

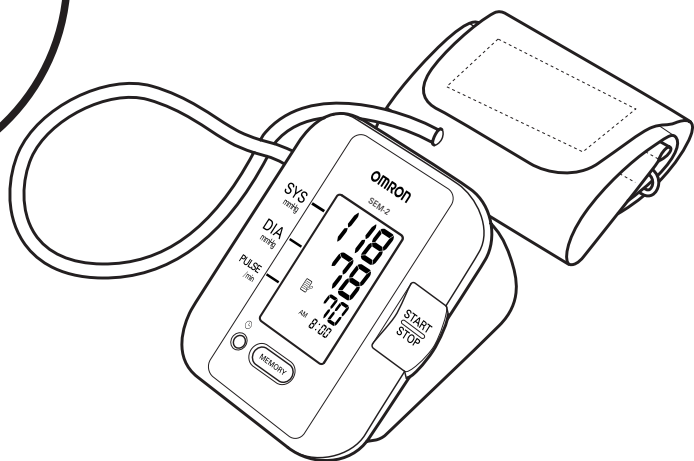
OMRON®

INSTRUCTION MANUAL

Automatic Blood Pressure Monitor

自動血壓計

Model
型 號 **SEM-2**



A Good Sense of Health

CONTENTS

Before Using the Monitor

Introduction	3
Important Safety Notes	4

Operating Instructions

Know Your Unit	6
Unit Display	7
How to Use Your Blood Pressure Monitor	8
How to Install/Replace the Batteries	9
Setting the Date and Time	11
How to Sit Correctly When Taking a Measurement	13
How to Apply the Arm Cuff	15
How to Take a Measurement	17
How to Use the Memory Function	21

Care and Maintenance

Maintenance and Storage	24
Using the Optional AC Adapter	26
Error Indicator	27
Troubleshooting Tips	29
Specifications	31

INTRODUCTION

Thank you for purchasing OMRON SEM-2 Automatic Blood Pressure Monitor.

Your new digital blood pressure monitor uses the oscillometric method of blood pressure measurement. This means the monitor detects your blood's movement through your brachial artery and converts the movements into a digital reading. An oscillometric monitor does not need a stethoscope so the monitor is simple to use.

The SEM-2 Automatic Blood Pressure Monitor is intended for home use.

SAVE THESE INSTRUCTIONS

IMPORTANT SAFETY NOTES

To assure the correct use of the product basic safety measures should always be followed including the precautions listed below:

- ☑ Self-diagnosis of measured results and treatment are dangerous. Please follow the instructions of your doctor.
- ☑ Do not use the unit on infants or persons who cannot express their consent.
- ☑ Do not inflate the arm cuff over 299 mmHg.
- ☑ Do not use the unit for any purpose other than measuring blood pressure.

Do not use a cellular phone near the unit. This may result in incorrect operation of the unit.

Keep batteries out of the reach of young children and infants. If a battery swallowed, consult a doctor immediately.

If the battery fluid should get in your eyes, immediately rinse with plenty of clean water. Consult a doctor immediately.

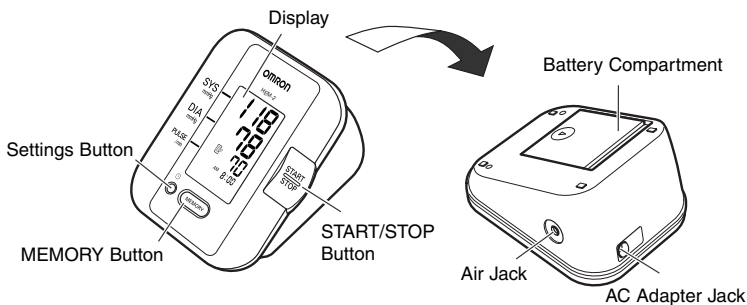
If the battery fluid should get on your skin or clothing, immediately rinse with plenty of clean water.

IMPORTANT SAFETY NOTES

- ☑ When using batteries, the battery liquid may leak and damage the main unit. Please observe the following points.
 - Do not insert the batteries with their polarities incorrectly aligned.
 - Replace old batteries with new ones immediately.
 - When you are not going to use the unit for a long period of time (approximately three months or more), take out the batteries.
- ☑ Do not use new and used batteries together. Do not use batteries of a different type together.
- ☑ Do not forcibly bend the arm cuff or bend the air tube excessively.
- ☑ When removing the air tube, pull on the air plug at the connection with the main unit not the tube itself.
- ☑ Do not expose the unit to strong shocks or vibrations. Do not drop the unit.
- ☑ Do not inflate the arm cuff when it is not wrapped around your arm.

