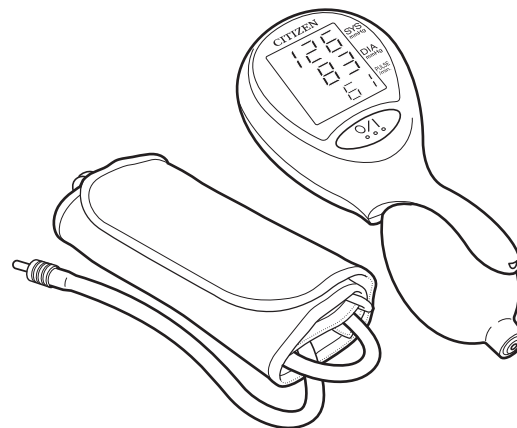


INSTRUCTION MANUAL
FOR
DIGITAL BLOOD PRESSURE MONITOR

REF **CH-311B**



- CITIZEN is a registered trade mark of Citizen Holdings Co., Ltd., Japan.
- Design and Specification are subject to change without notice.

CITIZEN SYSTEMS JAPAN CO., LTD.

6-1-12, Tanashi-cho, Nishi-Tokyo-shi, Tokyo 188-8511, Japan

<http://www.citizen-systems.co.jp/>

E-mail: sales-oe@systems.citizen.co.jp

English

1301

GENERAL REMARKS

General remarks on blood pressure and blood pressure measurement

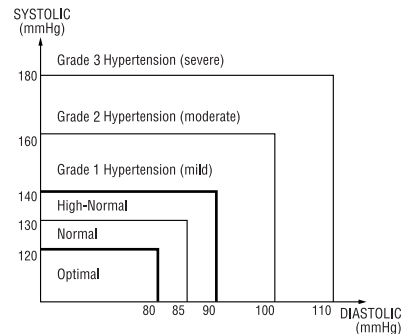
1. If the cuff is to be deflated quickly, depress "Exhaust button".
2. The attached cuff is suited for an arm circumference of 22 cm to 32 cm.
3. When attaching the cuff, the air hose should be placed on the inside of your arm on top of the arterial.
4. Self measurement is not therapy! In no case may you change the dosage of medication prescribed by your physician.
5. In preparation for blood pressure measurement, you should urinate and then remain relatively still for 10 to 15 minutes prior to measurement.
6. Exercising, eating, drinking, smoking, etc., prior to measurement may affect the results.
7. Blood pressure varies constantly throughout the day. Measurement should be made regularly at the same time each day.
8. DO NOT be too impressed by the results of one measurement. Keep a record of blood pressure variations. Many readings tell a story.
9. Emotional stress may tend to cause blood pressure to rise.

For proper measure of blood pressure

1. Take a deep breath five or six times and then relax before measuring your blood pressure. If you are tense when taking the measurement, you will not get a valid reading.
2. Blood pressure will be elevated when you are in a worrisome or irritated state, suffering from lack of sleep or constipation, or after exercise or a meal.
3. Wrap the cuff around the arm and tighten it so that one finger may be inserted between the cuff and arm. (See page 12)
4. DO NOT measure blood pressure after bathing or drinking.
5. When you feel like relieving yourself, you should do so before measuring your blood pressure.

GENERAL REMARKS

6. Measure your blood pressure where the room temperature is about 20°C. DO NOT measure blood pressure when it is too cold (below 10°C) or too hot (above 40°C) in the room.
7. DO NOT try to measure blood pressure immediately after drinking coffee or tea or smoking.
8. Measure blood pressure with a relaxed and quiet posture. Keep the center of the cuff at the level of your heart, and DO NOT move your arm or talk.
9. DO NOT measure blood pressure after the cuff has been on for a few minutes, as your arm will have built up higher blood pressure, and you will not get valid reading.
10. Next figure shows the classification of blood pressure according to WHO-standard.



Remarks:

The graph is not exact, but may be used as a guide in understanding non-invasive blood pressure measurements. The device intended for use in adult population.

Definition and Classification of Blood Pressure Levels

Measure your blood pressure at the same time on a daily basis.

- * The blood pressure changes at all times. This means that data gathered over a long period has great significance instead of data on just one measurement. It is therefore necessary to measure your blood pressure on a daily basis. Ideally, you should measure your blood pressure daily at the same time as far as possible.

