killers.”

Complaint:

Hypertension is one of the diseases of civilization and its pathology is still unclear. The key problem with hypertension is prevention, such as eating less salty foods, more vegetables and fruits, not smoking and paying more attention to a balanced diet, etc.



Why measure your blood pressure?

We recommend home blood pressure measurement as a preventive measure and as a standard supplement to the treatment of hypertension at your doctor. The advantage of measuring your blood pressure at home is that you can monitor your blood pressure regularly at a given time and in normal everyday conditions. This avoids the danger of an artificial increase in values caused by nervousness in a foreign medical office environment (so-called office hypertension, white coat effect, etc.).

People can also measure their blood pressure themselves

It is not easy to find out exactly what a person's blood pressure is. The measurement itself is not demanding, but the pressure fluctuates immensely, it changes with literally every heartbeat after physical or mental exertion – this can be, for example, a visit to the surgery. The pressure measured in the outpatient clinic is usually slightly higher than that which the patient normally has. The pressure is usually lowest during sleep, rising in the morning, highest in the morning, and decreasing after lunch. For someone, it will rise slightly for the evening. The difference may not only be between parts of the day, it is also common for the pressure measured on both hands to differ.

The solution? More frequent measurements.

Another solution is home measurement, whether occasional or 24-hour monitoring. However, even monitoring awareness can increase someone's pressure above normal. That is why the World Health Organization recommends that this monitoring be carried out several times in six months if hypertension is suspected.

It wants to prevent unnecessary administration of drugs to someone who does not really need them. If you intend to measure the pressure at home yourself, you should avoid the classic mercury device. The content of toxic mercury, as well as the complexity of the measurement, should be a sufficient argument why to withdraw from its purchase.

Regular daily pressure measurement

Many people have a good reason to measure pressure outside the doctor's office. Higher blood pressure poses a risk of a number of dangerous complications, but subjectively no one feels it. The so-called automation, i.e. measuring the pressure outside the doctor's office to the patient himself, is of great importance in preventing these complications – such as myocardial infarction, stroke and many others

Is blood pressure measurement difficult?

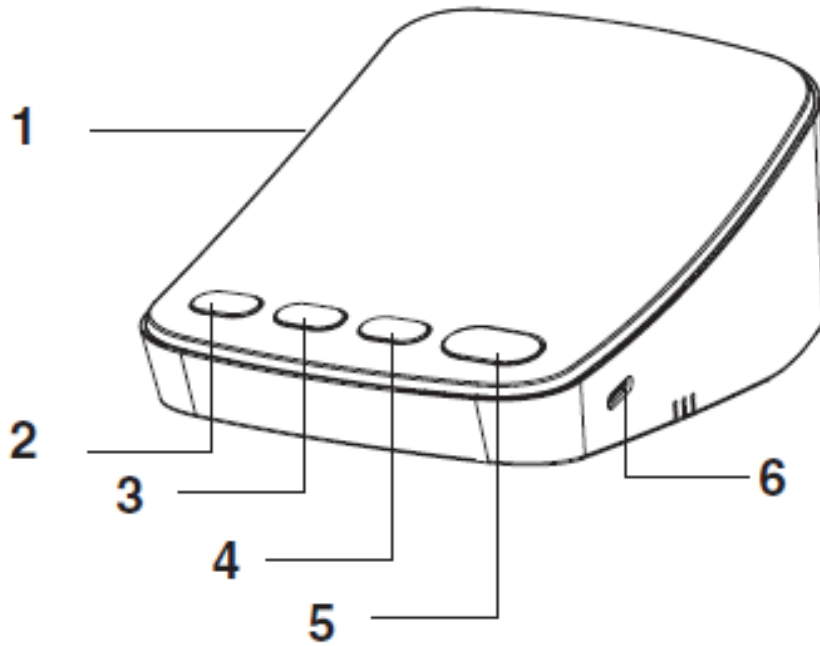
No, not at all. Electronic blood measuring instruments pressure on the arm and wrist are so easy to operate that it is very difficult to make a mistake when using them. They are therefore very suitable for driving both at home and on the road or in the office. However, in order to obtain comparable values, the following rules must be observed: always measure the pressure at the same time of day, after ten minutes of a quiet sitting position. Note that the measured values are affected by circumstances such as smoking or drinking coffee.