KNOW YOUR UNIT

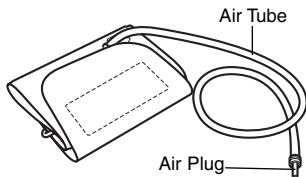
Main Unit:



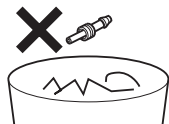
Arm Cuff:

The arm cuff should last for 18 months, when used four times a day. To ensure accurate measurement results, you should change to a new arm cuff after this period.

If air starts to leak from the arm cuff, please purchase a new one.



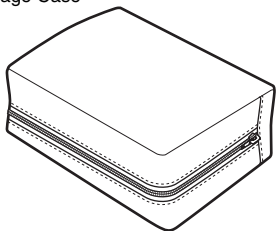
NOTE: An air plug is not included with the replacement arm cuff. Do not dispose of the current air plug when you purchase a new arm cuff.



KNOW YOUR UNIT

Components:

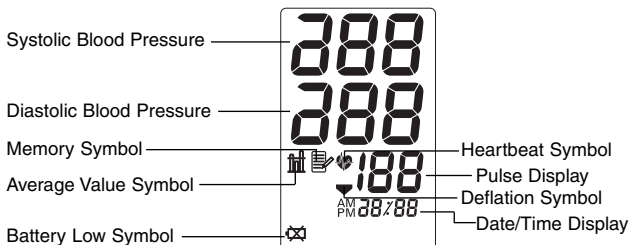
Storage Case



Four "AA" Alkaline (LR6) Batteries



UNIT DISPLAY

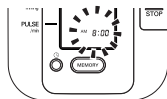


HOW TO USE YOUR BLOOD PRESSURE MONITOR

Preparation

Insert the batteries page 9

Set the date and time page 11

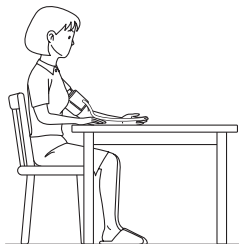


Measurement

Sit correctly page 13

Apply the arm cuff page 15

Start measurement page 17



View Results

Check the measurement result page 19

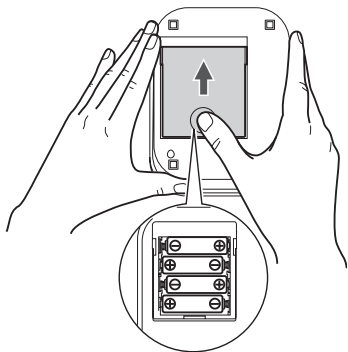
View previous measurement results page 21



Measurement results automatically stored in memory
(Up to 60 measurements)

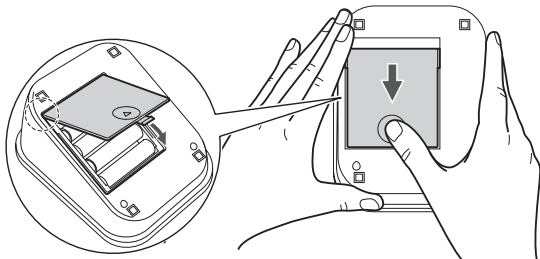
HOW TO INSTALL/REPLACE THE BATTERIES

1. Turn the main unit over.
2. Slide the battery cover in the direction of the arrow while pressing the ribbed part of the cover.
3. Install or replace four “AA” size batteries so that the + (positive) and - (negative) polarities match the polarities indicated on the battery compartment.



4. Replace the battery cover.

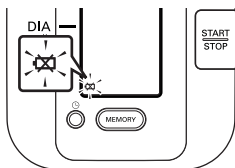
Slide the battery cover as indicated, until it clicks into place.





NOTE: The monitor memorizes previous measurement results even when the batteries are replaced.

HOW TO INSTALL/REPLACE THE BATTERIES

Battery Life & Replacement



If the battery low symbol () appears on the display, replace all four batteries at the same time.

Even if the battery low symbol () starts to blink, you will still be able to use the unit for a short while. However, you should replace the batteries with new ones when the symbol remains lit.