PRECAUTION FOR USE AND MAINTENANCE

Precaution for use

1. If you suffer from heart disease, high blood pressure or other circulatory disease, please consult your physician first.
2. If you feel abnormal pressure of the cuff during use or other irregularity, reduce the pressure immediately by depressing "Exhaust button" and consult the sales outlet where purchased.
3. If you think the measured value is abnormal or if measuring makes you feel unwell, discontinue use and consult your physician.
4. Measurement of blood pressure may not be possible for someone with a weak pulse or arrhythmia.
5. If blood pressure is measured repeatedly, congestion, swelling, etc. may occur in some people.
6. If blood pressure is measured repeatedly, an accurate result will not be achieved. An interval of about 3 minutes should be allowed.
7. Consult your physician before use if you suffer a severe disorder of blood circulation in the arms. Failure to do so may cause health hazards.
8. Measurement may not be possible for someone with an insufficient blood flow in the area to be measured or frequent irregular heartbeats. Consult your physician for judgment.
9. DO NOT wrap the cuff around an injured arm.
10. DO NOT wrap the cuff to the arm where a drip (intravenous infusion) or blood transfusion under medical treatment. Failure to do so may cause an injury or a serious accident.
11. DO NOT use in the vicinity of flammable gases such as anesthetic gases because of the risk of ignition and explosion.
12. DO NOT use in enriched oxygen environments such as a hospital's hyperbaric chamber or oxygen tent because of the risk of ignition and fire.
13. DO NOT use a mobile phone near the unit. Doing so may result in malfunction.
14. If you use a cardiac pacemaker, consult your physician before use.

PRECAUTION FOR USE AND MAINTENANCE

15. Be sure to use this unit only for measuring blood pressure. DO NOT use it for any other purpose.
16. DO NOT use this unit on an infant.
17. This product uses natural rubber for the rubber bulb.
The natural rubber may cause any allergic reaction such as itching, flare, urticaria, swelling, fever, difficult breathing, asthma status, blood pressure drop or any shock.
* If any of the symptoms as shown above is observed, immediately stop using this product and consult your physician.
18. 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.
19. Measurement of blood pressure may not be possible for someone with a common arrhythmias such as atrial or ventricular premature beats or atrial fibrillation.

Precaution for maintenance

1. DO NOT store the blood pressure monitor where it will be exposed to direct sunlight, high temperature (over 60°C), low temperature (below -20°C), high relative humidity (over 95%) or in a dusty place.
2. DO NOT drop or expose the blood pressure monitor to under force or vibration.
3. Remove the battery/batteries when not in use for a long period.
4. DO NOT disassemble the apparatus.
5. DO NOT bend the cuff or air hose unnecessarily.
6. When the monitor is very dirty, wipe it clean with a cloth moistened with Sterilizing alcohol or a neutral detergent, and then wipe it with a dry cloth.
7. NEVER wipe the blood pressure monitor with thinner or benzene, as they may damage it.
8. Please wipe the cuff with moist cloth. Hard rubbing will cause Air leaking. Also, be careful not to get water into the air hose.

PRECAUTION FOR USE AND MAINTENANCE

Nature and frequency of maintenance:

This product is designed for use over an extended period of time; however, it is generally recommended that it be inspected every two years to ensure proper function and performance.

Protect the nature environment:

Please help to protect natural environment by respecting natural and/or local recycling regulations when disposing of the batteries and the products at the end of their useful lives.

WEEE MARK

If you want to dispose this product, do not mix with general household waste. There is a separate collection systems for used electronics products in accordance with legislation under the WEEE Directive (Directive 2002/96/EC) and is effective only within European Union.



Reference European standard:

The blood pressure measuring device corresponds to regulation EN60601-1, EN1060-1, EN1060-3, EN1060-4.



Warning

The device has been tested and homologated in accordance with EN60601-1-2 for EMC. This does not guarantee in any way that the device will not be affected by electromagnetic interference. Avoid using the device in high electromagnetic environment.