IMPORTANT INFORMATION BEFORE USING THE DEVICE

- Consult your doctor about pressure measurement.
- Blood pressure is changing! It is affected by a number of different factors such as smoking, alcohol consumption, medication and physical activity. Do not eat, smoke or exercise for at least 30 minutes before starting the blood pressure measurement.
- Do not drink blood pressure before starting the measurement.
- Stress increases blood pressure, so do not measure under stressful conditions.
- Rest for at least 5 minutes before starting blood pressure measurement.

- Wrap the cuff around your wrist when measuring. It is recommended that the cuff of the blood pressure monitor be placed on the left wrist.
- Do not shake the instrument during the measurement. Otherwise, the measured data may not be correct. The measurement should be performed in a quiet place, you should be in a comfortable sitting position with feet on the floor. Leave the left shoulder on the table with the palm facing up so that the cuff is at the same level as the heart.
- Stay calm and do not talk during the measurement.
- Do not wrap the cuff around clothing. The measurement will not be correct.
- People who are disabled (diabetics, kidneys, arteriosclerotic, etc.) should consult the measured values with a doctor and find out about their accuracy.

DESCRIPTION OF THE DEVICE



1 Cuff hose connection

2 USER/ (User select) button

3 MEM (Memory) button

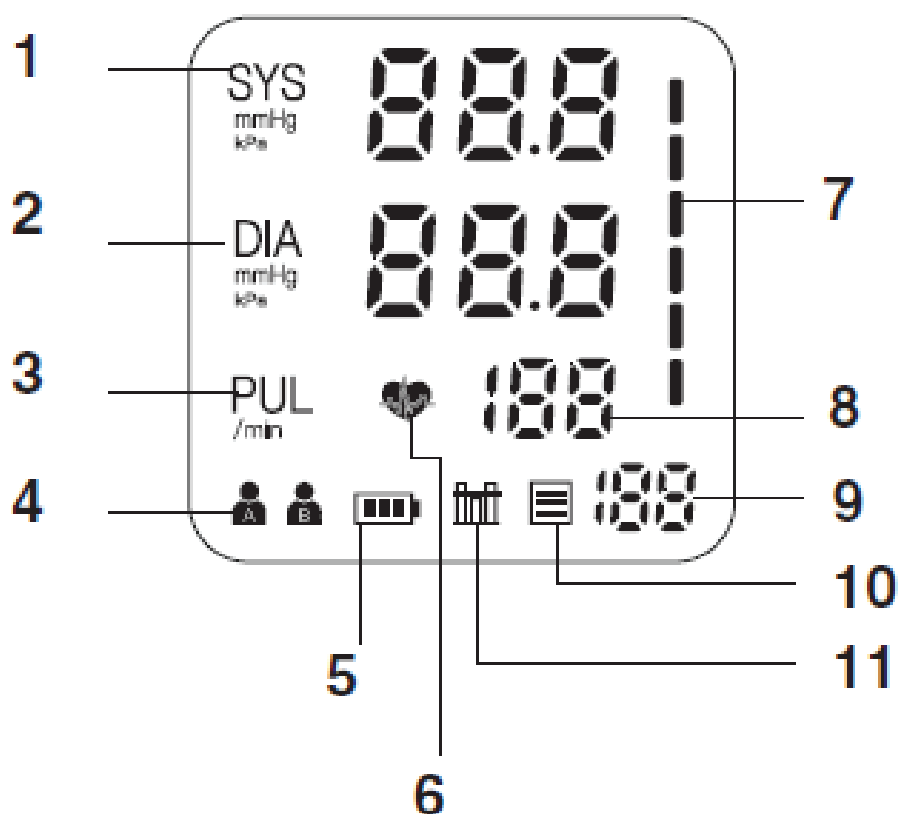
4 SET button

5 START/STOP button (On/Off/Start/Stop measurement)

6 USB-C connector for connecting the AC adapter
(5 V, not supplied)

7 Shoulder cuff with hose and connection

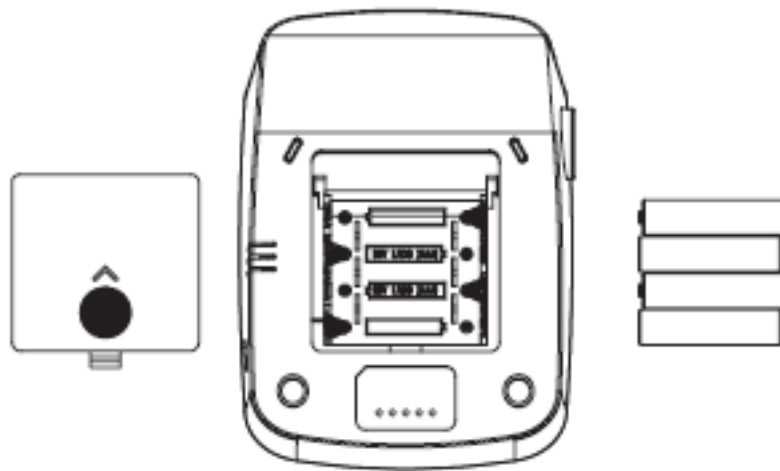
POPIS DISPLEJA



- 1** Scale for systolic pressure
- 2** Scale for diastolic pressure
- 3** PUL indicator (pulse)
- 4** User indicator
- 5** Battery status indicator
- 6** Arrhythmia indicator
- 7** Pressure classification scale
- 8** Pulse value indicator
- 9** Serial number of the measurement memory
- 10** Memory symbol
- 11** Indicator 3 measurements

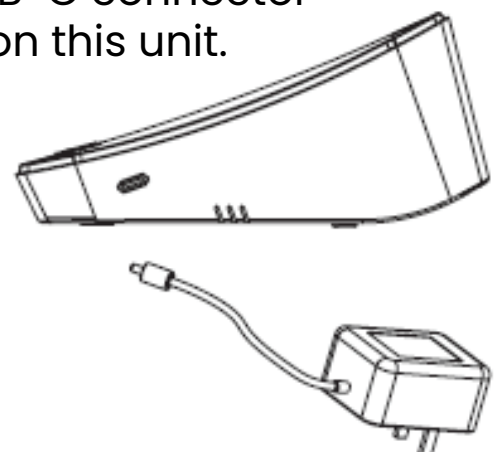
INSERTING/REPLACING BATTERIES

1. Slide the battery cover in the direction of the arrow.
2. Insert or replace 4x 1.5 V alkaline batteries (size „AAA“). Observe the correct + and - polarities on the batteries marked inside the battery compartment.
3. Slide the battery cover back into place.







Notes:

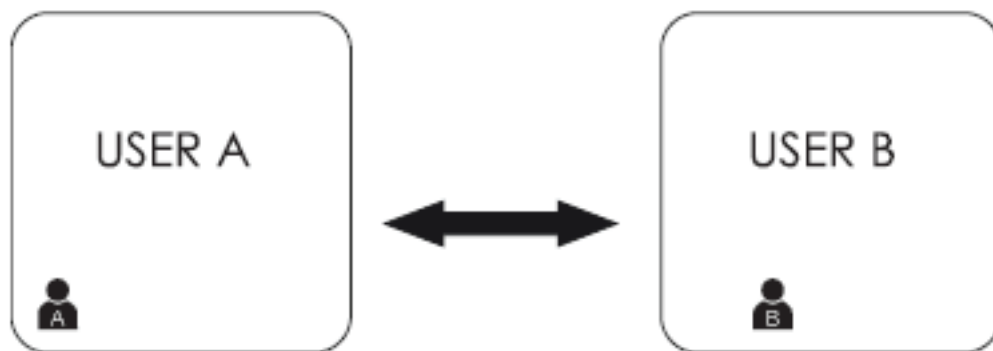
- If the low battery indicator e appears on the display, replace all batteries. Long-life alkaline batteries are recommended.
- If you will not be using the device for a long time, remove all batteries.
- Do not use rechargeable batteries (1.2 V) in the device. They are not suitable for this device and may damage the display.
- You can also use the optional AC adapter to charge mobile phones with 5V DC output power and a USB-C connector that you connect to the USB-C connector on this unit.



INSTRUMENT SETUP

User selection

- 1 With the pressure gauge off, press **USER** .  or  appears on the display.
- 2 Press **USER** to switch between  and .
- 3 Select a user and press START/STOP.



Setting units of measure

- 1 With the pressure gauge on, press the **SET** button. The display shows 0 or 0.0.
- 2 Press the **MEM** button to set the units of measure to kPa or mmHg.
- 3 After selecting the desired units, press the **SET** button again.

ATTACHING THE SHOULDER CUFF

1 Take off tight clothing from the left shoulder or loosen the tight rolled-up sleeve.

Do not put the cuff on the rough one clothing.

2 Insert the air plug properly to the air connector.

3 Hold your left hand with your palm facing you up.

Put the cuff on your left shoulder properly.

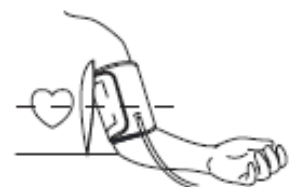
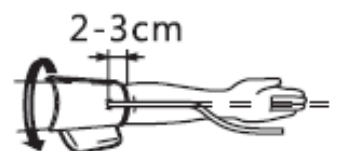
The lower edge of the cuff should be 2 to 3 cm above the inside elbow. The air hose should be on the inside of the upper limb and aligned with your mediator.

4 Wrap the cuff comfortably around the shoulder. The top and bottom edges must fit evenly on your shoulder.

5 After the shoulder cuff is properly seated, secure it firm connection and gluing of velcro.

6 Straighten your shoulder loosely on the table (palm up), the cuff at heart level.

The hose must not be bent (bent).



