OMRON

Automatic Blood Pressure Monitor

Model HEM-8712
Instruction Manual

5342191-6E

Introduction

Thank you for purchasing the OMRON HEM-8712 Automatic Blood Pressure Monitor.

The OMRON HEM-8712 is a compact, fully automatic blood pressure monitor, operating on the oscillometric principle. It measures your blood pressure and pulse rate simply and quickly. For comfortable controlled inflation without the need of pressure pre-setting or re-inflation the device uses its advanced "IntelliSense" technology.

Intended Use
This product is designed to measure the blood pressure and pulse rate of people within the range of the designated arm cuff, following the instructions in this instruction manual.
It is mainly designed for general household use.

Please follow this instruction manual thoroughly.
Please keep for future reference. For specific information about your own blood pressure, CONSULT YOUR DOCTOR.

Important Safety Information

Consult your doctor prior to using in pregnancy or if diagnosed with arrhythmia or arteriosclerosis.

⚠**Warning:** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

(General Usage)
- DO NOT adjust medication based on measurement results from this blood pressure monitor. Take medication as prescribed by your doctor. Only a doctor is qualified to diagnose and treat High Blood Pressure.
- Consult your doctor before using this monitor for any of the following conditions: common arrhythmias such as atrial or ventricular premature beats or atrial fibrillation, arterial sclerosis, poor perfusion, diabetes, age, pregnancy, pre-eclampsia, renal diseases.
  Note that PATIENT motion, trembling, shivering may affect the measurement reading.
- Do not use this monitor on the injured arm or the arm under medical treatment.
- Do not apply the arm cuff on the arm while being on an intravenous drip or blood transfusion.
- Consult your doctor before using this monitor on the arm with an arterio-venous (A-V) shunt.
- Do not use this monitor with other medical electrical (ME) equipment simultaneously. This may result in incorrect operation of the monitor and/or cause an inaccurate reading.
- Do not use this monitor in the area the HF surgical equipment, MRI, or CT scanner exists, or in the oxygen rich environment. This may result in incorrect operation of the monitor and/or cause an inaccurate reading.
- The air tube or the AC adapter cable may cause accidental strangulation in infants.
- Contains small parts that may cause a choking hazard if swallowed by infants.
- Stop using this monitor and consult your doctor if you experience skin irritation or other troubles.

(AC Adapter (optional) Usage)
- Do not use the AC adapter if this monitor or the power cord is damaged. Turn off the power and unplug the power cord immediately.
- Plug the AC adapter into the appropriate voltage outlet. Do not use a multiple-tap.
- Never plug in or unplug the power cord from the electric outlet with wet hands.

⚠**Caution:** Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury to the user or patient or damage to the equipment or other property.

(General Usage)
- Always consult your doctor. Self-diagnosis of measurement results and self-treatment are dangerous.
- Consult your doctor before using monitor for any of the following conditions:
  - If you have had a mastectomy.
  - People with severe blood flow problems or blood disorders as cuff inflation can cause bruising.
- Do not take measurements more than necessary. It may cause bruising due to blood flow interference.
- If there are any abnormalities during the measurement, remove the arm cuff.
- Do not use this monitor on infants or persons who cannot express their intentions.
- Do not inflate the arm cuff more than necessary.
- Do not use this monitor for any purpose other than measuring blood pressure.
- Use only the approved arm cuff for this monitor. Use of other arm cuffs may result in incorrect measurement results.
- During measurement, make sure that no mobile phone or any other electrical devices that emit electromagnetic fields is within 30cm of this monitor. This may result in incorrect operation of the monitor and/or cause an inaccurate reading.
- Do not disassemble the monitor or arm cuff. This may cause an inaccurate reading.
- Do not use in a location with moisture, or a location where water may splash on this monitor. This may damage this monitor.
- Do not use this monitor in a moving vehicle (car, airplane).

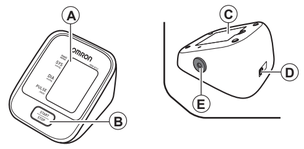
(Battery Usage)
- Do not insert the batteries with their polarities incorrectly aligned.
- Use only four "AA" alkaline or manganese batteries with this monitor. Do not use other types of batteries. Do not use new and used batteries together.
- Remove the batteries if this monitor will not be used for 3 months or more.
- Use the battery within recommended period mentioned to it.

