

Panasonic

Upper Arm Blood Pressure Monitor
Monitor de Presión Arterial de Brazo

Operating Instructions Instrucciones de funcionamiento

Model No. EW3111
Modelo No. EW3111

For questions or assistance with your blood pressure monitor, call us at 1-800-338-0552.

**Panasonic Consumer Electronics Company
A Unit of Matsushita Electric Corporation
of America**

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Secaucus, NJ 07094



Before operating this device, please read these instructions completely and save this manual for future use.

Antes de usar este dispositivo, lea completamente estas instrucciones y guarde este manual para utilizarlo como referencia en el futuro.

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Introduction

Thank you for purchasing the Panasonic Upper Arm Blood Pressure Monitor EW3111. Designed for easy, one-touch operation, this monitor incorporates Precise Logic™ technology to provide reliable measurements.

Measuring your own blood pressure is an important way of monitoring your health. High blood pressure (hypertension) is a major health problem which can be treated effectively once detected. Measuring your blood pressure between doctor visits on a regular basis in the comfort of your home, and keeping a record of the measurements, will help you monitor any significant changes in your blood pressure. Keeping an accurate record of your blood pressure will help your doctor diagnose and possibly prevent any health problems in the future.

Basics of Blood Pressure

Your heart acts like a pump, sending blood surging through your blood vessels each time it contracts. Blood pressure is the pressure exerted by blood pumped from the heart on the walls of blood vessels. Systolic pressure is the pressure exerted when the heart contracts and pumps blood into the arteries. Diastolic pressure is the pressure exerted when the heart expands, or relaxes. When you or your doctor take your blood pressure, both your systolic and diastolic pressures are measured. If your blood pressure measurement is 120 over 80 (120/80), for example, your systolic pressure is 120 while your diastolic pressure is 80.

Important Instructions Before Use

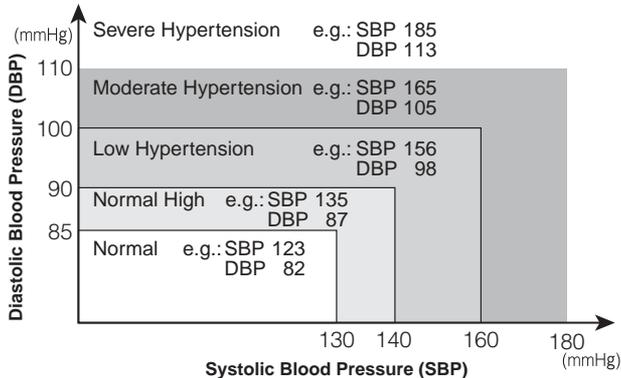
1. Do not confuse self-monitoring with self-diagnosis. Blood pressure measurements should only be interpreted by a health professional who is familiar with your medical history.
 2. If you are taking medication, consult with your physician to determine the most appropriate time to measure your blood pressure. NEVER change a prescribed medication without first consulting with your physician.
 3. Blood pressure can vary based on many factors, including age, gender, weight and physical condition. In general, a person's blood pressure is lower during sleep and higher when he or she is active. Blood pressure can change easily in response to physiological changes. The setting in which a person's blood pressure is measured can also affect the results. Having one's blood pressure measured by a healthcare professional in a hospital or clinic can cause nervousness and may result in a temporarily elevated reading. Because blood pressure measurements taken in a clinical setting can vary considerably from those taken at home, a person's blood pressure should be measured not only occasionally in the doctor's office, but also on a regular basis at home. Also, if you find that your blood pressure is lower at home, this is not unusual. To accurately compare with your physician's reading, take your National blood pressure meter to your doctor's office and compare readings in this setting.
 4. People suffering from cardiac arrhythmia, vascular constriction, liver disorders or diabetes, people with cardiac pacemakers or a weak pulse, and women who are pregnant should consult their physician before measuring their blood pressure themselves. Different values may be obtained due to their condition.
 5. Try to take your blood pressure measurements at the same time and under the same conditions every day.
 - The ideal time to measure your blood pressure (to obtain your so-called "base blood pressure") is in the morning just after waking up, before having breakfast and before any major activity or exercise. If this is not possible, however, try to take measurements at a specified time prior to breakfast, and before you have become active. You should relax for about 5 minutes before taking the measurement.
- The following situations may cause substantial variations in blood pressure readings and should therefore be avoided at least 30 minutes prior to taking your blood pressure.
 - Blood pressure will be higher than usual:
 - when you are excited or tense
 - when you are taking a bath
 - during exercising or soon after exercising
 - when it is cold
 - within one hour after eating
 - after drinking coffee, tea or other beverages containing caffeine
 - after smoking tobacco
 - when your bladder is full
 - Blood pressure will be lower than usual:
 - after taking a bath
 - after drinking alcohol
 - 6. Measurements may be impaired if this unit is used near a television, microwave oven, X-ray equipment or other devices with strong electrical fields. To prevent such interference, use the unit at a sufficient distance from such devices or turn the devices off.
 - 7. This unit is designed for use by adults. Consult with your physician before using this unit on a child. Do not use on infants or toddlers.
 - 8. This unit is not suitable for continuous monitoring during medical emergencies or operations.
 - 9. Do not use the unit for any purpose other than measuring blood pressure. Do not use the unit together with other devices.
 - 10. Improper handling of batteries may result in battery rupture or in corrosion from battery leakage. Please observe the following to ensure proper use of batteries.
 - a. Be sure to turn off the power after use.
 - b. Do not mix different types or sizes of batteries.
 - c. Change all batteries at the same time. Do not mix old and new batteries.
 - d. Be sure to insert batteries with correct polarity, as instructed.
 - e. Remove batteries when they are worn out, and dispose of them properly according to all applicable environmental regulations.
 - f. Do not disassemble batteries or throw them into a fire.
 - g. Do not short-circuit batteries.
 - h. Do not attempt to recharge the batteries included with the unit.

