

# H2-BP

[ Wearable Blood Pressure Monitor  
H2-BP User Manual ]





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Charmcare Co., Ltd.

Wearable Blood Pressure Monitor  
**H2-BP User Manual**

## Table of Contents

<b>Part 1   Before You Begin</b>	<b>02</b>
<b>Part 2   Product Overview</b>	<b>13</b>
<b>Part 3   Name of Each Part</b>	<b>14</b>
<b>Part 4   How to Use</b>	<b>15</b>
<b>Part 5   Error Table</b>	<b>30</b>
<b>Part 6   Simple Troubleshooting Tips</b>	<b>31</b>
<b>Part 7   Product Specifications</b>	<b>32</b>
<b>Part 8   About Wearable Blood Pressure Monitor</b>	<b>34</b>
<b>Part 9   Difference In Blood Pressure According To Posture</b>	<b>37</b>
<b>Part 10   Measure Q&amp;A</b>	<b>38</b>
<b>Part 11   Product Warranty</b>	<b>41</b>

Thank you for purchasing the H2-BP(model name of Automated Electronic Sphygmomanometer made by Charmcare Co., Ltd. ("Charmcare")}. For the safe operation of this product, it is recommended that you read this user manual thoroughly before using.

### I Purpose

This sphygmomanometer is a "Medical Device" suitable for IEC80601-2-30 and is an electronic device that measures blood pressure indirectly (non-invasive). It's cuff is automatically pressurized and is intended for the indication of systolic and diastolic blood pressure and heart rate.

### I Directive

- This manual is copyrighted by Charmcare. The contents of this manual cannot be changed without prior permission.
- The contents of this manual may be changed without any notice.
- The contents of this manual should be correct. If for some reason, there are any questionable points, please do not hesitate to contact our service center.
- The patient is an intended operator.
- No modification of this product is allowed.
- Charmcare only provides the user manual in English. Since we are not asked in certain countries, we are currently only providing it in English, but we are willing to provide it in other languages upon request.

### I Warranty

This product has been manufactured and inspected following the strict quality assurance guidelines of Charmcare.

- Refer to the Economic Planning Board's "Regulations Regarding Consumer Compensation" for more information on conditions for product repairs and exchanges.
- The warranty period for this product is one year.
- Product malfunctions occurring from regular use shall be repaired for free at the Charmcare service center during the term of the warranty period.
- During the term of the warranty period, to Charmcare all problems with the product including the model no., the product no., date of purchase and a detailed description of the error.
- Manufacturer and/or the store where the product was purchased do not assume any responsibility for any and/or all problems resulting from improper use or improper storage of the product.

## I Contact Us

Contact us at the following numbers and addresses to receive various services and products.

Need to purchase products or parts?	 Charmcare Co., Ltd. Rm714, 2, Gasandigital1-ro, Geumcheon-gu, Seoul, 08591, Korea Tel: +82-70-4756-8355 Fax: +82-2-862-5065	
Need service or repairs?		
Website	<a href="http://www.charmcare.com">http://www.charmcare.com</a>	E-mail: <a href="mailto:cs@charmcare.com">cs@charmcare.com</a>

## I Definition of Terms

- The user must follow all warnings and precautions.
-  Warning: "Warning" is used to refer to factors, which, when ignored, may result in severe and/or fatal injuries and property damage.
-  Caution: "caution" is used to refer to factors, which, when ignored, may result in moderate, but non-life-threatening, injuries.
-  Note: "Note" is used to highlight factors that are not dangerous, but should be paid close attention to during installation, use, and maintenance.

## I Abbreviation

Type	Description
SYS	Systolic Blood Pressure
DIA	Diastolic Blood Pressure
PUL	Pulse

## I Proper Environments for this Product

Do not use or store this product in the following conditions:



Do not expose this product to humidity and/or moisture or areas where air circulation is a problem.



Do not store or place this product in direct sunlight.



Use this product between temperatures of 10 °C and 40 °C, and at a humidity between 0% and 95%.



Do not place this product near heat sources.



Do not store or place this product in places where it is exposed to chemicals or flammable gas.



Do not subject this product to severe shock and/or vibrations.



Keep this product free of dust and debris, particularly metallic objects.



Do not attempt to disassemble the product by yourself. Charmcare is not liable for any problems that may occur should you attempt to do so.



Store below an altitude of 3,000 m and a temperature below 70 °C.