(AC Adapter (optional) Usage)
- Fully insert the power plug.
- When disconnecting the power plug, do not pull the power cord. Be sure to hold the power plug.
- When handling the power cord, observe the following:
  Do not damage. Do not break it.
  Do not tamper with it. Do not forcibly bend or pull.
  Do not twist. Do not bundle during use.
  Do not pinch. Do not place under heavy objects.
- Wipe the dust off from the power plug.
- Disconnect the power plug if the product will not be used for a long period of time.
- Disconnect the power plug before starting maintenance.
- Use only the original AC adapter designed for this monitor. Use of unsupported adapters may damage and/or may be hazardous to this monitor.

General Precautions
- Do not forcibly bend the arm cuff or bend the air tube excessively.
- Do not fold or kink the air tube while taking a measurement. This may cause harmful injury by interrupting blood flow.
- To unplug the air plug, pull on the air plug at the connection with the monitor, not the tube itself.
- Do not apply strong shocks and vibrations to or drop the monitor and arm cuff.
- Do not inflate the arm cuff when it is not wrapped around your arm.
- Read and follow the "Important information regarding Electro Magnetic Compatibility (EMC)" in the "6. Technical Data".
- Read and follow the "Correct Disposal of This Product" in the Technical Data Section when disposing of this monitor and any used accessories or optional parts.
- Do not use this monitor outside the specified environment. It may cause an inaccurate reading.
- Dispose of this monitor, components and optional accessories according to applicable local regulations. Unlawful disposal may cause environmental pollution.
- Please check (for example, by observation of the limb concerned) if this monitor is not causing a prolonged impairment of PATIENT blood circulation.
- If this monitor is stored at the maximum or minimum storage and transport temperature and is moved to an environment with a temperature of 20°C, we recommend waiting for approx. 2 hours before using the monitor.

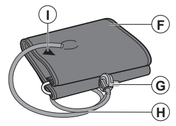
1. Overview

Monitor:



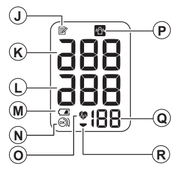
A. Display
B. START/STOP button
C. Battery compartment
D. AC adapter jack (for optional AC adapter)
E. Air jack

Arm cuff:



F. Arm cuff (Arm circumference 22 - 32 cm)
G. Air plug
H. Air tube
I. Marker

Display:



J. Memory symbol
K. Systolic blood pressure
L. Diastolic blood pressure
M. Low battery symbol
N. Cuff wrapping guide
O. Heartbeat symbol
   1. Flashes during measurement.
   2. If flashing after measurement completed or when viewing results stored in the memory, indicates blood pressure out of recommended range*.
P. Movement error symbol
Q. Pulse display
R. Deflation symbol

* Note: If your systolic or diastolic pressure is outside the standard range (above 135/85 mmHg) the Heartbeat symbol (♥) will blink. Please refer to Section 3.3.

Before Taking a Measurement

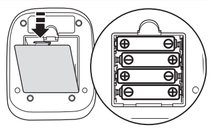
To help ensure an accurate reading, follow these directions:
1. Avoid bathing, drinking alcohol or caffeine, smoking, exercising and eating for 30 minutes before taking a measurement.
2. Rest for at least 5 minutes before taking the measurement.
3. Stress raises blood pressure. Avoid taking measurements during stressful times.
4. Measurements should be taken in a quiet place.
5. Remove tight-fitting clothing from your arm.

2. Preparation

2.1 Installing/Replacing the Batteries

1. Remove the battery cover.

2. Insert four "AA" batteries as indicated in the battery compartment and then replace the battery cover.



Notes:
- If the low battery symbol (▭) appears on the display, turn the monitor off then replace all batteries at the same time.
- The measurement values continue to be stored in memory even after the batteries are replaced.
- The supplied batteries may have a shorter life.

Disposal of used batteries should be carried out in accordance with the national regulations for the disposal of batteries.

