# **Instruction Manual**

## REIZEN Talking Wrist-Mounted Blood Pressure Monitor



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## Introduction

Thank you for purchasing the REIZEN Talking Wrist-Mounted Blood Pressure Monitor (item #188220)

For your safety, please be sure to read this Instruction Manual thoroughly before using the Blood Pressure Monitor. For other specific information about your own blood pressure, CONTACT YOUR PHYSICIAN.

- Measures Blood Pressure (SYS. & DIA.) & Pulse.
- Fuzzy logic measurement system with fully automatic inflation and deflation to provide home blood pressure monitoring convenience.
- 80 sets of memory with Date/Time
- Easy to wrap wrist cuff suitable for wrist sizes from 5- 1/4" to 7- 3/4" (135~195mm).
- Automatic turn-off after 1 minute
- Low Battery icon and intelligent error detection.
- Portable for traveling almost anywhere
- Uses two "AAA" alkaline batteries
- Recall and Scan functions.
- Delete single or all measurements.

## Warning Signs & Safety Statements



ATTENTION!!

Read user's manual before use.



Type BF applied part.

## **Health and Blood Pressure Values**

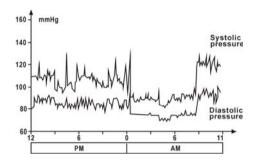
Blood pressure of the human body tends to increase naturally from middle age. This is due to the continuous aging of the blood vessels. Other causes include obesity, lack of exercise, cholesterol (LDL) adhered to the blood vessels that will cause the same symptom and let the vessels lose their elasticity. Higher blood pressure will accelerate the hardening of the arteries, and the body becomes more susceptible to apoplexy and coronary heart disease. This is the reason we need to know our routine blood pressure trend in order to see whether our body condition is healthy or not. The blood pressure fluctuates constantly throughout our daily life and is an essential element for our daily health management.

## What is Blood Pressure

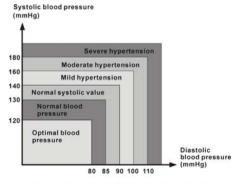
Blood is pumped by the beat (contraction and expansion) of a pump called the heart. The pressure of the pumped-out blood is called the "blood pressure". Blood pressure heaves with each beat of the heart. The raised pressure when the heart contracts is called the "systolic blood pressure" and the lowered pressure when the heart expands is called the "diastolic pressure".

Blood pressure is typically low in the morning and increases from the afternoon to the evening. It is lower in the summer and higher in the winter. The blood pressure naturally varies from time to time throughout the day. Many factors may cause the blood pressure to fluctuate: Breathing, Exercise, Mental Stress, Smoking, Eating, Concern, Environmental and/or Temperature Change, the Time of Day, Urination and Bowel Movement, Conversation, Taking Bath, Drinking Alcohol, Medication and Physical Activity, etc.

Variations in Blood Pressure:
 The variations in blood pressure over a whole day with measurement taken every five minutes are shown below



 Classification of Blood Pressure by the WHO: The World Health Organization (WHO) and the International Society of Hypertension (ISH) developed the Blood Pressure Classification shown as below.



According to the blood pressure classification by the WHO/ISH (revised in 1999)

## **Important Information**

- Blood pressure values measured at home tend to be lower than those measured in the hospital. This is caused by the fact that you are nervous when you have your blood pressure measured in the hospital, but you feel relaxed at home. It is important to know your stable normal blood pressure measured at home.
- It is recommended that people with heart troubles, kidney trouble, hypertension, diabetes, arteriosclerosis or any other medical condition, please consult your physician before and during use of blood pressure monitor to determine if your wrist blood pressure accurately reflects your actual blood pressure.
- Blood pressure may fluctuate by 30 to 50 mmHg depending on whether you are nervous or relaxed, exercise or the environment (temperature or mental state).
- The device may show some reading error in the presence of common arrhythmia such as arterial or ventricular premature beats or arterial fibrillation.

### **Precautions**

- This unit will not serve as a cure of any symptoms of your cardiovascular diseases or other diseases. The data measured is only for reference. Always consult your physician if any abnormal results are measured.
- Always follow the operation procedures described in the manual to accurately measure your blood pressure.
- Be sure to keep this manual handy for future reference.
- Diseases such as diabetes and hyper lipide accelerate

hardening of the arteries. If such conditions continue, there is an increased danger of apoplexy and coronary infarction, arterial stenosis and disorder in peripheral blood circulation. In such cases, there will be a large difference between blood pressure values taken at the wrist and upper arm. (Since even healthy persons may show a difference of 20 mmHg if the conditions of the measurement status are not suitable. Do not rely on the self-diagnosis or just one measurement, and always follow the advice of a physician.) Physiological conditions may have varying degrees of effect, but generally blood pressure values at the wrist and upper arm should display the same pattern of change. Consequently, it is possible to monitor trends in change by measuring blood pressure at the wrist.