Precautions to Ensure Safe, Reliable Operation

1. Do not drop the unit. Protect it from sudden jars or shocks.
2. Do not insert foreign objects into any openings.
3. Do not attempt to disassemble the unit.
4. Do not crush the pressure cuff.
5. If the unit has been stored at temperatures below 0°C, leave it in a warm place for about 15 minutes before using it. Otherwise, the cuff may not inflate properly.
6. Do not store the unit in direct sunlight, high humidity or dust.

Easily Check Your Blood Pressure Readings Against the World Health Organization (WHO) Guidelines

Blood Pressure Categories



If your systolic pressure falls in one category but your diastolic pressure in another, your level is classified in the higher of the two categories.

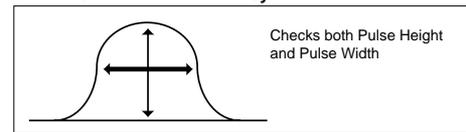
IMPORTANT:

- WHO does not define a low blood pressure area. For reference, systolic pressure readings of less than 90 mmHg are considered to indicate low blood pressure regardless of the diastolic pressure.
- Do not be alarmed by temporarily high or low readings because fluctuations in a person's blood pressure are not uncommon. If possible, measure and record your blood pressure at the same time every day, and consult your physician if you have questions or concerns.
- If abnormal variations in blood pressure are observed in measurement, please consult your physician.

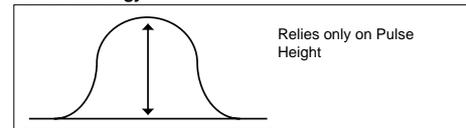
About the Precise Logic™ Measurement System

The blood flow (pulse wave) which influences blood pressure monitors varies according to the conditions of the blood vessels and the structure of the arm, making measurements by conventional methods difficult in some cases. For more consistent, accurate results, this device employs a Precise Logic™ measurement system that verifies both the height and width of the pulse wave in order to reliably measure blood pressure.

Panasonic Technology Double Check Measurement System

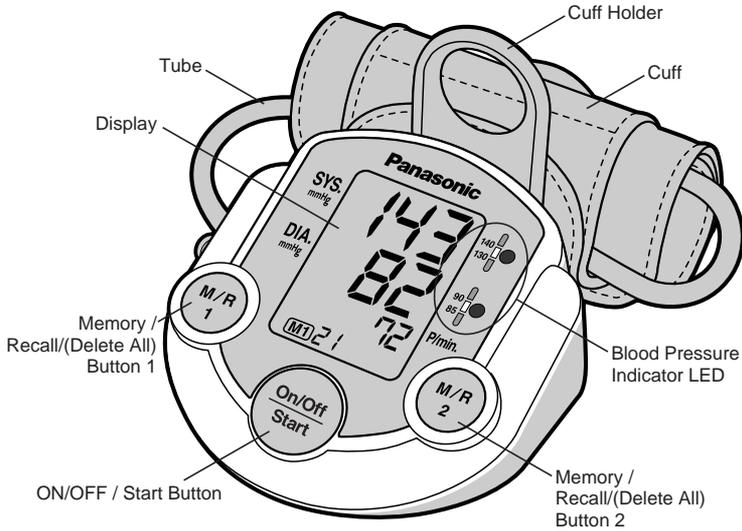


Old Technology



By using the Precise Logic™ measurement system, measurement reliability and accuracy have been improved.