3. Using the Monitor

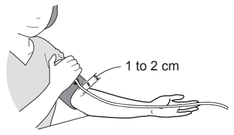
3.1 Applying the Arm Cuff

Remove tight-fitting clothing or tight rolled up sleeve from your upper arm. Do not place the arm cuff over thick clothes.

1. Insert the air plug into the air jack securely.

2. Put your arm through the cuff loop.

The bottom edge of the arm cuff should be 1 to 2 cm above the elbow. Marker (arrow under the air tube) is centred on the middle of your inner arm.



3. Close the fabric fastener FIRMLY.

Notes:
- When you take a measurement on the right arm, the air tube will be at the side of your elbow. Be careful not to rest your arm on the air tube.

- The blood pressure can differ between the right arm and the left arm, and therefore also the measured blood pressure values can be different. OMRON recommends to always use the same arm for measurement. If the values between both arms differ substantially, please check with your doctor which arm to use for your measurement.

3.2 How to Sit Correctly

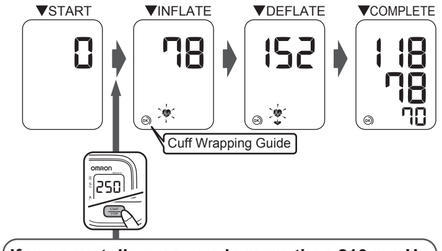
To take a measurement, you need to be relaxed and comfortably seated at comfortable room temperature.

- Sit in a chair with your legs uncrossed and your feet flat on the floor.
- Sit with your back and arm being supported.
- The arm cuff should be placed on your arm at the same level as your heart.

3.3 Taking a Measurement

Notes:
- To cancel a measurement, press the START/STOP button to release the air in the arm cuff.
- Remain still and do not talk while taking a measurement.

1. Press the START/STOP button.
The arm cuff will start to inflate automatically.



If your systolic pressure is more than 210 mmHg
After the arm cuff starts to inflate, press and hold the START/STOP button until the monitor inflates 30 to 40 mmHg higher than your expected systolic pressure.

Notes:
- The monitor will not inflate above 299 mmHg.
- Do not apply more pressure than necessary.

Note: Wait 2-3 minutes before taking another blood pressure measurement. Waiting between readings allows the arteries to return to the condition prior to taking the blood pressure measurement.

⚠ **Always consult your doctor. Self-diagnosis of measurement results and self-treatment are dangerous.**

Cuff Wrapping Guide:
The Cuff Wrapping Guide is a unique feature that indicates if the cuff is not wrapped tightly enough around the arm. Even when the (◯)) appears on the display, a blood pressure reading will be taken.

Note: This reading is **NOT** reliable due to the incorrect wrapping of the cuff. Please wrap the cuff again, taking care to wrap it correctly and take the measurement again. When the (OK) is displayed, the cuff is correctly wrapped tightly enough on the arm and the reading is accurate and reliable.

2. Remove the arm cuff.

3. Press the START/STOP button to turn the monitor off.
The monitor automatically stores the measurement in its memory.
It will automatically turn off after 2 minutes.

Important:
- If your systolic or diastolic pressure is outside the standard range, the heartbeat symbol will blink when the measurement result is displayed. Recent research suggests that the following values can be used as a guide to high blood pressure for measurements taken at home.

Systolic Blood Pressure	Above 135 mmHg
Diastolic Blood Pressure	Above 85 mmHg

This criteria is for home blood pressure measurement.

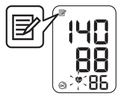
- If you move during measurement, the movement error symbol (🚶) will appear on the display. Keep still and repeat the measurement.

3.4 Using the Memory Function

The monitor automatically stores the last measurement values (blood pressure and pulse rate).

To View the Readings Stored in Memory

1. Press and hold the START/STOP button for more than 5 seconds.
The last measurement value is displayed along with the memory symbol.

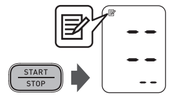


Notes:
- If your systolic or diastolic pressure is outside the standard range, the heartbeat symbol will blink when the measurement result is displayed.
- The cuff wrapping guide result appears on the display with the measurement values.
- If there are no measurements results stored in the memory, the screen to the right is displayed.