## **Contraindications**

- Do not use the device on infants and persons who cannot express his/her own will, which may lead to serious accidents.
- Do not use the device for purposes other than measuring blood pressure.
- Do not use this device near any mobile phone or microwave oven in use, or reading error may occur.
- Do not try to disassemble or modify the unit or wrist cuff, which may damage the unit or cause permanent reading error.
- Do not start the inflation when the wrist cuff is not wrapped around the wrist.
- Do not drop this unit and avoid strong impact.

## **Warning**

- If the inflation continues and doesn't stop, please untie the cuff immediately or turn off the unit by pressing the (1) POWER Button.
- Do not measure repeatedly for a long period of time.
- This device is not to be used if your wrist has any wound or injury.
- Remove batteries if not using the device for a long time.
- Do not use batteries of different types or brands as this may lead to an incorrect reading and possibly cause battery explosion (don't mix alkaline and heavy duty batteries).
- Leaving the batteries in the blood pressure monitor for over 3 months and not using the device may damage the device by battery leakage. Please read the Installing/Replacing Batteries section in this manual.
- The device might not meet its normal performance if stored or used beyond the temperature and humidity ranges specified below.
  - Operating conditions: 10°C~40°C, 40%~85% R.H.
  - Conditions for storage: -20°C~50°C, 15%~85% R.H.

## Suggestions before Measuring Blood Pressure

- 1. Please relax yourself physically and mentally for at least 5-10 minutes before measurement.
- Avoid eating, smoking, exercising, bathing and drinking (alcohol/coffee/tea) for at least 20-30 minutes before measuring your blood pressure.
- 3. Be sure the wrist cuff is at the same level as your heart.
- Stress raises blood pressure. Keep calm and relaxed during measurement.
- 5. Please DO NOT talk or speak during measurement.

- Avoid urination or bowel movement before taking a measurement.
- Wait at least 3 minutes before you take another blood pressure measurement.
- 8. Keep the records for your physician as reference. Remember that one measurement can't conclude the health of your blood pressure, only recording long-term measuring results will reveal the long-term trend of your blood pressure. Try to measure your blood pressure at the same time each day for consistency.

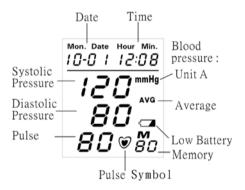
## **Device Descriptions**



## **Description of Control Buttons**

- POWER: To turn on/off the unit.
- START: Start inflating to measure blood pressure and pulse. Turn on or turn off voice in power off.
- TIME: To set the Date/Time.
- MEMO/ A: To review the measured record(s) manually / To select the digit of Date/Time.
- SCAN/▼: Automatically review all previously memorized record(s) / To select the digit of Date/Time / To delete memorized record(s).

## **Description of LCD Display Symbols**



### Installing/Replacing Batteries

Be sure the unit is turned off before installing/replacing batteries, or the memories & Date/Time setting will be erased. If the batteries are removed for more than 30 seconds, the memories of the unit and the setting of Date/Time will be erased as well. Then, you must reset the Date/Time

- Slide the battery compartment cover in the direction of the arrow to remove it.
- Place the batteries (two AAA Alkaline batteries) in the compartment as indicated by the polarity symbols (+, -) marked below. Then all symbols will be shown on the screen for 1 second and then return to standby mode.
- 3. Replace the battery compartment cover.



Note: When ( (Low Battery indicator) appears on the display, the batteries are weak. Change the batteries as soon as possible, or it may not be able to take any measurement. And, the memories and the Date/Time setting of the unit may be lost.

## Warning:

- Be sure to follow the instruction above when installing or replacing the batteries.
- b. We recommend you use only ALKALINE
   batteries for the best performance and the longest device life

- c. Use only brand new batteries of the required size and DO NOT mix using old and new or different type of batteries together.
- d. Remove the batteries if not using the blood pressure monitor for an extended period (i.e., 3 months). The batteries can leak chemicals then damage the electronic parts.
- e. Immediately replace run-down batteries with new ones.
- Check the batteries periodically and replace them when necessary.