Diagram of device



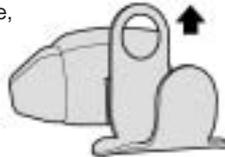
Connecting tube to cuff



Cuff Plug
(Insert cuff plug all the way in.)

Attachment of cuff holder

Slide from below in the direction of the arrow, at the rear of the unit, until a clicking sound is heard.
(NOTE: To remove, slide downwards from above.)



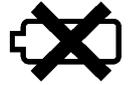
Display/Symbols



Measurement in progress



e.g.: Arm has been moved/
Cuff not positioned correctly



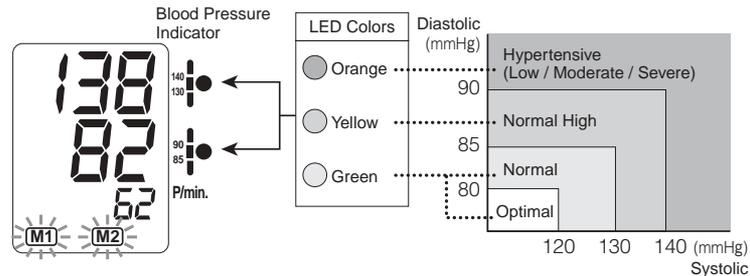
Replace batteries

Alarm function signals high blood pressure

Blood pressure measurements for both systolic and diastolic readings are determined and indicated via a three-color LED system as being within normal or hypertensive ranges based on definitions and classification of blood pressure levels by the World Health Organization (WHO). Moreover, when blood pressure is in the high range, the reading displayed on screen flashes on and off to alert the user.

According to WHO guidelines, values consistently in excess of 140 mmHg (Sys.) and/or 90 mmHg (Dia.) are considered to constitute high blood pressure.

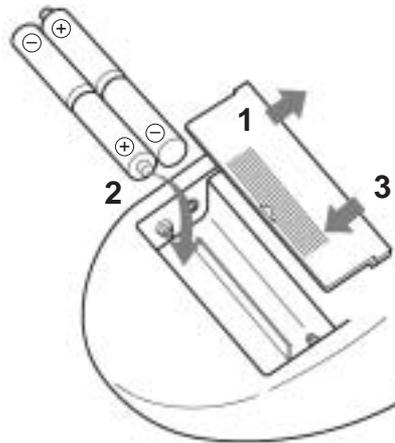
High blood pressure is a health risk and must be treated without fail.



Please consult your doctor without delay if the blood pressure indicator repeatedly draws attention to elevated blood pressure values.

Inserting/replacing batteries

1. Slide off the Battery Cover from the housing.
2. Insert four 1.5 V batteries (R6/AA), ensuring correct polarity.
3. Close the Battery Cover.



Batteries must be replaced when ...

- The Replace batteries symbol appears on the display.
- You press the ON/OFF/Start Button and the display screen goes blank after all displays have come on.
- You press the ON/OFF/Start Button and nothing is displayed on the screen.



Note:

- New batteries contain enough power for about 200 measurements.
- If you do not use the unit for a long time, we recommend to remove batteries from the main unit to avoid damage by liquid leakage.
- Low temperature conditions can cause battery life to be shortened.

CAUTION:

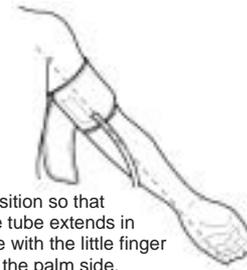
Do not throw batteries into a fire. Doing so may result in an accident or explosion.

Fitting the Blood Pressure Monitor

1. Attaching the cuff to the upper arm.
 - Make sure the cuff is wrapped so that it is in contact with the skin.

Measurements may be taken from either the left or right arm. However, please take measurements using the same arm each time, because there is said to be a blood pressure difference of approx. 10 mmHg between the left and right.

Positioning on the Upper Left Arm



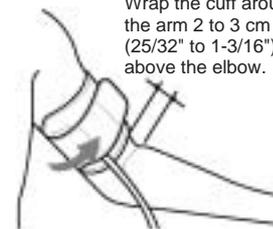
- Position so that the tube extends in line with the little finger on the palm side.

Positioning on the Upper Right Arm



2. Fasten firmly, but not too tight.
 - Optimally, there should be enough room to insert one finger between the cuff and arm.
 - Make sure your sleeve does not get in the cuff.
 - Firmly attach using the hook-and-loop tape.