2. Press the START/STOP button to turn the monitor off.
It will automatically turn off after 2 minutes.

To Delete the Values Stored in Memory

Press and hold the START/STOP button for more than 15 seconds.



4. Troubleshooting and Maintenance

4.1 The Icons and Error Messages

Error Display	Cause	Remedy
	Movement during measurement.	Carefully read and repeat the steps in section 3.3.
	Cuff is not applied correctly.	Apply the arm cuff correctly. Refer to section 3.1.
	The batteries are low.	You should replace them with new ones ahead of time. Refer to section 2.1.
	The batteries are exhausted.	You should replace them with new ones at once. Refer to section 2.1.
E1	Air plug disconnected.	Insert the plug securely. Refer to section 3.1.
	Arm cuff not applied correctly.	Apply the arm cuff correctly. Refer to section 3.1.
	Air is leaking from the arm cuff.	Replace the cuff with the new one. Refer to Chapter 5.
E2	Movement during measurement and the arm cuff has not been inflated sufficiently.	Repeat measurement. Remain still and do not talk during measurement. Refer to section 3.3.
		If “E2” appears repeatedly, inflate the cuff manually until it is 30 to 40 mmHg above your previous measurement result. Refer to section 3.3.
E3	The arm cuff was inflated above 299 mmHg when inflating the cuff manually.	Do not inflate the cuff above 299 mmHg. Refer to section 3.3.
E4	Movement during measurement.	Repeat measurement. Remain still and do not talk during measurement. Refer to section 3.3.
E5	Clothing is interfering with the arm cuff.	Remove any clothing interfering with the arm cuff. Refer to section 3.1.
Er	Device error.	Contact your local OMRON representative.

4.2 Troubleshooting

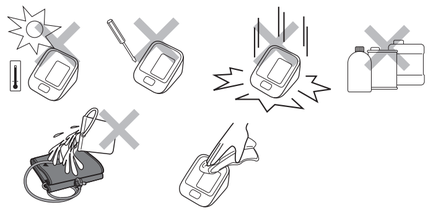
In case of any of the below problems occur during measurement, first check that no other electrical device is within 30cm. If the problem persists, please refer to the table below.

Problem	Cause	Remedy
The reading is extremely low (or high).	Arm cuff not applied correctly.	Apply the arm cuff correctly. Refer to section 3.1.
	Movement or talking during measurement.	Remain still and do not talk during measurement. Refer to section 3.3.
	Clothing is interfering with the arm cuff.	Remove any clothing interfering with the arm cuff. Refer to section 3.1.
Arm cuff pressure does not rise.	The air tube is not securely connected into the air jack.	Make sure that the air tube is connected securely. Refer to section 3.1.
	Air is leaking from the arm cuff.	Replace the arm cuff with a new one. Refer to Chapter 5.
Arm cuff deflates too soon.	The arm cuff is loose.	Apply the cuff correctly so that it is firmly wrapped around the arm. Refer to section 3.1.
Cannot measure or readings are too low or too high.	The arm cuff has not been inflated sufficiently.	Inflate the cuff so that it is 30 to 40 mmHg above your previous measurement result. Refer to section 3.3.
Nothing happens when you press the buttons.	The batteries are empty.	Replace the batteries with new ones. Refer to section 2.1.
	The batteries have been inserted incorrectly.	Insert the batteries with the correct (+/-) polarity. Refer to section 2.1.
Other problems.	• Press the START/STOP button and repeat measurement. • If the problem continues, try replacing the batteries with new ones. If this still does not solve the problem, contact your local OMRON representative.	

4.3 Maintenance

To protect your monitor from damage, please observe the following:

- Do not subject the monitor and the cuff to extreme temperatures, humidity, moisture or direct sunlight.
- Do not fold the cuff or tubing tightly.
- Do not inflate the arm cuff over 299 mmHg.
- Do not disassemble the monitor and components.
- Do not subject the monitor to strong shocks or vibrations (for example, dropping the monitor on the floor).
- Do not use volatile liquids to clean the monitor.
- Do not wash the arm cuff or immerse it in water.
- Do not use petrol, thinners or similar solvents to clean the arm cuff.
- Do not carry out repairs of any kind yourself. If a defect occurs, consult your local OMRON representative.