- Turn the monitor off before replacing the batteries.
- Remove the batteries if the monitor will not be used for more than 3 months.
- If the batteries are removed for more than 30 seconds or so, the Date/Time setting will need to be reset. See “Setting the Date and Time” for details.
- Dispose of batteries according to applicable local regulations.

Four new “AA” manganese batteries will last for approximately 300 measurements, when used to take two measurements a day.

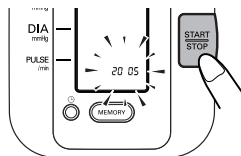
Since the supplied batteries are for monitoring use only, they may have a shorter life and not last for 300 measurements.

SETTING THE DATE AND TIME

Your blood pressure monitor automatically stores up to 60 measurements, and also calculates average values based on the three most recent measurements taken within 10 minutes of the last reading. (If there are only two readings in memory for that period, the average will be based on two readings. If there is only one reading in memory for that period, that reading will be displayed as the average value.) To make use of the memory and average reading functions:

- Set the monitor to the correct date and time before taking a measurement for the first time, or if the date and time setting has been reset.

1. When the monitor is switched on for the first time after inserting batteries, the year digits (2005) will flash on the display.

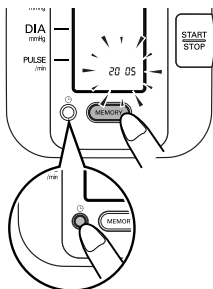


2. **Press the MEMORY button** to advance the digits one at a time.

NOTE: The range for the year setting is 2005 to 2030. If the year reaches 2030, it will return to 2005.

3. **Press the settings button** to confirm the setting when the desired number appears on the display.

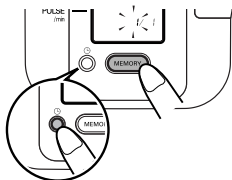
The year is set and the month digits flash on the display.



SETTING THE DATE AND TIME

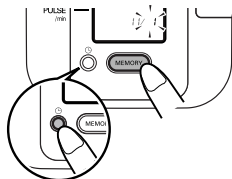
4. Repeat steps 2 and 3 to **set the month**.

The month is set and the day digits flash on the display.



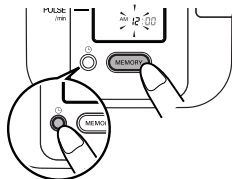
5. Repeat steps 2 and 3 to **set the day (date)**.

The date is set and the hour digits flash on the display.



6. Repeat steps 2 and 3 to **set the hour**.

The hour is set and the minutes digits flash on the display.



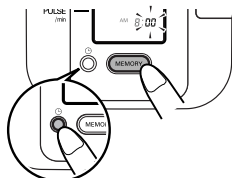
7. Repeat steps 2 and 3 to **set the minutes**.

The minutes settings is set.

The monitor automatically shuts itself off after the minute setting has been set.

To adjust the date and time again, press the settings button while the monitor is off.

(When you have finished adjusting the date and time, press the START/STOP button to turn the monitor off.)

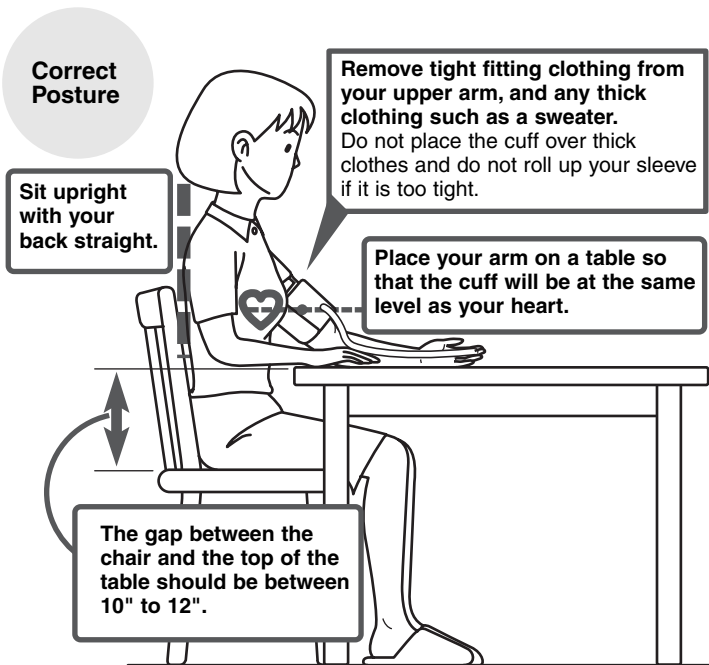


HOW TO SIT CORRECTLY WHEN TAKING A MEASUREMENT

You can take a measurement on either your left or right arm.