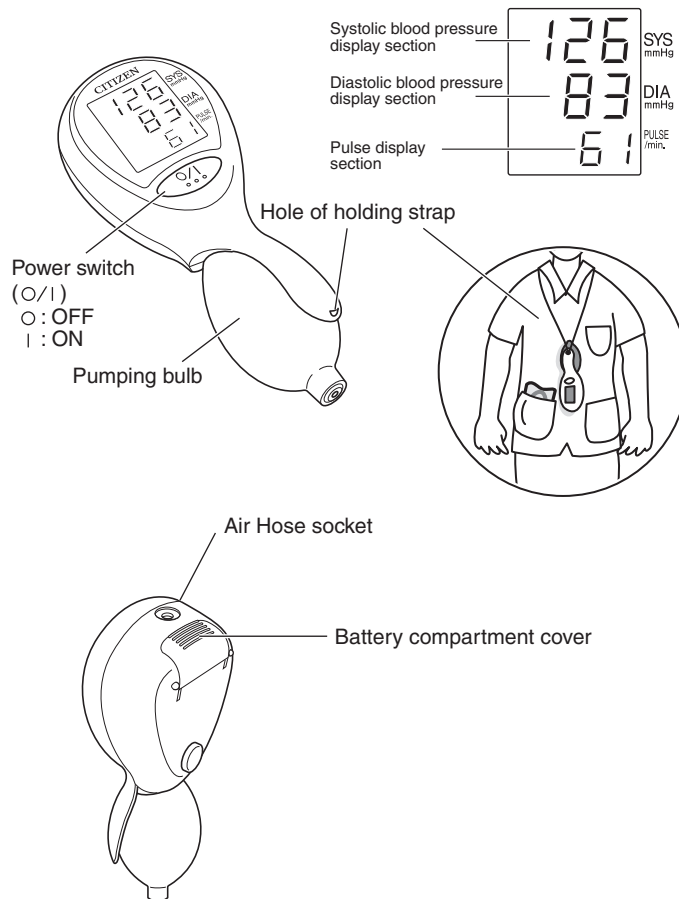
Name : **CITIZEN SYSTEMS (H.K.) LIMITED**
Address : 62 Hung To Road, Kwun Tong, Kowloon, Hong Kong

European Representative:

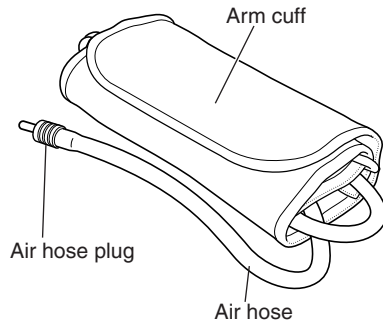
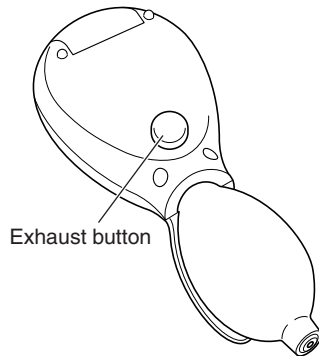
Name : WvW elektronische Geräte Vertrieb GmbH
Address : Fintelmanstraße 20/Eingang, Martin-Heydert-Straße,
D-14109 Berlin, Germany



IDENTIFICATION OF PARTS



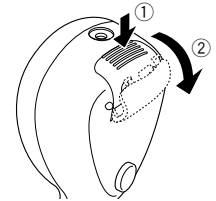
IDENTIFICATION OF PARTS



HOW TO LOAD BATTERIES

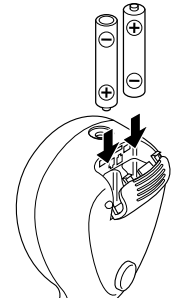
1 Open the battery compartment cover.

① While pressing the lock section of the battery compartment cover, ② pull the cover toward you to open.



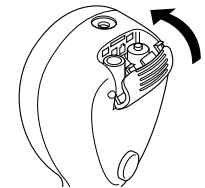
2 Place the batteries in the compartment.

Fit the batteries paying attention to the positive (+) and negative (-) terminals.



3 Close the battery compartment cover.

Push the cover in the direction of the arrow.

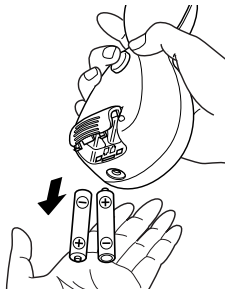


HOW TO UNLOAD THE BATTERIES

1 Open the battery compartment cover.


(☞ See page 9 "HOW TO LOAD BATTERIES".)