Wrap the cuff around the arm 2 to 3 cm (25/32" to 1-3/16") above the elbow.



Instructions for correct measurement of blood pressure



Measurement in a sitting position

1. Rest your elbows on a table or other level surface.
2. Make adjustments so that the height of the cuff and heart are at the same level.
3. With the palm of your hand facing up release any tension held in your muscles.

Measurement in lying position

1. Lie on your back with your body straight.
 - Do not lie on your side. Doing so will exert an uneven amount of force on one arm.
2. With the palm of the hand facing up, extend your arm so that it is straight.
3. Relax and release any tension held in your muscles.



IMPORTANT

Take measurements at the same time everyday using the same arm and posture.

- Measured readings will vary according to the height of the cuff.
- Measurements taken in the morning should be done so upon waking and in the absence of an urge to urinate. If this should prove difficult, take measurements prior to breakfast while your body is still in an inactive state.
- Do not touch the tube or the meter while measurement is in progress.

Assume a natural posture, remaining calm and quiet when taking measurements

- Rest for about 4 to 5 minutes before taking measurements.
- Release any tension present in your body and refrain from muscle movement such as in the arm or fingers.
- Do not speak while measurement is in progress.

Measuring your blood pressure

1. Press the ON/OFF/Start Button to turn on the unit.
The LCD display will show **888** and then switch to **0**. The cuff is automatically inflated.



2. The blood pressure measurement is indicated along with the pulse rate (number of beats per minute). The air in the cuff is released automatically when the measurement is complete.
3. Press the power switch to turn off the unit. If you forget to do so, the unit switches off automatically approx. 5 minutes after a measurement.

Error

If "E" (meaning error) appears in the display during measurement, an error has occurred, e.g., you have moved your hand during measurement. In this case, turn the unit off, wait at least 5 minutes and measure again.

E

CAUTION:

- For persons with poor circulation resulting from diabetes, liver disease, arteriosclerosis, high blood pressure or other conditions, there may be significant differences in blood pressure values measured at the wrist versus at the upper arm.
- Do not confuse self-monitoring with self-diagnosis.
- NEVER change a prescribed medication without first consulting with your physician.

Storing blood pressure readings

This monitor has enough memory capacity to store 21 readings for two users.

M1 and **M2** will flash on the display after a measurement.

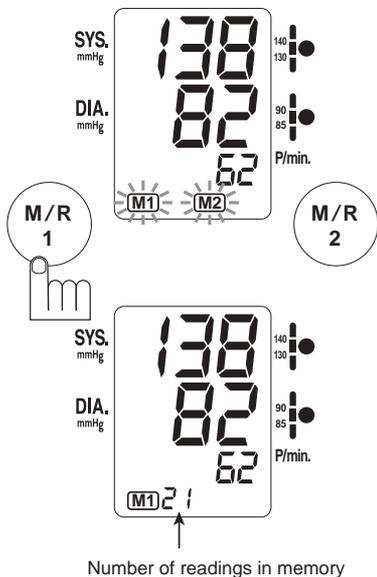
1. Press the Memory/Recall Button number if you want your readings to be recorded.
Example:

Person A is recorded under **M1**
Person B is recorded under **M2**

2. Memorization completed

Twenty-one readings can be recorded for each person. If you exceed the number of readings, the existing readings will be deleted in order of the oldest as new readings are made.

- Measurements for which accurate readings could not be obtained (display of error symbol **E** for blood pressure values) cannot be stored in the memory.



NOTE: Blood pressure readings *can* be memorized when the error symbol **E** is displayed only for the pulse rate.

When you want to clear all memory

1. To call up the data that you wish to delete, simply push the Memory/Recall Button number of that user.
2. Push the same user's Memory/Recall Button again, for more than about 3 seconds, until the memorized readings are deleted

NOTE: Individual readings in the memory cannot be deleted selectively.

Calling up readings from memory

Readings may be recalled once they have been stored in the memory without having to pressing the ON/OFF/Start Button.