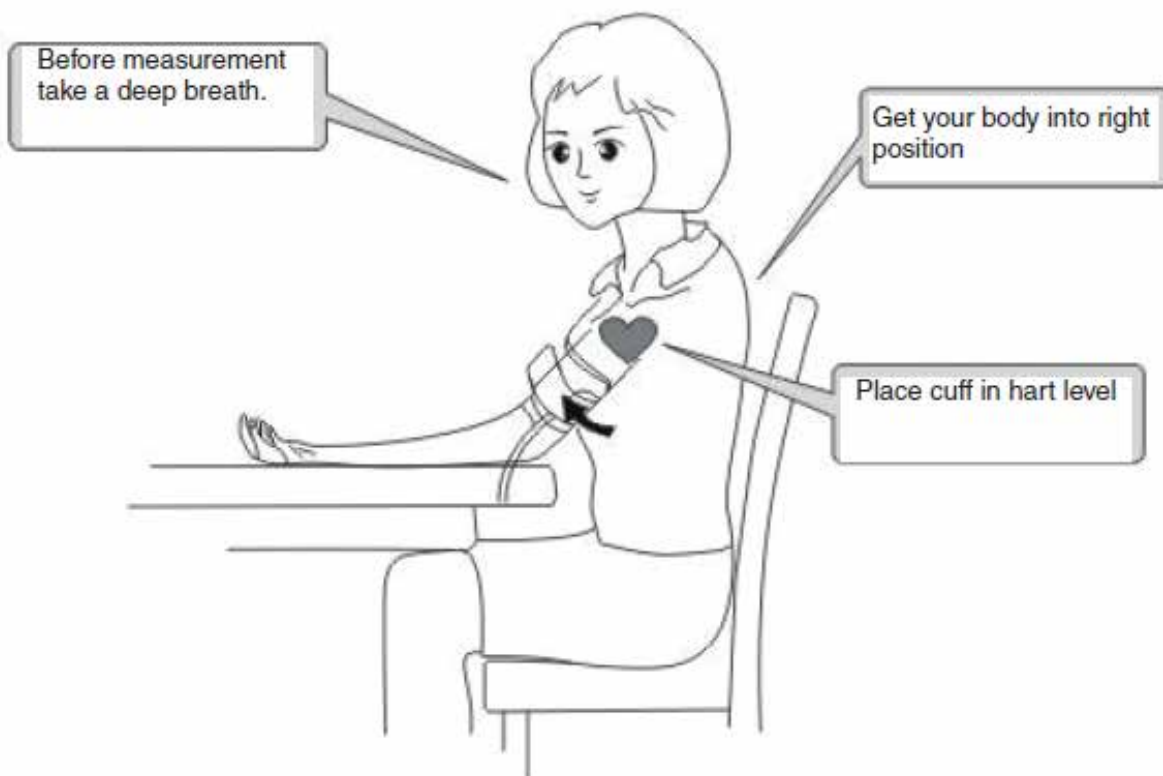
MEASUREMENT AND READING OF RESULTS



Read and follow the instructions in the **Important Information section before using the device** and in the **Attaching the Arm Cuff section**.

Do not talk or move during the measurement.

The pressure gauge is designed for measuring and storing measured data in memory for 2 people defined as A and B.

The model has a memory for 2 people for 199 measurements.




1 When using for the first time, press **USER**, when the device is switched off, you are prompted to enter an ID  (Person A) or  (Person B) for measurements. Make your selection with the button / ,. Before performing a measurement or displaying the memory, make sure that you have entered the correct identifier (A or B) that you have registered before starting the device.

2 Press **START/STOP.** The pressure gauge starts working and a function check is performed. All functions will be shown on the display for about 3 seconds.

Then the symbols on the display disappear and the pressure measurement symbol flashes and the cuff is pressurized. If the measured pressure is higher, the cuff is pressurized to a higher pressure. Do not move or talk during the measurement.

3 When the correct cuff pressure level is reached, automatic cuff discharge will begin automatically. When the cuff is deflated, descending numbers appear on the display. The heart symbol will flash based on the oscillation signals (pulse).

4 When the measurement is completed, the remaining air is released. The display will show the systolic values and diastolic pressure in mmHg and a color indication of whether your pressure is low, normal or high.

At the same time, the heart rate (pulse/min) is displayed. If a cardiac arrhythmia is detected during the measurement, the arrhythmia indicator  will flash after the measurement. After a certain time, the display and the pressure gauge turn off.



Note:

- Wait 2-3 minutes before starting another blood pressure measurement. This time is needed to restore blood circulation. Depending on your individual physiological dispositions, you may need a longer rest period between measurements.
- If it is necessary to end the measurement during it, press the **START/STOP** button at any time and the measurement will end.

STORAGE OF MEASUREMENT RESULTS

The results of each measurement (systolic and diastolic pressure values, pulse) are automatically stored in the device's memory. The device can store the results of up to the last 199 measurements for both user A and B. When saving the 200th measurement, the results from the oldest (1st) measurement will be deleted.

Recall measurement results from memory

1 With the unit turned off, select the desired user with **USER**.

2 With the device turned on, press the **MEM** button. If no measurement results are stored in the database, the indicator **3** measurements and „no“ are displayed.

If measurements have already been saved, the average value for the last three measurements taken is displayed together with the 3 measurements symbol.