2 Remove the batteries.



3 Close the battery compartment cover.

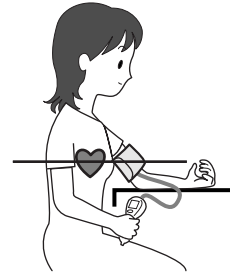
Replacing the batteries

- Replace the batteries with two new "AAA" batteries when  appears on the display, or when nothing appears on the display when the POWER switch is pressed.
- The memory is erased if the batteries are removed for replacement, etc. and a record should be kept of any necessary data.
- Do not use the alkaline dry battery and manganese dry battery together.
- The batteries provided with the unit power the monitor. They may not last as long as indicated.
- Dispose of used batteries properly in accordance with local regulations.

POINTS FOR ACCURATE MEASUREMENT

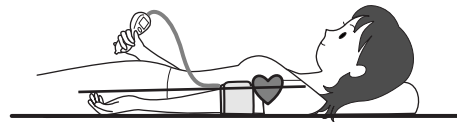
Blood pressure varies with posture, the time of day or numerous other factors. It is recommended to measure blood pressure at the same time each day in the same posture.

■ Measurement in sitting posture ●●●●●●●●●●



- ① Place your arm on a table or similar surface stretching out the portion from the elbow to the hand.
- ② It is important to have the arm cuff level to your heart.
- ③ Lightly open your hand on the table with palm up and relax your fingers.
- ④ Do not move your body or talk during measurement.

■ Measurement in laying posture ●●●●●●●●●●



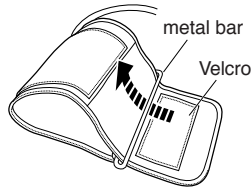
* Relax yourself not to apply pressure to the arm cuff.

- ① Lie down your head facing the ceiling.
- ② Lightly open your hand with palm up and straighten your arm.
- ③ Relax your body, arm and fingers.
- ④ Do not move your body or talk during measurement.

HOW TO WRAP THE ARM CUFF

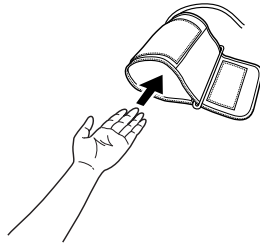
1 Unroll the arm cuff.

- When the arm cuff comes off, pass it through metal bar, directing the Velcro-attached side to the outer surface.

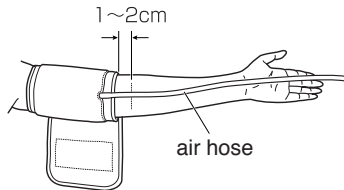


2 Put the arm cuff around your arm so that the air hose comes to the left palm side.

- The arm cuff should be put on the bare arm or over a light-weight clothing.
- If you wear a heavy-weight top, remove it. Be aware that if you roll up sleeves the upper arm may be compressed resulting in incorrect measurements.



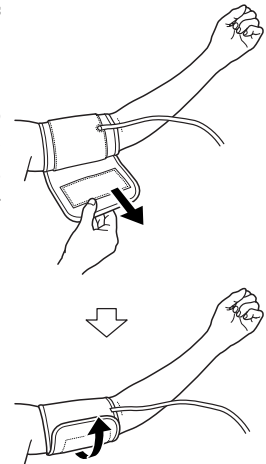
3 Adjust the arm cuff position as that the air hose is located at the center of your arm and so that the hem section of the cuff is spaced 1 to 2 cm from the elbow joint.



HOW TO WRAP THE ARM CUFF

4 Draw the end of the arm cuff to fit it on the arm and secure with Velcro.

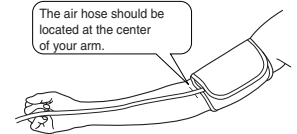
- Carefully place the arm taking care to obtain adequate tightness, not too tight or loose. Adequate tightness is obtained when you can place a finger between the cuff and your arm.



When you put the arm cuff around your right arm

You may measure your blood pressure on your right arm. Adjust the arm cuff position so that the air hose is located at the center of your right arm exactly as shown in the procedure for the left arm.

However blood pressure reading may differ by about 10 mmHg between the right and left arms. It is recommended to use the same arm for measurement thereby ensuring a consistent reading.



The air hose should be located at the center of your arm.