- The monitor should be cleaned with a soft, dry cloth.
- Use a soft, moistened cloth and neutral soap to clean the arm cuff.

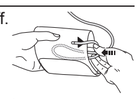
Note: Read and follow the “Correct Disposal of This Product” in the Technical Data Section when disposing of the monitor and any used accessories or optional parts.

Calibration and Service

- The accuracy of this blood pressure monitor has been carefully tested and is designed for a long service life.
- It is generally recommended to have the device inspected every two years to ensure correct functioning and accuracy. Please consult your local OMRON representative.

4.4 Storage

1. Unplug the air plug from the air jack.
2. Gently fold the air tube into the arm cuff.



Notes:
- Do not bend the air tube excessively.
- Do not store your monitor and other components in the following situations:
  - If your monitor and other components are wet.
  - Locations exposed to extreme temperatures, humidity, direct sunlight, dust or corrosive vapours.
  - Locations exposed to vibrations, shocks or where it will be at an angle.

5. Optional Parts

Small Cuff
HEM-CS24
Arm circumference
17 - 22 cm

Medium Cuff
HEM-CR24
Arm circumference
22 - 32 cm

Wide Range Soft Cuff
HEM-RML31
Arm circumference
22 - 42 cm

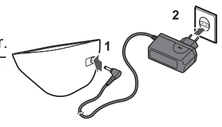
AC Adapter
HHP-CM01

Notes:
- Please check with your local OMRON representatives for the appropriate optional parts.
- Please use AC Adapter HHP-OH01 in Australia and New Zealand.
- Please use AC Adapter HHP-BH01 in India.

Using the Optional AC Adapter

Note: Make sure to use an easily accessible power socket in which to START INFLATE DEFLATE COMPLETE connect and disconnect the AC adapter.

1. Insert the AC adapter plug into the AC adapter jack on the rear side of your monitor.
2. Plug the AC adapter into an electrical outlet.



To disconnect the AC adapter, unplug the AC adapter from the electrical outlet first and then remove the AC adapter plug from the monitor.

6. Technical Data

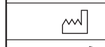
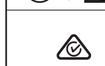
Product Description	Automatic Blood Pressure Monitor
Model	HEM-8712
Display	LCD Digital Display
Measurement Method	Oscillometric method
Measurement Range	Pressure: 0 to 299 mmHg
Blood pressure measurement range	20 to 280 mmHg
Pulse measurement range	40 to 180 beats/ min.
Accuracy	Pressure: ±3 mmHg Pulse: ±5% of display reading
Inflation	Fuzzy-logic controlled by electric pump
Deflation	Automatic pressure release valve
Memory	Last Measurement
IP classification	Monitor: IP20 Optional AC adapter (HHP-CM01) : IP21 (HHP-OH01/HHP-BH01) : IP22
Rating	DC6V 4W
Operation mode	Continuous operation
Power Source	4 “AA” batteries 1.5V or Optional AC adapter (INPUT AC100-240V 50-60Hz 0.12-0.065A)
Battery Life	Approx. 1000 measurements (using new alkaline batteries)
Durable period	Monitor: 5 years Cuff: 1 year Optional AC adapter: 5 years
Applied Part	Type BF (Cuff)
Protection Against Electric Shock	Internally powered ME equipment (When using only the batteries) Class II ME equipment (Optional AC adapter)
Operating conditions	+10 to +40°C / 15 to 90% RH (non-condensing) / 700 to 1060 hPa
Storage/ Transport conditions	-20 to +60°C / 10 to 95% RH (non-condensing) / 700 to 1060 hPa
Console Weight	Approx. 250g without batteries
Cuff Weight	Approx. 130g
Outer Dimensions	Approx. 103 (w) mm × 80 (h) mm × 129(l) mm
Cuff Dimensions	Approx. 145 mm × 466 mm (Cuff: arm circumference 22 to 32 cm)
Cuff/ Tube Material	Nylon, polyester, polyvinyl chloride
Package Contents	Main unit, arm cuff, instruction manual, battery set