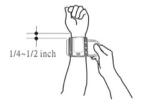
## **Program Date and Time**

- Continuously press TIME button for 2 seconds until "2006" shows on the screen and starts to flash.
- Press MEMO/▲ button or SCAN/▼ button to set the number representing the Year.
   (You can press and hold MEMO/▲ or SCAN/▼ buttons for about 1 second, the number of the Year will be displayed in the faster speed.)
- 3. Press TIME button to confirm the Year setting. Then the number representing the Date will flash.
- 4. In the same manner, set the **Month**, **Date**, **Hour** and **Minute**

Note: After replacing batteries, always check that the Date/Time is properly set first, then use the blood pressure monitor. If the batteries are removed for more than 30 seconds, you must reset the Date/Time.

## How to Apply the Wrist Cuff

- Keep your left arm in front of you with your palm facing up. Apply the wrist cuff so that the monitor is on the inside of your wrist with the display facing up like your palm.
- As shown in the figure below, leave a space of 1/4"~1/2" between the edge of the wrist cuff and the bottom of your palm.
- Hold the end of the wrist cuff and wrap the cuff around your wrist. The cuff should be tightened evenly, and with no room left between the cuff and your wrist for most accurate measuring result. (Do not pull the cuff too hard or it will make the wrist cuff too tight.)
- 4. The excess part of the cuff can be folded and attached to the other side of the cuff.



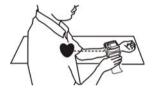


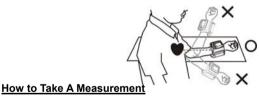
## **Correct Measuring Position**

In order to read the accurate value, please sit or lie down to measure. Rest your left arm on the table and use the enclosed storage box, a cushion or a pillow as bolster. With left palm face up, keep the cuff at the same level as your heart. Higher or lower level will affect the readings. (If the wrist cuff is lower than the level of the heart, blood pressure will be measured higher.)

## Measurement while sitting down:

- a. Place your elbow on a table and have the wrist rest on an object such as your storage case or a cushion.
- b. Make sure the wrist cuff is at the same level as your heart. (It is very important to obtain your true blood pressure.)
- c. Relax your whole arm with the palm facing up.
- d. Relax your body before measurement by taking several deep breaths.





Please read and follow directions in the section. "Suggestions Before Measuring Blood Pressure" and "How to Apply the Wrist Cuff" before taking a measurement.

1. Press U POWER button on the 188220 to turn on the unit. All the symbols will be displayed for a couple seconds then the number 0 will flash. Press START button to take a measurement. (If the unit has been

turned on, press START button to take a measurement directly.)

- \* The cuff automatically inflates to approximately 170mmHg. (50mmHg higher than the average systolic blood pressure reading).
- When the cuff reaches your correct inflation level, it begins to deflate automatically with decreasing numbers shown on the display. The Heart Symbol flashes as the onset of oscillation signals.



- If during deflation the blood pressure monitor senses that higher pressure is required to measure the user's blood pressure, the device will stop deflation and pump again to reach the workable pressure (up to the max. 280 mmHg). If the inflation continues and doesn't stop, please untie the cuff immediately or turn off the unit by pressing the POWER.
- 3. The monitor exhausts the residual air when the measurement is completed. The Heart Symbol stops flashing and your Blood Pressure and Pulse will appear on the display. After taking the measurement, the latest measured readings will always be displayed before the power is turned off.

#### Note:

- Wait for at least 3 minutes if you want to take another measurement. Waiting allows your blood vessels to bounce back to normal status. More rest time may be required between measurements depending on individual physiological conditions.
- While starting the unit each time, it will give a voice prompt. If you don't need it, please turn off the announcement

## **How to Use the Memory Features**

The blood pressure and pulse measured and displayed are automatically stored in the memory. The blood pressure monitor can store up to 80 measurements. If more than 80 measurements have been taken, the earliest measurement will be erased and replaced by the most recent measurement.

## Review the Average Value and previously measurements:

Press **MEMO**/ ▲ button, the unit first displays the average values of Systolic, Diastolic and Pulse with voice prompt. (Averaged from all memorized readings.) Press **MEMO**/ ▲ button again to review the measurements from the latest to the earliest.

The latest measurement (M 01) appears when you press MEMO/ ▲ button. M 01 is the latest reading measured. The Systolic, Diastolic, Pulse and Date/Time of the measurement will be displayed with voice prompt... Press MEMO/ ▲ button to repeatedly review other memorized readings. The readings will be displayed as M 02, M 03, M 04 ... etc. You can press

SCAN/▼ button to switch to the automatic display mode.

### 3. Scan all previous measurements:

Press SCAN/▼ button, the unit will display all measurements one by one in one in one second interval. You can press MEMO/ ▲ button to switch to the single display mode.