HOW TO MEASURE YOUR BLOOD PRESSURE

1 Wrap the arm cuff tightly around your arm.

(☞ See page 12 "HOW TO WRAP THE ARM CUFF".)

2 Insert the air hose plug into the case of the unit (Air Hose socket).

3 Sit in the recommended position.

(☞ See page 11 "POINTS FOR ACCURATE MEASUREMENTS".)

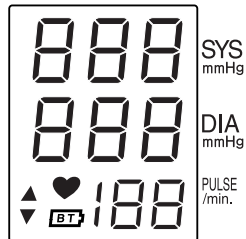
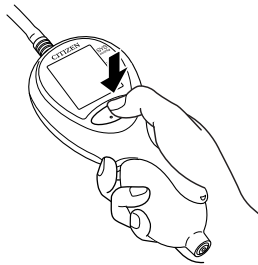
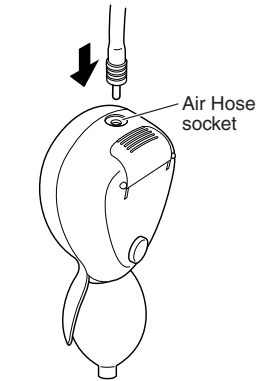
4 Measure your blood pressure.

4.1 Turn the Power On

Grip the pumping bulb.
(★ Do not bend or pull the pumping bulb.)

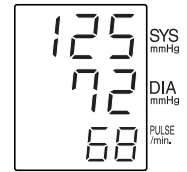
Press the "POWER" switch for Power on.

All display mark appear for approx. 1 second.



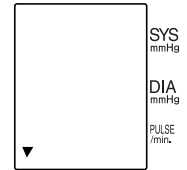
HOW TO MEASURE YOUR BLOOD PRESSURE

After all display marks are disappeared, the last measured systolic / diastolic blood pressure values and pulse rate are displayed.



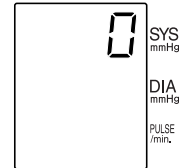
Memory function works on for approximately 2 second or during depressed the "POWER" switch.

After memorized blood pressure value is disappeared, deflation mark "▼" appears.



If there is some air remaining in the cuff, release air with the exhaust button until the "0" appears.

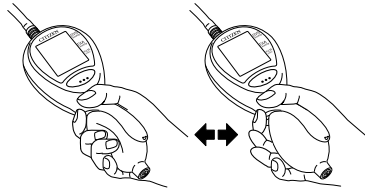
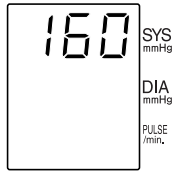
The unit is now ready to take new measurement.



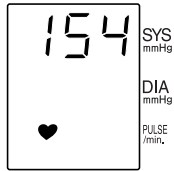
HOW TO MEASURE YOUR BLOOD PRESSURE

4.2 Pressurize the cuff

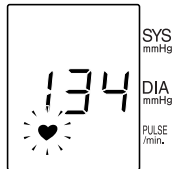
Pressurize the cuff by pumping bulb until you have a reading of approximately 30 to 40 mmHg higher than your regular systolic blood pressure.



When pressurization is completed, the automatic air release system will gradually reduce cuff pressure, and Measuring Mark "♥" will appear on the display indication that measurement is in progress. (★ Do not pump bulb while measuring.)

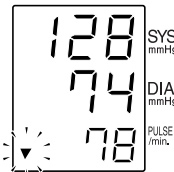


When a pulse is detected, a pressure reading will shift to the diastolic pressure display section. Once the pulse is detected, the "♥" mark will flash with each pulse beat.



When the diastolic pressure value is detected, the measurement is completed.

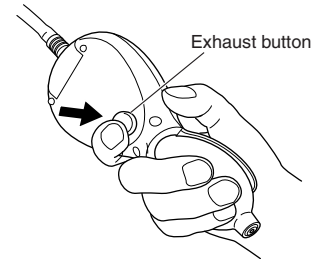
After completion of measurement, the mark "▼" appears.



HOW TO MEASURE YOUR BLOOD PRESSURE

4.3 Press the exhaust button

Press the exhaust button valve to completely release the air in the cuff.



4.4 Power off

Press the "POWER" switch to turn off.