### I Safety Precautions

- Do not shock or drop this product.
- Do not measure without wearing this product on your wrist.
- Dispose of body, parts and accessories of this product according to local regulations.
- For specific information about your own blood pressure, consult with your physician.

### I Contraindication

- This product is contraindicated for use in ambulatory environments.
- This product is contraindicated for use on aircraft.



### Warning

- Please do not adjust dosage on your discretion according to the measurement results.
- Please take your medicine according to your physician's prescription.
- Diagnosis and treatment of hypertension is only possible with your physician.
- Please consult with your physician before using, if you have any of the symptoms below.
  - Arrhythmia such as atrial fibrillation, arteriosclerosis, poor circulation, diabetes, aging, pregnancy, pregnancy addiction {pregnancy, preeclampsia, or kidney disease}, kidney disease.
- During the measurement, blood pressure measurements may be affected by movement, trembling, chills, etc.
- Please do not make measurements on wrists that are injured or under treatment.
- Please do not press the cuff around any wound which could make the wound worse.
- Please do not use cuffs on intravenous or transfused arms.
- Please consult with your physician in advance if you are measuring an arm with arteriovenous (AV) shunt.
- Please do not use this product with other electronic medical products together; hence mutual interference may undermine the intended purpose.
- Please do not use in the vicinity of HF surgical instruments, MRI, CT scanners, or in environments with high oxygen concentrations.
- Please keep the charging cable away from infants, toddlers, or children; hence the small parts are likely to cause suffocation if swallowed.
- Please stop the usage of this product and consult with a physician if you feel any pain or other abnormalities on your skin.
- Please do not use this product on infants, toddlers, children, or people who cannot express themselves.
- Please consult with your physician before using this product if you have severe blood flow problems or blood disorders as cuff inflation can cause bruising.



## Warning

- Please do not use in a location where there is moisture or a risk of splashing water over this product which may damage the product.
- Please keep this product clean. If this product is causing skin irritation due to sweat or contamination, stop using it and consult with your dermatologist.
- Please do not let chemical products such as lotions, oils, skin creams or cosmetics collect on the product. To avoid damage to this product, make sure to wipe off any chemical products that have collected on the product.
- Continuous rubbing and pressure may irritate the skin. Give your wrist a break by removing the product for a while after a long wear.
- Please do not take blood pressure measurements more often than necessary because bruising, due to blood flow interference, may occur.
- Please consult with your physician or healthcare provider if you begin a weight reduction or exercise program.
- Please be sure to tighten the band strap correctly and always check at your discretion.
- Please do not change any part of the product at your disposal.
- Please do not disassemble or attempt to repair this product or any components. This may cause an inaccurate reading.
- Please do not touch or wet the charging port of the band, terminal of the charging clip, and plugs of cables.
- Please do not crush or puncture the battery because it may cause spontaneous combustion.
- Please do not connect the + and - poles using a piece of metal or other conductive objects.
- This product has a built-in rechargeable battery. Do not either throw into fire, apply heat, puncture, crush, use, or leave it in a high temperature environment since it may cause overheating.
- Please do not use this product after the durable period has expired.



### Caution

- Please consult with your physician for specific information about your own blood pressure.
- Self-diagnosis or self-treatment according to measurement results is dangerous.
- Please consult with your physician if you have the symptoms following below.
  - In case of wire ablation
  - In cases of severe blood disorders or internal bleeding due to compression.
- Please do not measure more often than necessary. Internal bleeding may occur due to compression.
- Please do not use this product for purposes other than blood pressure measurement.
- Please do not disassemble or modify the body or wrist cuff.
- Please do not use this product in a humid place or wet place which may cause malfunction. This may cause malfunction.
- Please do not contact water.



### Note

- Use this product to measure your blood pressure regularly, record your results and consult with your physician.
- When measuring blood pressure, the position of the cuff should be accurately set at the radial artery, and the cuff should be at the same level as your heart.
- Blood pressure changes frequently during the day, and can be greatly affected by smoking, drinking, medication, and exercise, so please measure 30 minutes after exercise and 2 hours after meals.
- Be careful not to shock or vibrate the blood pressure monitor during blood pressure measurement.  
These shocks or vibrations may cause the measurement results to be wrong or impossible to measure.
- While measuring your blood pressure, you should measure yourself comfortably without speaking.
- Inaccurate measurement results may be obtained due to arrhythmia or the very slight movements of blood vessel expansion and contraction.
- Measurement for adults with small wrists, may not be applicable. Even though this product is for adult-use.
- This product can't be used for infants, toddlers, or children.
- This product is for adults.