## How to delete Single or All Memories

## 1. Delete single measurement:

You can delete the single memory just after taking the measurement. Press **SCAN**/▼ button then "dEL" will appear and flash. Press **SCAN**/▼ button again to confirm the delete function.

### 2. Delete all measurements:

Turn off the unit first then keep pressing SCAN/▼ until "dEL ALL" displayed. Press SCAN/▼ button again and all memories will be deleted when "00 ALL" shows on the screen.





### **Voice Prompt Function**

- When installing batteries, the initial mode is voice prompt mode. While starting the unit and operating each time, there is a voice prompt to remind user. It's especially useful to the Blind and those with low vision.
- ◆ If the user doesn't want to use the voice prompt, it may be turned off. Please turn off the unit first and press START button so that it will give "VOICE ON". Then, the user can press MEMO/ ▲ or SCAN/ ▼ to choose "VOICE OFF" or "VOICE ON".







Voice Off

#### Note:

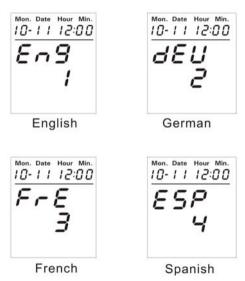
Using the Voice Prompt Function, increases power consumption, and reduces the life of the battery.

### Set the Language of Voice Prompt

There are four languages of voice prompt (English, German, French, Spanish) that can be set. Make sure you have turned off the unit before you want to set the voice prompt function.

 Press START button, the unit will show "Eng 1" (default) and speak a demo voice in English "Memory number 3, Systolic pressure 160 high, Diastolic pressure 66 normal, Pulse rate 62"

- Press MEMO/ ▲ button or SCAN/ ▼ button to set the number representing the language.
- Press START button to confirm and the unit will show "UoC On" (default)
- Press MEMO/▲ button or SCAN/▼ button to set the voice prompt on or off.
- Press START button to confirm and the unit will go to standby mode



Note:

Using the Voice Prompt Function increases power consumption and reduces the life of the battery.

## **Maintenance**

## Storage

- 1. Always put the device in the included storage box when not in use or during transporting.
- If you won't use the device for an extended period like over 3 months, remove the batteries.
- 3. Do not store the device under direct sunlight, high temperature, humid, dusty, or corrosive environment.
- 4. Do not stretch, bend or tug the wrist cuff too hard.
- 5. Do not wet the unit.

## Cleaning

- Do not use an alcoholic-base, benzene, gasoline or solvent agent to clean the device.
- Wipe with a moistened cloth with clean water or a mild cleaning agent and then dry the device with a soft and dry cloth.
- The cuff can be wiped clean with a moistened cloth and soap.
- 4. Do not flush the device or cuff.
- Do not bend the cuff or sleeve and wrap the sleeve to the inside-out surface.
- Do not disassemble the device or dismantle the cuff or try to repair by yourself. If any problem happens, bring the device to the distributor for further examination.
- Do not operate the device in severe environments, extreme temperature or humidity, or direct sunshine.

## **Error Messages & Troubleshooting**

The unit is manufactured through a complete quality assurance system.

If the measurement is not made correctly, the following error will be displayed. Please check the cause, then how to correct and measure your blood pressure again.

## **ERROR MESSAGES**

Error Indicators	Cause	How to Correct
Mon. Date Hour Min. 10-0 1 12:08	Incorrect posture in measurement or the user moves or talks during measurement.  There is interference or noise during measurement.  User is tense and does not relax or has severe heart beat problem.	Cuff is not fastened well; please fasten again by following the instructions.     Wait at least 3 minutes before taking another measurement.     Repeat steps listed under "How to Take a Measurement."     User has a special condition; please refer to a physician.

Error Indicators	Cause	How to correct
Mon. Date Hour Min. 10-0 1 12:08 2 E	●No pulse or blood pressure sensed. ●Incorrect posture during measurement. ●Cuff is not wrapped properly.	● Cuff is not fastened correctly or not tight enough; please fasten the cuff by following the instructions. ● Wait at least 3 minutes before taking another measurement. Please see "How to Take a Measurement" on page 14.
Mon. Date Hour Min. 10-0 1 12:08 3 E	<ul> <li>Insufficient or failed inflation.</li> <li>Cuff broken.</li> </ul>	Cuff is not fastened well; please re-fasten the cuff by following the instructions.  Pump, or venting valve or deflation valve failure, please contact the distributor.

