



INSTRUCTION MANUAL

MANUAL INFLATION BLOOD PRESSURE MONITOR

Model **HEM-412CREL**

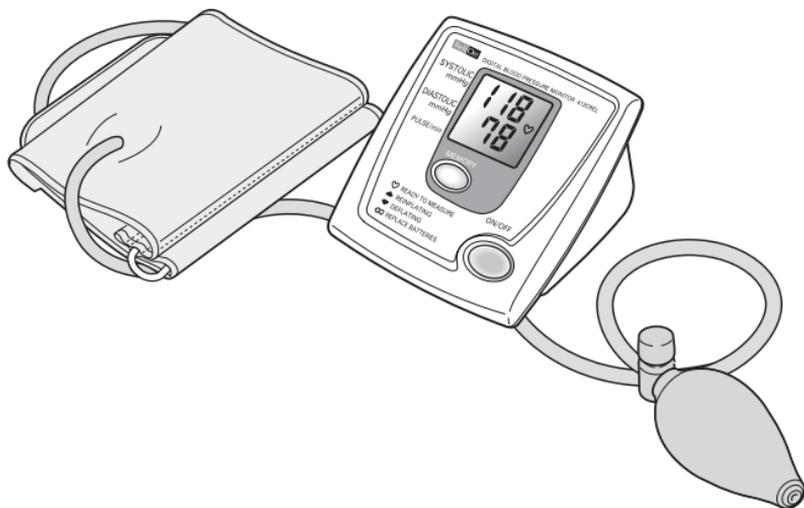


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INTRODUCTION

Thank you for purchasing the ReliOn HEM-412CREL Manual Inflation Blood Pressure Monitor.

Fill-in for future reference

DATE PURCHASED: _____

SERIAL NUMBER: _____

Staple your purchase receipt here.

The monitor features an easy-to-squeeze inflation bulb that allows you to quickly inflate the cuff. The measurement reading is clearly displayed on a large digital panel.

Omron digital blood pressure monitors use 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 ReliOn HEM-412CREL Manual Inflation Blood Pressure Monitor is intended for home use.

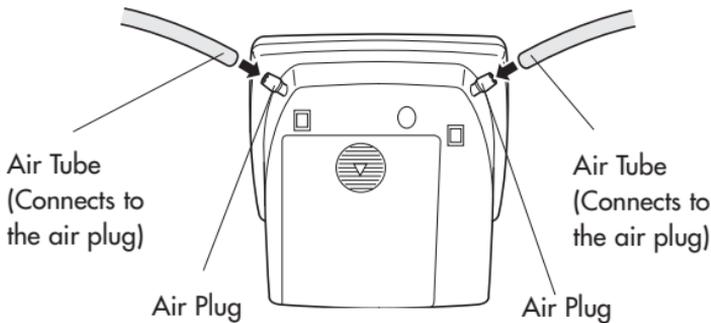
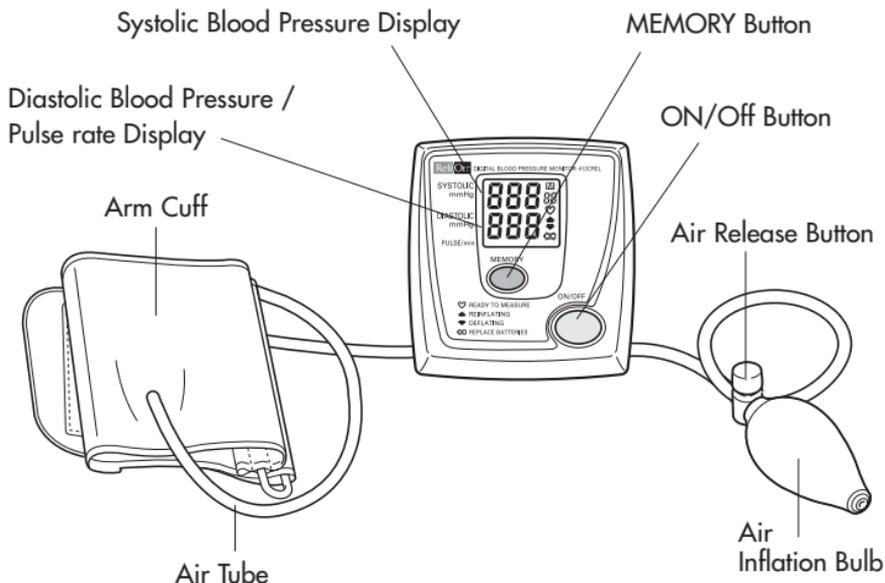
SAVE THESE INSTRUCTIONS