NOTE: Measurements should be taken in a quiet place and you should be in a relaxed, seated position. Make sure that the room is not too hot or cold.

Do not take a measurement after bathing, alcohol or exercise.



HOW TO SIT CORRECTLY WHEN TAKING A MEASUREMENT

NOTES:

- Correct posture during measurement is necessary to get accurate results.
- You should also try to measure your blood pressure at the same time each day. (Within 1 hour of waking is recommended.)

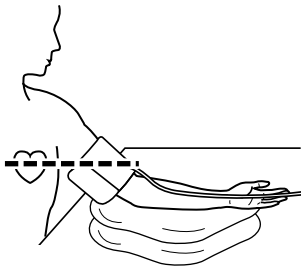
Incorrect Posture

- **Arched back (leaning forwards)**
- **Sitting cross-legged**
- **Sitting on a sofa or at a low table so that you tend to lean forwards**



These situations could lead to higher blood pressure reading due to strain or the arm cuff being lower than the heart.

If the arm cuff is at a lower position than your heart use cushions etc., to adjust the height of your arm.

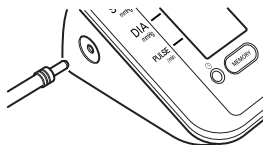


HOW TO APPLY THE ARM CUFF

Be sure to wrap the arm cuff correctly so that you get accurate results.

Measurements can be taken in light clothing. However, please remove thick clothes, such as sweaters, before taking a reading.

1. Insert the air plug into the air jack on the left side of the main unit.

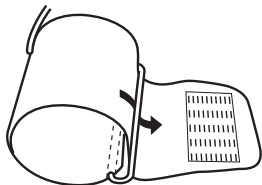


2. Put your left arm through the cuff loop.

The air tube should run down the inside of your forearm and be in line with your middle finger.



NOTE: If the cuff is not assembled, pass the end of the cuff furthest from the tubing through the metal D-ring to form a loop. The smooth cloth should be on the inside of the cuff loop.



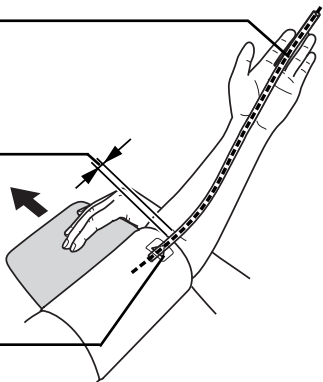
HOW TO APPLY THE ARM CUFF

3. Position the arm correctly.

- 1) The air tube should run down the inside of your forearm and be in line with your middle finger. _____

- 2) The bottom of the cuff should be approximately 1 to 2 cm above your elbow. _____

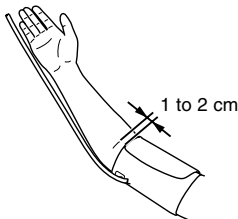
- 3) Apply the cuff to your upper arm so that the colored marker is centered on the middle of your inner arm and points down the inside of the arm. _____



TAKING MEASUREMENTS ON THE RIGHT ARM

Apply the cuff so that the air tube is at the side of your elbow.

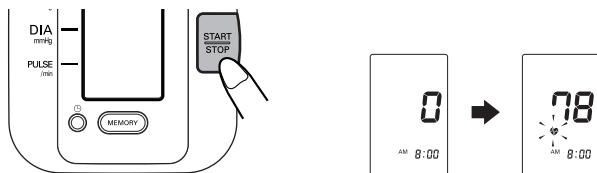
- Be careful not to rest your arm on the air tube, or otherwise restrict the flow of air to the cuff.
- The cuff should be 1 to 2 cm above the elbow.