## I Product Symbol Description

Label	Symbol	Description
1		The serial number that identifies the object.
2		Date of manufacture
3		Manufacturer
4		Warning
5		Caution
6		Instruction for User Manual
7		Type of applied part
8		WEEE Mark

## I Maintenance and Cleaning

Wearable blood pressure monitor device can be kept clean using various methods. Avoid any damage or contamination of this product using the methods recommended below.

- This product is not covered under the guarantee period free of charge in cases of using unauthorized substances that can damage the product.



### Caution

- After cleaning this product, check it's monitor.
- Do not use this product if it is beyond the expiration date or damaged.

- Using lukewarm water and/or alcohol, rub with a soft cloth once a month to keep this product's body clean but do not use thinner, ethylene, or oxide because these materials can damage this product.
- Do not store this product in places exposed to excessive temperature, humidity, moisture or direct sunlight.
- Do not disassemble this product.
- Do not shock or vibrate this product hard such as dropping this product on the floor.
- Do not repair by yourself in any case.
- Wipe this product with a soft, dry cloth.
- Keep the product and accessories in a clean and safe place.

### | Data Transmission

- This product emits radio frequencies (RF) in the 2.4 GHz band. Do not use this product in areas where RF is restricted, such as on an aircraft or in hospitals. Turn off the Bluetooth® feature of this product when in RF restricted areas.

### | Calibration and Service

- The accuracy of this product has been carefully tested and is designed to last.
- To maintain proper operation and accuracy of this product, it is recommended that you inspect it regularly once a year.  
If necessary, please contact the customer service center.

## I Composition of Product

## I Basic Unit

Part	Quantity
H2-BP Main unit	1

## I Basic Accessories

Type	Description	Quantity
Charging Cable	5V USB connector	1
Tape Measure	A tool that measures the girth size of the wrist	1
Adjusting Pin	Pin to adjust height	1
User Manual	A guide for user	1
Quick Start Guide	Quick manual for user	1

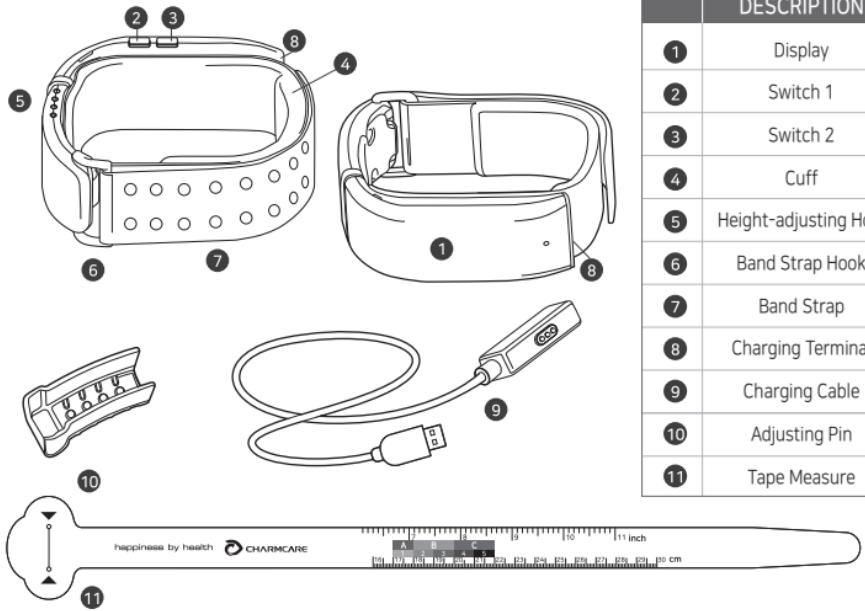


## Warning

- Do not swallow accessories. This may result in choking.
- Please purchase accessories via Charmcare or its distributors.

## I Part 3 Name of each part

## I Name of each part of wearable blood pressure monitor



## Warning

- For electrical safety, this product should not be disassembled.

This manual describes the basic names and functions of this product that users need to know, and provides information for simple use.

### | Precautions when using

- Use this product within the ambient temperature of 10°C - 40°C and the humidity of 0% - 85%.
- Check the battery charge status.
- Be careful because this product is easily damaged by impact.
- Use this product within the range of the ambient temperature and the humidity guided by Charmcare, and store it away from dust and flammable materials.
- Check whether if the external appearance of this product is changed or not.
- Make sure that there should be no deformation in the appearance of the charging cable.