IMPORTANT SAFETY NOTES

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

- ☑ Read all information in the instruction book and any other literature included in the box before using the unit.
- ☑ Contact your physician for specific information about your blood pressure. Follow the instructions of your healthcare provider.
- ☑ Operate the unit only as intended. Do not use for any other purpose.
- ☑ The unit is intended for use in measuring blood pressure and pulse rate in adult patient population. Do not use on infants.
- ☑ Do not use a cellular phone near the unit. It may result in operational failure.
- ☑ Changes or modifications not approved by Omron Healthcare will void the user warranty. Do not disassemble or attempt to repair the unit or components.

KNOW YOUR UNIT



QUICK REFERENCE GUIDE

1. Avoid eating, smoking, and exercising for at least 30 minutes before taking a measurement.
2. Put your left arm through the cuff loop. The bottom of the cuff should be about 1/2 inch above the elbow. The cuff tab should lie over the brachial artery on the inside of the arm.
3. Pull the cuff so that it is tightened evenly around your arm. Insert one finger under cuff to check fit. Press the sewn hook material firmly against the pile side of the cuff. Make sure that your skin will not be pinched in the D-ring once you inflate the cuff. Immediately deflate the cuff and readjust it if skin becomes pinched.
4. Sit in a chair with your feet flat on the floor and place your left arm on a table so that the cuff is at the same level as your heart.
5. Turn the monitor on, and after the Ready To Measure Symbol (♥) appears next to a zero on the digital panel, rapidly squeeze the inflation bulb to inflate the cuff. Stop pumping when the numbers on the display are approximately 40 mmHg higher than your normal systolic blood pressure. Do not inflate higher than 280 mmHg.
6. The cuff will deflate automatically. Remain still throughout the entire reading.
7. When measurement is complete, the monitor alternately displays your blood pressure/pulse rate on the digital panel. Press the Air Release Button to remove air in the cuff.
8. Wait 2-3 minutes before taking another blood pressure measurement.

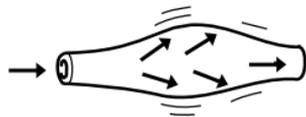
A FEW WORDS ABOUT BLOOD PRESSURE

Blood pressure is the force on the walls of your blood vessels as blood flows through them.

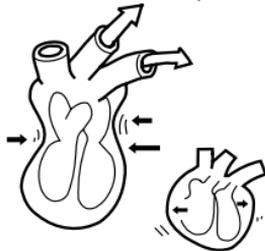
Your heart is like a pump. When it contracts, or beats, it sends a surge of blood through the blood vessels and pressure increases. This is called your **systolic pressure**.

When your heart relaxes between beats, your blood pressure decreases. This is called your **diastolic pressure**.

When a doctor takes your blood pressure, he or she measures both your systolic and diastolic pressures and records them as numbers. For example, if your blood pressure reading is 120/76 (120 over 76), your systolic is 120 and your diastolic is 76. The numbers are expressed in millimeters of mercury 120/76 mmHg.