4. When the cuff is positioned correctly, close the fabric fastener **FIRMLY**.

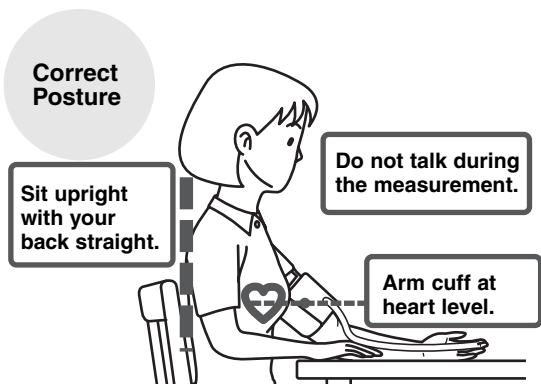
HOW TO TAKE A MEASUREMENT

1. Press the **START/STOP** button to turn on the monitor.



Sit in a chair with your feet flat on the floor and place your arm on a table so that the cuff will be at the same level as your heart. Keep still and do not talk during measurement.

NOTE: To cancel a measurement, press the START/STOP button to turn off the unit and to release the air in the arm cuff.



HOW TO TAKE A MEASUREMENT

Common Causes of Inaccurate Results

Arm cuff is too loose.



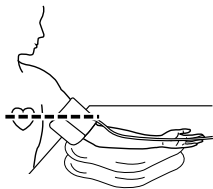
Movement or talking during measurement.



Leaning forwards during measurement.



NOTE: If the arm cuff is at a lower position than your heart use cushions etc., to adjust the height of your arm.



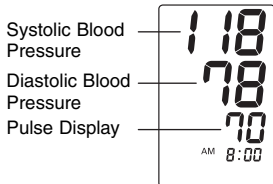
2. When the measurement is complete, the arm cuff completely deflates and your blood pressure and pulse rate are displayed.

NOTE: The monitor automatically stores blood pressure and pulse rate into its memory.

HOW TO TAKE A MEASUREMENT

3. Check the measurement results.

The monitor automatically stores blood pressure and pulse rate into its memory. Refer to “How to Use the Memory Function” on page 21.



NOTES:

- Self-diagnosis of measured results and treatment are dangerous. Please follow the instructions of your doctor.
- If an error symbol “E” or “EE” appears, measurement was not completed successfully. Refer to “Error Indicator” on page 27.
- 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.

4. Remove the arm cuff.

5. Press the **START/STOP** button to turn the monitor off.

NOTE: If you forget to turn the monitor off, it will automatically shut itself off after five minutes.

Guide to Blood Pressure Levels

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

Use these figures as a guide.

* Consult your doctor if necessary.

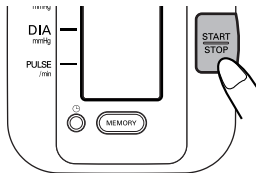
HOW TO TAKE A MEASUREMENT

INSTRUCTIONS FOR SPECIAL CONDITIONS

Instructions for special conditions If your systolic pressure is known to be more than 220 mmHg, press and hold the START/STOP button until the arm cuff inflates 30 to 40 mmHg higher than your suspected systolic pressure.

1. **Press the START/STOP button** to turn the unit on.

Measurement starts.



2. When the cuff starts to inflate, **press the START/STOP button** and keep it pressed until the pressure is 30 to 40 mmHg higher than your suspected systolic pressure.

NOTE: You cannot inflate the cuff above 299 mmHg. (An error will be displayed if you try to inflate the cuff above 300mmHg.)

3. **Release the START/STOP button** when the cuff has been inflated to the desired pressure. The cuff starts to deflate and measurement starts.
4. The rest of the procedure is the same as for normal measurement. Refer to steps 2 to 5 on pages 18 to 19.

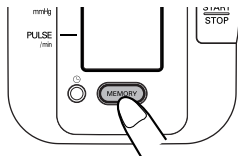
NOTE: Do not apply more pressure than necessary.

HOW TO USE THE MEMORY FUNCTION

This monitor has a memory capable of storing 60 sets of readings. Every time you complete the measurement, the monitor automatically stores the blood pressure and pulse rate. If there are three readings within 10 minutes of the last reading, the average of the three readings is displayed.

NOTE: When 60 sets of readings are stored in memory, the oldest set will be deleted to store a new set.

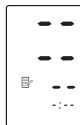
1. Press the **MEMORY** button.



If there are three readings stored in memory that were taken within 10 minutes of the last reading, an average value for those reading is displayed. (If there are only two readings in memory for that period, the average will be based on two readings. If there is only one reading in memory for that period, that reading will be displayed as the average.)