If a trouble occurs while you are using the blood pressure monitor, check the attached Troubleshooting first. If you cannot measure your blood pressure correctly even after taking the following countermeasures, the monitor may be broken. Please send the unit to the distributor for repair. Do not dismantle or try to repair the monitor by yourself.

## **TROUBLESHOOTING**

Condition	Cause	Correction
After the batteries are installed, no indication or symbol displayed on the LCD. The wrong indication shows when power is turned on.	installed properly.  Batteries are discharged.	Check and correct the battery polarities.     Remove the old batteries and wait for one minute, then install the new batteries.
The inflation cannot be done or the air pressure doesn't rise.	Cuff is not wrapped properly.	<ul> <li>Check the wrist position and fasten the cuff correctly.</li> <li>Measure the pressure again.</li> </ul>
•	Battery low. Battery voltage is excessively low.	●In order to keep the previous measurements & date/time, ensure the unit is turned off before replacing batteries. ●Replace with new "AAA" Alkaline batteries.

Condition	Cause	Correction	
The blood pressure		●Re-fasten the cuff.	
cannot be taken, and		●Relax yourself.	
the LCD shows error		<ul> <li>Keep the cuff and</li> </ul>	
message or wrong		heart at the same	
result.		level during the	
		measurement.	
		<ul> <li>Keep silent and still</li> </ul>	
		in measurement.	
		<ul><li>If the patient has</li></ul>	
		severe heart beat	
		problem, the blood	
		pressure reading	
		may not be correct.	
Under normal		<ul> <li>●Usually people feel</li> </ul>	
operating		tenser in the	
circumstance, the		hospital or clinic	
reading at home is		(white robe effect)	
different from that of		than in their home.	
the clinics.		●Record the results	
		and consult with	
		your physician.	
Each measurement		●The variation might	
has a different		be due to the	
reading.		different	
		environments.	
		●The blood pressure	
		is changing	
		according to the	
		physiological or	
		psychological status	
		of the human body.	

## **Specifications**

Model No.	188220
Display	LCD Digital Display
Measurement	Oscillometric method
Method	
Measurement	Pressure: 20~280mmHg
Range	Pulse: 40~190 / minute
Accuracy /	Pressure: ±3mmHg or 2% of reading
Calibration	Pulse: ±5% of reading
Memory capacity	80 sets memories
Inflation	Automatic inflation by air pump
Deflation	Automatic liner pressure deflation valve
Pressure Release	Automatic exhaust valve
Sensor	Semiconductor pressure sensor
Power Supply	3V DC (2 "AAA" alkaline batteries)
Measuring Interval	1 mmHg
Operating	+10°C~+40°C (50 °F~104 °F)
Temperature /	40%~85% R.H. maximum
Humidity	
Storage	-20°C~+50°C (-4 °F~122 °F)
Temperature /	15%~85% R.H. maximum
Humidity	
Battery Life	Approx. 200 uses (alkaline batteries)
Unit Weight	Approx. 120 grams (not including batteries)
Cuff Size	Wrist Circumference approx. 135~195mm
	(5 1/4~ 7 3/4 inch)
Unit dimensions	Approx. 70 (L) x 80 (W) x 25 (H) mm
Accessories	Storage Case, Instruction Manual, AAA Batteries
	x2pcs
	1

Please understand that specifications may be changed without prior notice.

## **Warranty Information**

Your REIZEN Talking Wrist-Mounted Blood Pressure Monitor is guaranteed to be free from defects in workmanship and materials under normal use for a period of ONE year from the date of purchase.

For repair within one year warranty, our Authorized Service Agent must be advised the defects of the device. This warranty covers parts and labor only under normal usage, any transportation cost and freight incurred will be at the owner's expenses. Any defect from natural causes, e.g., flood, hurricane etc., is not within this warranty. This warranty does not cover damage incurred by: usage NOT following the instructions, accidental damage, or being tampered with or serviced by unauthorized Service Agents.

Subjecting the monitor to misuse, abuse, negligence of the instruction manual, unauthorized repair or modifications will waive the warranty. The warranty excludes expendables and consumables like batteries. All warranty claims must be directed to the distributor for the sale of the device. The content of this warranty is subject to change without further notice.

## PERSONAL BLOOD PRESSURE RECORD

Name	A	ge Weight	<del></del>
Date	Time	SYS./DIA./PULSE	Remarks

## **Conformity Standards**

- Medical device electrical safety: EN 60601-1
- Electromagnetic Compatibility: EN 60601-1-2
- EN 1060-1. EN 1060-3

## Manufacturer/Supplier

REIZEN P.O. Box 3312 Farmingdale, N.Y. 11735