Heart Contracts
(Pressure Increases)



Heart Relaxes
(Pressure Decreases)

Systolic
(Upper Number)

120

76

Diastolic
(Lower Number)

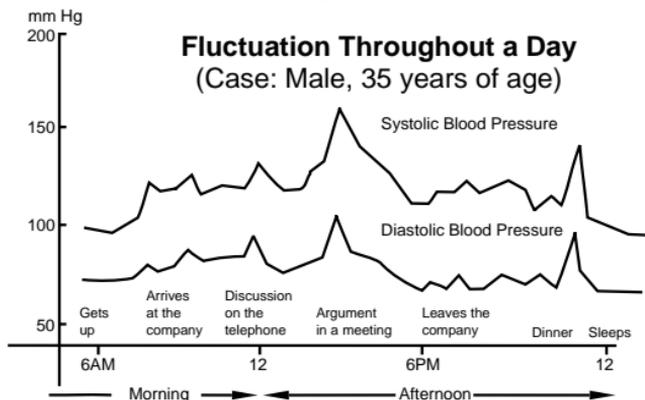
A FEW WORDS ABOUT BLOOD PRESSURE

These two numbers provide important information about your health. When blood pressure is consistently above normal it is called hypertension (high blood pressure).

Your new ReliOn HEM-412CREL Manual Inflation Blood Pressure Monitor measures your systolic and diastolic blood pressure for you, then displays the results on an easy-to-read digital panel!

A FEW WORDS ABOUT BLOOD PRESSURE

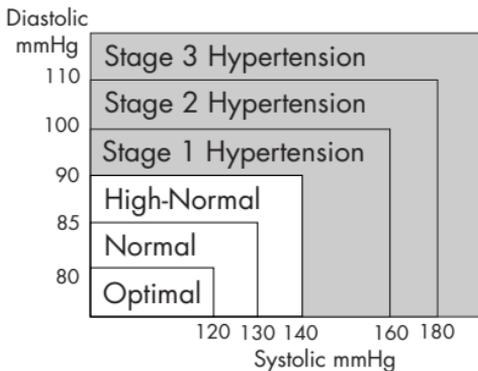
Your blood pressure changes constantly. Blood pressure changes from day to day and minute to minute according to your body's condition. For example, when you are exercising or angry your blood pressure increases, but when you are relaxing or sleeping your blood pressure decreases. These changes are completely normal. Your ReliOn HEM-412CREL Manual Inflation Blood Pressure Monitor is especially helpful when tracking changes in blood pressure because it travels anywhere and takes just seconds to use.



NOTE: One or two readings will not determine your normal blood pressure. It is very important to take regular, daily measurements and to keep accurate records. In partnership with your doctor, an accurate record of your blood pressure over a period of time can be a valuable aid in diagnosing and preventing potential health problems.

A FEW WORDS ABOUT BLOOD PRESSURE

The World Health Organization (WHO) and The International Society of Hypertension (ISH) jointly developed the following Blood Pressure Classification. This classification, however, is only a general guideline because your optimum blood pressure depends on your age, morbidity, and treatment strategy by a physician. **CONSULT YOUR PHYSICIAN TO DETERMINE YOUR OPTIMUM BLOOD PRESSURE.**



	Systolic (mmHg)	Diastolic (mmHg)
Optimal	< 120	< 80
Normal	< 130	< 85
High-Normal	130-139	85-89
Stage 1 Hypertension (mild)	140-159	90-99
Stage 2 Hypertension (moderate)	160-179	100-109
Stage 3 Hypertension (severe)	≥ 180	≥ 110

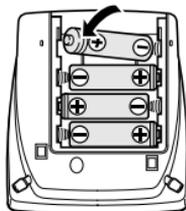
- There is not a universally accepted definition of hypotension (low blood pressure,) but a systolic pressure below 100 mmHg is usually regarded as hypotension.

BATTERY INSTALLATION / REPLACEMENT

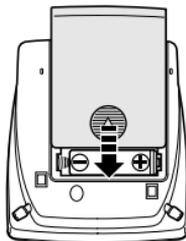
1. Slide the battery cover off in the direction of the arrow.