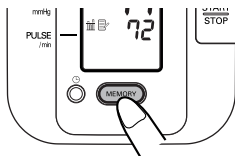


NOTE: If there are no measurements results stored in memory, the screen to the right is displayed.



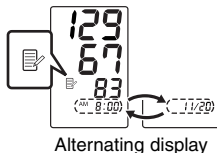
HOW TO USE THE MEMORY FUNCTION

2. Press the **MEMORY** button again, while the average reading screen is displayed.



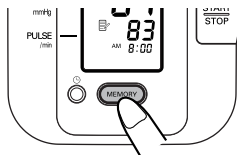
The result from the most recent measurement is displayed.

The date and time of each measurement is displayed alternately with the measurement reading.



3. Press the **MEMORY** button repeatedly to cycle through the previous measurement results.

Keep the button pressed down to cycle rapidly through the previous results.



4. Press the **START/STOP** button to turn off the power.

NOTE: If you forget to turn the monitor off, it will automatically shut itself off after five minutes.

HOW TO USE THE MEMORY FUNCTION

TO DELETE ALL THE READING

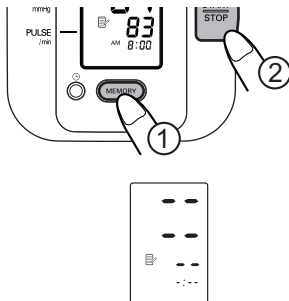
You cannot delete individual stored readings, all the readings will be deleted.

1. To delete stored measurement results, while the memory values are displayed, first **press the MEMORY button**. Then while holding it down, **press the START/STOP button** simultaneously for about 2-3 seconds. All results will then be deleted.

NOTE: Be careful not to press the START/STOP button first. If the START/STOP button is pressed first, the monitor will be turned off.

2. **Press the START/STOP button** to turn the monitor off.

If you forget to turn the monitor off, it will automatically shut itself off after five minutes.



NOTE:

If the date and time are reset to a time before the most recent measurement, the average value will be based on any measurements taken after the date and time were reset. However, you can still view the readings stored in memory.

MAINTENANCE AND STORAGE

MAINTENANCE

To keep your digital blood pressure monitor in the best condition and protect the unit from damage follow the directions listed below:

- Do not subject your monitor and cuff to extreme temperatures, humidity, moisture or direct sunlight.
- Do not fold the cuff or tubing tightly.
- Do not inflate the monitor over 299 mmHg.
- Do not disassemble the monitor.
- 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. The monitor should be cleaned with a soft, dry, cloth.
- Do not wash the arm cuff or immerse it in water.

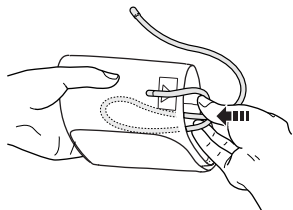
MAINTENANCE AND STORAGE

STORAGE

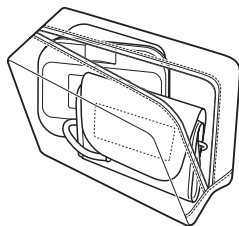
Keep the unit in its storage case when not in use.

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

NOTE: Do not bend the air tube excessively.



3. Place the arm cuff and the main unit in the storage case.



Do not store the monitor in the following situations:

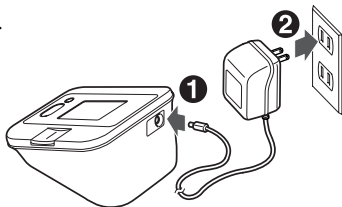
- If the unit is wet.
- Locations exposed to extreme temperatures, humidity, direct sunlight, dust or corrosive vapours.
- Locations exposed to vibrations, shocks or where it will be at an angle.
- Locations exposed to chemicals or corrosive vapours.

USING THE OPTIONAL AC ADAPTER

Insert batteries into the battery compartment even when using the AC adapter.


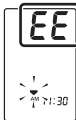

NOTES:

- Never unplug the power cord with wet hands.
 - Use only exclusive AC adaptor specified by Omron dealers. Use of unsupported adapters may damage the unit.
 - When storing the optional AC adapter in the storage case with the main unit, be careful not to damage the main unit or cuff.
1. Insert the AC adapter plug into the AC adapter jack on the rear side of the main unit.
 2. Plug the AC adapter into an electrical outlet.