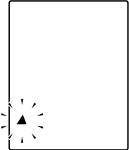
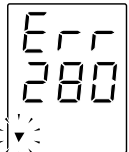
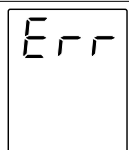

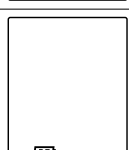
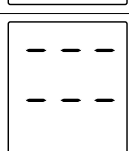
4.5 Subsequent measurement

For another measurement, just pressurize the cuff by pumping bulb. The time between two such Measurements must be at least 3 minutes.

Automatic Power off Function

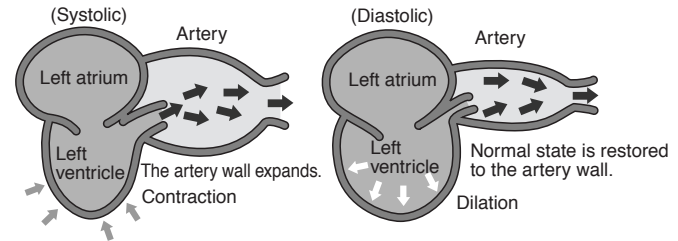
About 3 minutes after the last measurement was obtained, the power will be turned off, automatically.

ERROR INDICATIONS

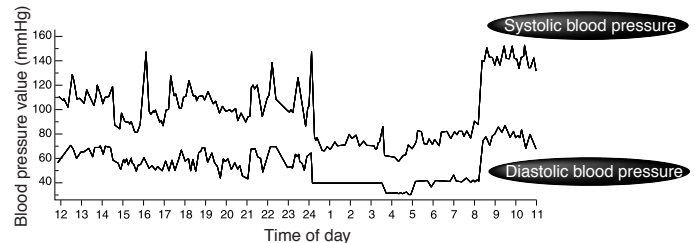
DISPLAY MARK	CONDITION/CAUSE	CORRECTIVE ACTION
	The cuff was not inflated to more than 30-40 mmHg above your systolic pressure.	Raise the set pressure value by higher level.
	The cuff was inflated to more than 280 mmHg.	Exhaust the air within the cuff.
	Appears when the blood pressure could not be measured accurately.	Repeat measurement again.
	Appears when the pulse rate falls outside the measuring range (below 39 beats/min. or above 181 beats/min.)	Repeat measurement again.
	Appears when the battery becomes weak.	Replace the battery.
	Device has a trouble.	Ask purchased shop.

ABOUT "BLOOD PRESSURE"

What is blood pressure? The heart is a pump that circulates blood throughout your body. Blood is pumped from the heart at a constant pressure into arteries. This pressure is called the arterial blood pressure, which represents, in general, blood pressure. Blood pressure is indicated by several kinds of pressures such as: systolic pressure that occurs when the heart pumps blood; and diastolic pressure that occurs just when blood returns to the heart.



Blood pressure changes at all times. Blood pressure differs with age, gender and other factors. Blood pressure of one person is likely to be affected by biorhythm of a day, posture, physical activities, mental activities, stress and atmospheric temperatures. It is said that blood pressure of a healthy person varies by 20 to 50 mmHg within a day.



QUESTIONS AND ANSWERS ON BLOOD PRESSURE

Q Why is the blood pressure measured at home different from that measured at the physician or a hospital?

A Blood pressure may vary with exercising, ambient temperature or mental states. When you have a physician or nurse measure your blood pressure, the pressure value is likely to be 10 to 20 mmHg higher than usual because of concern and nervousness. To know what affects blood pressure is helpful to your health monitoring.

Q What is the benefit of measuring blood pressure at Home?

A Blood pressure measured at home is reliable since it can be measured in a stable and relaxed condition. Physicians lay importance on blood pressure measurements taken at home. It is recommended to measure your blood pressure at the same time on a daily basis and to record blood pressure variation.






Caution

Always consult your physician for interpretation of your blood pressure readings and proper treatment.

BEFORE ASKING FOR REPAIR/INSPECTION

Be sure to check the following before sending your blood pressure monitor for repair/inspection.

Phenomenon	Point to be checked	How to repair
Display gives no indication even when you press Power switch.	Check whether batteries are dead.	Replace all batteries with new ones.
	Check whether batteries are installed with incorrect polarity (\oplus \ominus).	Load the batteries with correct polarity.
No measurement is possible.	Check if the  mark has come on.	Wrap the arm cuff properly.
	Check if the arm cuff is wrapped properly.	
	Did you stay calm during measurement?	Measure again, making sure to remain still.
	Note that measurement of blood pressure may not be possible for someone with an extremely weak pulse or cardiac arrhythmia (irregular pulses).	
If your pressure readings are abnormally higher or lower than those taken in hospital:		 See page 20.
If your pressure readings are abnormally high or low:		 See pages 11 to 13.