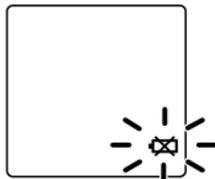
2. Install 4 “AA” size batteries so + (positive) and – (negative) polarities match the polarities of the battery compartment as indicated.



3. Replace the battery cover.



NOTE: If the Low Battery Indicator appears on the display, replace all four batteries. Long-life alkaline batteries are recommended.



CARE AND MAINTENANCE

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

Clean the monitor with a soft dry cloth. Do not use any abrasive or volatile cleaners. Do not attempt to clean the cuff. Never immerse the monitor or any components in water.

Store the monitor in a safe and dry location. Do not fold the cuff and tubing tightly. Do not subject the monitor to extreme hot or cold temperatures, humidity and direct sunlight.

Avoid subjecting the monitor to strong shocks, such as dropping the unit on the floor.

Remove the batteries if the unit will not be used for three months or longer. Always replace all the batteries with new ones at the same time.

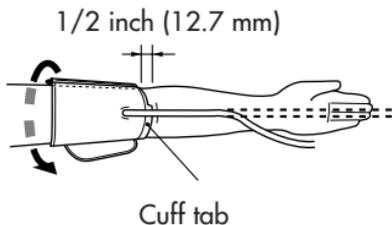
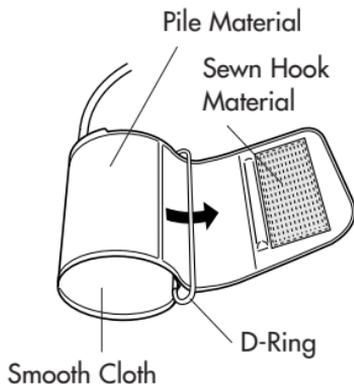
Use the unit consistent with the instruction provided in this manual. Use only authorized parts and accessories.

SUGGESTIONS BEFORE TAKING A MEASUREMENT

1. Avoid eating, smoking, and exercising for 30 minutes before taking a measurement. Rest for at least 15 minutes before taking the measurement.
2. Stress raises blood pressure. Avoid taking measurements during stressful times.
3. Remove tight-fitting clothing from your left arm.
4. Measurements should be taken in a quiet place.
5. Sit in a chair with your feet flat on the floor. Rest your left arm on a table so that the cuff is at the same level as your heart.
6. Remain still and do not talk during the measurement.
7. Keep a record of your blood pressure and pulse readings for your physician. A single measurement does not provide an accurate indication of your true blood pressure. You need to take and record several readings over a period of time. Try to measure your blood pressure at the same time each day for consistency.
8. Wait 2-3 minutes between measurements. The wait time allows the arteries to return to the condition prior to taking the blood pressure measurement. You may need to increase the wait time depending on your individual physical characteristics.

HOW TO APPLY THE ARM CUFF

1. If the cuff is assembled correctly, the sewn hook material will be on the outside of the cuff loop and the metal D-ring will not touch your skin.
2. 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.
3. Put your left arm through the cuff loop. The bottom of the cuff should be approximately 1/2 inch above the elbow. The cuff tab on the cuff should lie over the brachial artery on the inside of the arm. Tube should run down center of arm even with middle finger.



HOW TO APPLY THE ARM CUFF

4. Pull the cuff so that the top and bottom edges are tightened evenly around your arm.



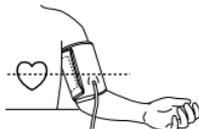
5. When the cuff is positioned correctly, press the sewn hook material **FIRMLY** against the pile side of the cuff.

6. Make certain the cuff fits snug around your arm. The cuff should make good contact with your skin.



7. Sit in a chair with your feet flat on the floor and place your arm on a table so that the cuff is at the same level as your heart.

8. Relax your arm and turn your palm upward.



9. Be sure there are no kinks in the air tubing.

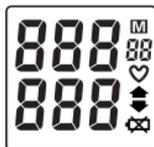
NOTE: If your arm circumference size is 13 inches to 17 inches you will need the large adult cuff. The large adult cuff is an accessory item sold separately. You may purchase the large adult cuff at Walmart (model H-003DREL).