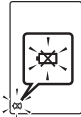
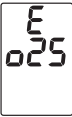


To disconnect the AC adapter, unplug the AC adapter from the electrical outlet first and then immediately remove the AC adapter plug from the main unit.

ERROR INDICATOR

SYMBOL	CAUSE	CORRECTION
	Movement during measurement.	Repeat measurement. Remain still and do not talk during measurement. Refer to page 17.
	Air plug disconnected.	Insert the air plug securely. Refer to page 15.
	Arm cuff not applied correctly.	Apply the arm cuff correctly. Refer to page 15.
	Clothing is interfering with the arm cuff.	Remove any clothing interfering with the arm cuff.
	Air is leaking from the arm cuff.	Replace the arm cuff with a new one.
	Cuff is under inflated.	Carefully read and repeat the steps listed under “How to Apply the Arm Cuff” on page 15.
	The arm cuff was inflated above 299 mmHg when inflating the cuff manually.	Release your finger from the START/STOP button before the pressure reaches 299 mmHg, when inflating the cuff manually. Refer to page 20.

ERROR INDICATOR

SYMBOL	CAUSE	CORRECTION
 <p>Blinks or appears continuously</p>	<p>Batteries are worn.</p>	<p>Replace all four “AA” batteries with new ones. Refer to page 9.</p>
	<p>Device error.</p>	<p>Contact your OMRON service representative.</p>

TROUBLESHOOTING TIPS

PROBLEM	CAUSES	REMEDY
The reading is extremely low (or high).	Arm cuff not applied correctly.	Apply the arm cuff correctly. Refer to page 15.
	Movement or talking during measurement.	Remain still and do not talk during measurement. Refer to page 17.
	Clothing is interfering with the arm cuff.	Remove any clothing interfering with the arm cuff. Refer to page 13.
Arm cuff pressure does not rise.	Is the air plug securely inserted into the main unit?	Make sure that the air plug is connected securely. Refer to page 15.
	Air is leaking from the arm cuff.	Replace the arm cuff with a new one.
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 page 15.
Cannot measure or readings are too low or too high.	Has the arm cuff been inflated sufficiently?	Inflate the cuff so that it is 30 to 40 mmHg above your previous measurement result. Refer to page 21.

TROUBLESHOOTING TIPS

PROBLEM	CAUSES	REMEDY
The unit loses power during measurement or the date and time are reset.	The batteries are worn or have been removed for a long time.	Replace all four “AA” batteries with new ones. Refer to page 9.
Nothing happens when you press the buttons.	The batteries are empty.	Replace all four “AA” batteries with new ones. Refer to page 9.
	The batteries have been inserted with their polarities incorrectly aligned.	Check the battery installation for proper placement of the battery polarities.
Other problems.	<p>Press the START/STOP button and repeat measurement.</p> <p>If the problem continues, try replacing the batteries with new ones.</p> <p>If this still does not solve the problem, contact your OMRON service representative.</p>	

SPECIFICATIONS

Name:	OMRON Automatic Blood Pressure Monitor
Model:	SEM-2
Display:	LCD Digital Display
Measurement Range:	Pressure: 0 to 299 mmHg, Pulse: 40-180/min.
Accuracy/Calibration:	Pressure: ± 3 mmHg or 2% of reading Pulse: $\pm 5\%$ of reading
Inflation:	Automatic by electric pump
Deflation:	Automatic pressure release valve
Rapid Air Release:	Automatic exhaust valve
Pressure Detection:	Capacitive pressure sensor
Measurement Method:	Oscillometric method
Pulse Wave Detection:	Capacitance type pressure sensor
Power Source:	4 “AA” batteries (or AC Adapter)
Battery Life:	Approx. 300 uses when used twice a day with new “AA” manganese batteries
Operating Temperature /Humidity:	10°C to 40°C /30 to 85% RH
Storage Temperature /Humidity:	-20°C to 60°C /10 to 95% RH
Main Unit Weight:	Approximately 340 g not including batteries
Main Unit Dimensions:	Approx. 121 mm (w) \times 86 mm (h) \times 141 mm (l)
Cuff Size:	Approximately 146 mm (w) \times 446 mm (l) Cuff tube 600 mm (l)
Cuff Circumference:	Fits arm circumferences 220mm to 320mm
Contents:	Main Unit, Arm Cuff, Storage Case, Four “AA” Alkaline (LR6) Batteries, Instruction Manual

NOTE: These specifications are subject to change without notice.