Notes:
- Subject to technical modification without prior notice.
- In the clinical validation study, the 5th phase was used on 85 subjects for determination of diastolic blood pressure.
- This monitor is clinically investigated according to the requirements of ISO 81060-2:2013.
- This monitor has not been validated for use on pregnant patients.
- IP classification is degrees of protection provided by enclosures in accordance with IEC 60529.
  This monitor and optional AC adapters are protected against solid foreign objects of 12.5 mm diameter and greater such as a finger. The optional AC adapter (HHP-CM01) is protected against vertically falling water drops which may cause issues during a normal operation. Other optional AC adapters (HHP-OH01 and HHP-BH01) are protected against oblique falling water drops which may cause issues during a normal operation.

CE 0197

- This device fulfils the provisions of EC directive 93/42/EEC (Medical Device Directive).
- This blood pressure monitor is designed according to the European Standard EN1060, Non-invasive sphygmomanometers Part 1: General Requirements and Part 3: Supplementary requirements for electromechanical blood pressure measuring systems.
- This OMRON product is produced under the strict quality system of OMRON HEALTHCARE Co., Ltd., Japan. The core component for OMRON blood pressure monitors, which is the Pressure Sensor, is produced in Japan.

Symbols description	
	Applied part - Type BF Degree of protection against electric shock (leakage current)
	Class II equipment. Protection against electric shock
CE	CE Marking
SN	Serial number
LOT	LOT number
	Temperature limitation
	Humidity limitation
	Atmospheric pressure limitation
	Indication of connector polarity
	For indoor use only
	OMRON's trademarked technology for blood pressure measurement
	Identifier of cuffs compatible for the device
	Cuff positioning indicator for the left arm
	Marker on the cuff to be positioned above the artery
	Range pointer and brachial artery alignment position
LATEX FREE	Not made with natural rubber latex
	Range indicator of arm circumferences to help selection of the correct cuff size.
	Need for the user to consult this instruction manual.

Symbols description	
	Need for the user to follow this instruction manual thoroughly for your safety.
⎓	Direct current
~	Alternating current
	Date of manufacture
	Arm circumference
	Efficiency Level of power supply
	RCM compliance mark, which indicates compliance with electrical safety, EMC, EME & telecommunications requirements in Australia, as applicable to the product.
	SMPS incorporating a short-circuit-proof safety isolating transformer (inherently or non-inherently)
	SMPS (Switch mode power supply unit)
Product production date is integrated in the Serial number, which is placed on the product and/or sales package: the first 4 digits mean year of production, the next 2 digits mean month of production.	

Depending on the product, some of the above symbols may not be applicable on the product.

Important information regarding Electro Magnetic Compatibility (EMC)

HEM-8712 manufactured by OMRON HEALTHCARE Co., Ltd. conforms to EN60601-1-2:2015 Electro Magnetic Compatibility (EMC) standard.
Further documentation in accordance with this EMC standard is available at http://www.omronhealthcare-ap.com/emc-information.
Refer to the EMC information for HEM-8712 on the website.

Correct Disposal of This Product
(Waste Electrical & Electronic Equipment)

This marking shown on the product or its literature, indicates that it should not be disposed of, with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this product from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can return this item for environmentally safe recycling.
Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial waste for disposal.

Manufacturer	**OMRON HEALTHCARE Co., Ltd.** 53, Kunotsubo, Terado-cho, Muko, KYOTO 617-0002 JAPAN
EU-representative EC REP	**OMRON HEALTHCARE EUROPE B.V.** Scorpius 33, 2132 LR Hoofddorp, THE NETHERLANDS www.omron-healthcare.com
Asia Pacific HQ	**OMRON HEALTHCARE SINGAPORE PTE LTD.** 438A Alexandra Road, #05-05/08 Alexandra Technopark, Singapore 119967 www.omronhealthcare-ap.com
Production facility	**OMRON HEALTHCARE MANUFACTURING VIETNAM CO., LTD.** Binh Duong Province, VIETNAM

Made in Vietnam