HOW TO TAKE A MEASUREMENT

Please read “A Few Suggestions Before Blood Pressure Measurement” and “How To Apply The Arm Cuff” before taking a reading.

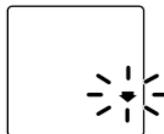
1. Press the ON/OFF Button.

- a) All display symbols appear for about one second.
This is the initial LCD Test.



Initial
LCD Test

- b) The display symbols disappear and the Deflation Indication Symbol (▼) starts to flash.



Deflation
Indication

- c) When the monitor completes the necessary preparations before measurement, the Heart Symbol (♥) appears next to a zero.



Ready
To Measure

NOTE: Wait for the Heart Symbol (♥) before taking a measurement.

2. Begin inflating the cuff by rapidly squeezing the inflation bulb until you have reached approximately 40 mmHg higher than your normal systolic reading. If your normal systolic blood pressure is unknown, inflate the cuff to 180 mmHg.
Do not inflate higher than 280 mmHg

HOW TO TAKE A MEASUREMENT

3. Remain still. The cuff will begin to deflate automatically.

4. As the cuff deflates, decreasing numbers appear on the display. The Heart Symbol (♥) flashes at every heartbeat.



Indicated Value Drops ↓ Measuring



5. When measurement is complete, the Heart Symbol (♥) stops flashing and your blood pressure and pulse rate are displayed alternately.



6. When the Deflation Indication Symbol (▼) appears on the display, push the Air Release Button to release any air left in the cuff.

Blood Pressure Reading Display (for approx. 3.5 sec.)

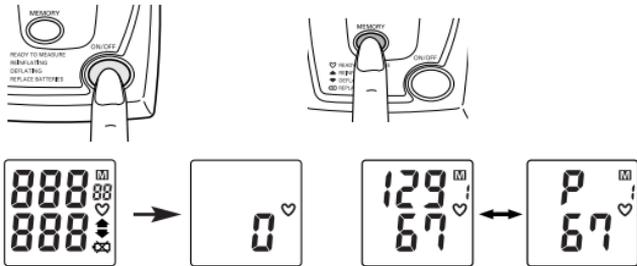
↑ ↓ Pulse Reading Display (for approx. 2 sec.)



HOW TO USE THE MEMORY FUNCTION

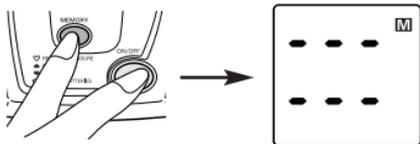
This monitor has a memory capable of storing fourteen (14) sets of readings. Every time you complete the measurement, the monitor automatically stores blood pressure and pulse rate.

- Press the ON/OFF Button
- Press the MEMORY Button to recall stored readings while the Heart Symbol (♥) is displayed.
- When fourteen (14) sets of readings are stored in memory, the oldest set will be deleted to store a new set.

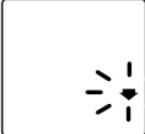


- To delete stored readings, press the MEMORY Button and the ON/OFF Button simultaneously for 2 seconds. **All the readings will be deleted.**

NOTE: You can not delete the stored readings partially.



ERROR INDICATORS

Error Symbol	Cause	Correction
	Cuff under-inflated.	Wait 2-3 minutes and take another measurement. Repeat steps listed under “How To Take A Reading”. Inflate the cuff 40 mmHg higher than the previous inflation value.
	Movement during Measurement No pulse or blood pressure reading due to very weak artery pulse.	
	Residual air pressure in cuff.	Press Air Release Button for 4-5 seconds to release air pressure in cuff.
	Cuff over-inflated (more than 300 mmHg).	Carefully read and repeat steps listed under “How To Take A Reading.”
	Batteries have run down.	Replace all four “AA” batteries.