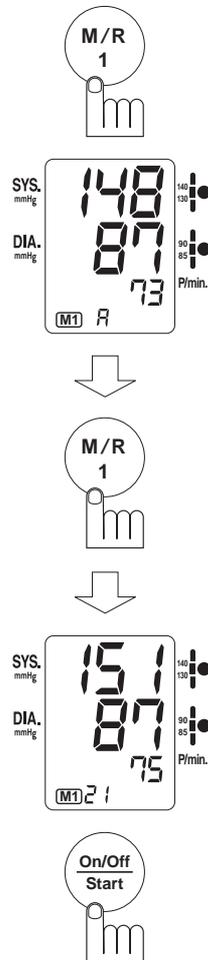
1. Push the Memory/Recall Button number of the user whose data you want to call up, **M1** for example.
 ‹Averaged values for all recorded measurements are displayed›

- **M1 A** is displayed at the bottom of the screen.
- When, for example, 21 readings have been recorded, the average values of 21 readings will be displayed. (When there are no readings or only one reading in memory, **M1 A** is not displayed.)
- The blood pressure indicator LED will flash (approx. 6 seconds)

2. Press the Memory/Recall Button again.

‹Each time the Memory/Recall Button is pressed readings are displayed in order of the most recent entry›

- The blood pressure indicator LED will flash (approx. 6 seconds).
- Nothing will be displayed when there are no readings in the memory.



Please use a quick, light touch when pressing the Memory/Recall Button. Take care to do so, as continuous pressing of the button for a duration of two seconds or more will clear all readings from the memory.

3. Press the ON/OFF/Start Button to turn off the unit.

- If you should forget to turn off the unit after calling up the memory without pressing the ON/OFF/Start Button, the unit will switch off automatically after approx. 30 seconds.

Storage



1. Loosely roll up the cuff and place it in the cuff holder.
2. Put the tube inside the cuff.
 - Do not wrap the tube around the unit, etc. Excessive straining of the tube can cause malfunctioning.

Troubleshooting

Display	Status before error	Check points
The "E" blinks on the display 	Pressurization to above 300 mmHg was performed. (Re-pressurization was performed several times.)	Check whether measurements are being taken correctly and whether the user is assuming the correct posture. Make sure the cuff is correctly attached to your upper arm. (See pages 10 and 11)
	Pressure decreased suddenly and "E" appeared in the display.	
	The measurement process was performed until 20 mmHg was reached and then "E" appeared in the display. Pressurization to above 180 mmHg was not performed.	Check whether the pressure cuff is attached to your upper arm correctly. Make sure the tube is fully inserted into its socket. (See pages 7 and 10)

Symptom	Possible cause
The systolic pressure value or diastolic pressure value is high.	<ul style="list-style-type: none"> The cuff was held too low, i.e. not at heart level. (See page 11) The cuff was not attached properly. (See page 10) You moved your body or you spoke during measurement. (See page 11)
The systolic pressure value or diastolic pressure value is low.	<ul style="list-style-type: none"> The cuff was held too high, i.e. not at heart level. (See page 11) You moved your body or you spoke during measurement. (See page 11)
The measured values differ significantly.	<ul style="list-style-type: none"> Your posture was not the same for all measurements, or measurements were taken without sufficient time in between. Always wait approximately 5 minutes before taking another reading, and above all, relax.
The measured value differs from that measured by the doctor. The measured value is different for each measurement.	<ul style="list-style-type: none"> Blood pressure varies in response to minute changes in your mental state, such as your reaction to your doctor taking the measurement. One way to check this is to bring the unit to your doctor's office and directly compare the readings taken by your physician. Relax for at least 5 minutes and then take another measurement.

If the device still appears to provide unusual or erroneous readings, consult your physician. If the device does not appear to be functioning properly, contact Panasonic at [1-800-338-0552](tel:1-800-338-0552).

Specifications

Method of measurement:	Oscillometric System with Precise Logic™
Display:	Digital LCD
Measuring range:	Blood pressure: 20 – 300 mmHg Pulse rate: 30 – 160 pulse/min.
Measurement accuracy:	Blood pressure: ±4 mmHg Pulse rate: ±5 %
Power source:	Four 1.5-volt (R6/AA) batteries
Operating environment:	10°C to 40°C (50°F to 104°F) 30% to 85% RH
Storage environment:	–20°C to 60°C (–4°F to 140°F) 10% to 95% RH
Upper arm circumference measurement range:	20 to 40 cm (7-3/4" to 15-3/4")
Dimensions (H × W × D):	110 × 130 × 200 mm (4-11/32" × 5-3/32" × 7-7/8")
Weight:	485 g (17.1 oz.) not including batteries

Specifications are subject to change without notice.

Model EW3111 is intended to be used for the oscillometric PRECISE LOGIC™ measurement of systolic and diastolic blood pressure and pulse rate using a pressurized cuff.

Blood pressure measurements determined with this device are equivalent to those obtained by a trained observer using the cuff/stethoscope auscultation method, within the limits prescribed by the American National Standard, Electronic or automated sphygmomanometers.