3 Press the **MEM** button again.

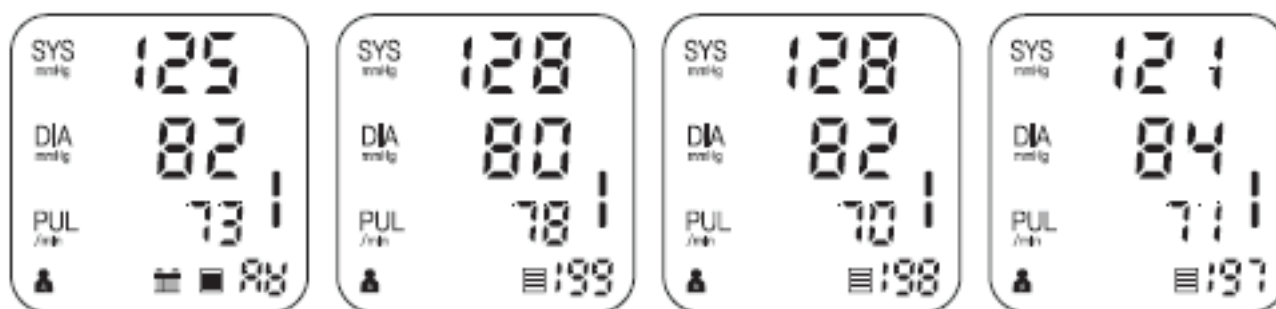
The value of the last measurement is displayed.

4 Each time you press **MEM** again, the older measurements are displayed one by one.

Note:

You can check the measured and stored values with your doctor.

5 To stop reading the stored data, press **START/STOP**.





Erasing measurement results from memory

1 With the unit turned off, press **SET** twice until CL appears, then press **START/STOP**. CL will flash 4 times and all stored data will be deleted.

2 After pressing the **MEM** button, the 3 measurement indicator will now be displayed and „no“, which means that the memory is empty.

TROUBLESHOOTING AND SYMBOLS DISPLAYED

Indicator/ Problem	Cause	Solution
	Weak Batteries	Replace the batteries.
	The indicator flashes after the pulse is measured.	Cardiac arrhythmia during measurement. Try the measurement again.
Abnormal results	The shoulder cuff is too loose.	Put on the shoulder cuff properly.
	Movement or talking during measurement	Do not move or talk during the measurement.
	Parts of clothing can obstruct	Take off clothing that obstructs the husband.

Indicator/ Problem	Cause	Solution
E-1	No pressure was measured. Sudden pressure change.	Fit the cuff correctly and repeat the measurement.
E-2	Radiation interference.	Remove the source of interference (mobile phone), do not talk and repeat the measurement.
E-3	Inflation error.	Fit the sleeve correctly, connect the hose correctly and repeat the measurement.
E-5	Non-standard pressure.	Treat yourself to a break of about 30 minutes and repeat the measurement.

MAINTENANCE

Notifications

- Do not disassemble the device.
- Protect the device from strong impacts.
- Protect the device from high temperatures and sunlight.
- Do not immerse the device or the cuff in water.
- If the device is stored below freezing, do not use it immediately. Leave it in a warm place for at least one hour before use.
- Do not wash or soak the cuff.
- Do not clean the monitor with volatile liquids.
- If you do not use the monitor for a long time, remove the batteries from the device.

Cleaning

Use a soft cloth slightly moistened with a mild cleaning solution to clean the surface of the device. Do not use any type of abrasive pad, scouring powder, or solvent, such as thinner, petrol, or alcohol.

Clean the shoulder cuff with a soft, dry cloth or a soft, damp cloth and neutral soap.

Changes or modifications not expressly approved by the manufacturer could void the warranty.
Do not disassemble or repair the device.

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To read the user manual in a different language,
go to osmousermanual.com

Have any questions or need more assistance?

Send us an email at support@tryosmo.com
and we'll be happy to help you!