FCC STATEMENT

Note:

POTENTIAL FOR RADIO/TELEVISION INTERFERENCE (for U.S.A. only)
This product has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. The product generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If the product does cause harmful interference to radio or television reception, which can be determined by turning the product on and off, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the product and the receiver.
- Connect the product into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

POTENTIAL FOR RADIO/TELEVISION INTERFERENCE
(for Canada only)

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the interference-causing equipment standard entitled “ Digital Apparatus”, ICES-003 of the Canadian Department of Communications. Cet appareil numérique respecte les limites de bruits radioélectriques applicables aux appareils numériques de Classe B prescrites dans la norme sur le matériel brouilleur: “Appareils Numériques”, ICES-003 édictée par le ministre des communications.

Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.

WARRANTY INFORMATION

Limited Warranties

Your HEM-412CREL Manual Blood Pressure Monitor, excluding the monitor cuff, is warranted to be free from defects in materials and workmanship appearing within 5 years, when used in accordance with the instructions provided with the monitor. The monitor cuff is warranted to be free from defects in materials and workmanship appearing within one year, when the monitor is used in accordance with the instructions provided with the monitor. The above warranties extend only to the original retail purchaser.

We will, at our option, repair or replace without charge any monitor or monitor cuff covered by the above warranties. Repair or replacement is our only responsibility and your only remedy under the above warranties.

To obtain warranty service, ship the monitor and all of the components, together with proof of purchase and a note explaining the problem with \$5.00 for return shipping and insurance to:

Omron Healthcare, Inc.
Attn: Repair Department
300 Lakeview Parkway
Vernon Hills, IL 60061

Be sure to include the model number, your name and your phone number on the enclosed note and any other correspondence.

ALL IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE, ARE LIMITED TO THE DURATION OF THE APPLICABLE WRITTEN WARRANTY ABOVE. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

OMRON SHALL NOT BE LIABLE FOR LOSS OF USE OR ANY OTHER INCIDENTAL, CONSEQUENTIAL OR INDIRECT COSTS, EXPENSES OR DAMAGES. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusions may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which may vary from state to state.

FOR CUSTOMER SERVICE

Call toll free:

1-800-634-4350

SPECIFICATIONS

Model:	HEM-412CREL
Display:	LCD Digital Display
Measurement Range:	Pressure: 0 to 280 mmHg Pulse: 40-180/min.
Accuracy/Calibration:	Pressure: ± 3 mmHg or 2% of reading Pulse: $\pm 5\%$ of reading
Inflation:	Manual by inflation bulb
Deflation:	Automatic pressure release valve
Rapid Air Release:	Push button valve
Pressure Detection:	Capacitive pressure sensor
Measurement Method:	Oscillometric method
Pulse Wave Detection:	Capacitive pressure sensor
Power Source:	4 "AA" batteries
Battery Life:	Approximately 1000 uses
Operating Temperature/ Humidity:	50°F to 104°F (10°C to 40°C) 30 to 85% RH maximum
Storage Temperature/ Humidity:	-4°F to 140°F (-20°C to 60°C) 10 to 95% RH maximum
Console Weight:	Approximately 13 oz. (350g) with cuff, exclude batteries
Outer Dimensions:	Approximately 4 1/8" (w) x 3 3/8" (h) x 4 1/2" (d) (106mm x 84mm x 116mm)
Cuff Dimensions:	Approximately 5 3/4" (w) x 18 7/8" (l) (145mm x 480mm)
Arm Circumference Range:	Approximately 9" to 13" (220mm - 320mm)
Accessories:	Arm cuff, Inflation bulb, Instruction manual
UPC Code:	6 81306 61112 3

NOTE: These specifications, to improve performance, are subject to change without notice.

Made in China

Manufactured by:

OMRON HEALTHCARE, INC.

300 Lakeview Parkway

Vernon Hills, Illinois 60061

www.omronhealthcare.com

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412CRELINST Rev A