ADDITIONAL INFORMATION

Precautions for use

Make sure to store the blood pressure monitor, where children, pets and or pests are not there.

The monitor is not intended to be a diagnostic device, because it is intended for home use.








Be sure to use only our authorized parts and accessories. Parts and accessories not approved for use with the device may damage the unit.

Intended Use

- This device is noninvasive blood pressure monitor by oscillometric method. This device can measure the systolic blood pressure (SYS), the diastolic blood pressure (DIA) and the pulse rate automatically.
- This device is intended to be used for checking personal health condition at home under the direction of a physician and is not intended to be a diagnostic device.
- This device is not intended for use with neonates or infant, and not intended for automatic cycling measurement.

Symbols Explanation

CE⁰⁰⁸⁶ : The CE marking is meant to provide information to market inspectors in the EU member countries.

-  : Type BF applied part
-  : Keep dry
-  : Warning
-  : Refer to instruction manual before use
-  : Appliance compliance WEEE directive
-  : Accumulators and battery packs for separate collection
-  : Manufacturer

Information for Users on Collection and Disposal of used Batteries.

The symbol in this information sheet means that used batteries should not be mixed with general household waste.

For proper treatment, recovery and recycling of used batteries, please take them to applicable collection points.

For more information about collection and recycling of batteries, please contact your local municipality, your waste disposal service or the point of sale where you purchased the items.

Information on Disposal in other Countries outside the European Union.

This symbol is only valid in the European Union.



If you wish to discard used batteries, please contact your local authorities or dealer and ask for the correct method of disposal.

Note for the battery symbol.

The symbol might be used in combination with a chemical symbol. In this case it complies with the requirement set by the Directive for the chemical involved.



SPECIFICATIONS

Model Number:	CH-311B	
Measuring Principle:	Oscillometric Method	
Cuff:	Soft cuff	
Arm Circumference Range:	22.0 to 32.0 cm	
Measurement Range:	Pressure	0 - 280 mmHg
	Pulse	40 - 180 Pulse / Min
Accuracy:	Pressure	±3 mmHg
	Pulse	±5% of reading
LCD Indication:	Pressure	Systolic Blood Pressure: 3 digits Diastolic Blood Pressure: 3 digits
	Pulse	Pulse Rate: 3 digits
	Marks	Measuring: ♥ Exhaust: ▼ Re-Measure: ▲ Battery: 
Switch:	"POWER" switch	
Inflation:	Manual Inflation by Pumping Bulb	
Deflation:	Air release system	
Exhaust:	Quick Exhaust Valve	
Rated Voltage:	DC 3V --- 0.1W (--- : Direct Current)	
Power Source:	2 "AAA" (R03, LR03) Size Batteries	
Battery Life:	Approx. 700 times (Manganese Battery) (160 mmHg, 1 time / day, 22°C)	
Automatic Power off Function:	Approx. 3 min. (after activated)	
Memory Function:	One Memory	
Dimensions:	66.5(W) x 44.5(D) x 161.5(H) mm	
Weight:	Approx. 140g (Apparatus with batteries)	
Operating Environment:	Temperature 10 to 40°C Humidity 30 to 85% RH	
Storage Environment:	Temperature -20 to 60°C Humidity 10 to 95% RH	
Electrical Shock Protection:	Internal Power Unit	
Degree of Protection	 Type BF applied part	
Service Life:	5 years	
Cuff's Life:	Approx. 2000 times	
Accessories:	Set includes a cuff (model:SCN-002), 2 AAA batteries (R03) for the monitor, Instruction Manual.	

* Applied part for this device is Cuff.

* A range in barometric pressure 105 kPa to 70 kPa

* A range in altitude -300 m to 3000 m

* Overall system accuracy of this device is met with the requirement of item 7.9 of EN1060-3. EN1060-3 : Non-invasive sphygmomanometers Part 3 (European Standard)

 **Warning** No modification of this device is allowed.

* Specifications may be changed without notice in the event of improvements being made.

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