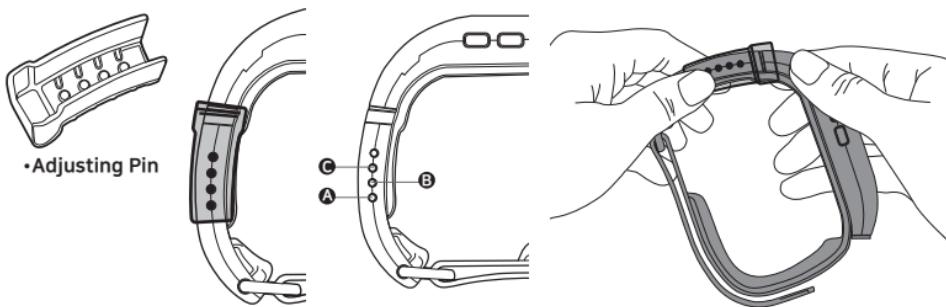
### | Principle of operation

- This product starts measuring by pressing this switch 1.
- The cuff is automatically inflating to press the radial artery and measure the systolic and the diastolic blood pressure by analyzing the waveform amplitude, using the oscillometric method of measuring pulsating phenomena.

**I Preparation before wearing**

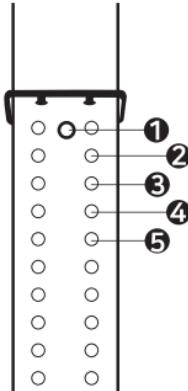
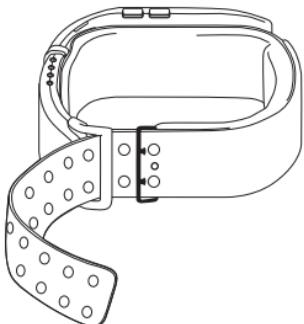
•Tape Measure for measuring wrist circumference

**(1) Measurement** | With the enclosed 'Tape Measure', measure the wrist circumference. And check the number and letter (alphabet) that fits the user.

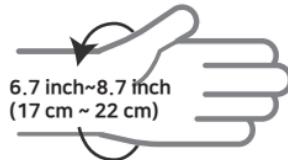


**(2) Adjustment** |

① Height Adjustment: Insert the adjusting pin to be matched to the hole on the band and push or pull the band to adjust the height to the letter from A to C you measured.

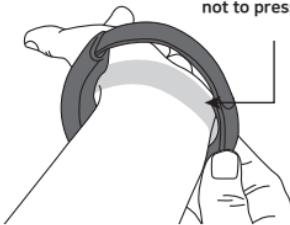


② Strap Adjustment: Tighten the band size to the number from 1 to 5 you measured.



\* Note: The H2-BP device fits adult wrists from 6.7 inch to 8.7 inch (17 cm to 22 cm) in circumference.

• Make sure the hard part not to press the ulnar artery



\* Before wearing the device, please make sure there is some gap between the wrist and the band. Be careful not to press the ulnar artery with the hard part of the band.

You can normally wear the band loosely except when you measure your blood pressure.

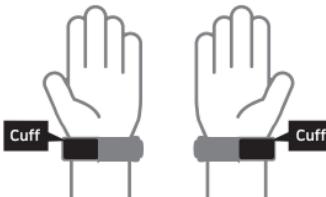


### Caution

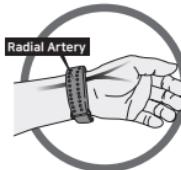
Give space between the wrist and the product. Otherwise, a measurement error will occur.

### I How to wear

- The band is to be set to the palm as close as possible. Do not wear the band on the part of the lower arm. Please make sure the band neither to be too tight nor too loose to have some space, so a finger barely goes through it as shown.
- \* You can normally wear the band loosely except when you measure your blood pressure



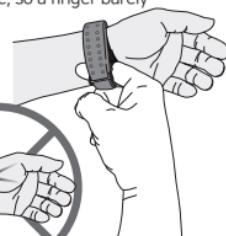
Left-handed figure   Right-handed figure



Correct Example



Poor Example



### Warning

Please be careful not to get this product wet because it doesn't have waterproof function.



### Caution

- Wear this product on any wrist with a strong pulse on the radial artery for accurate measurement.
- Do not measure on a wrist where the radial artery is blocked. Measurement errors may occur.
- Blood pressure can differ between the right and left wrists, and readings can be different. Charmcare recommends always using the same wrist when measuring blood pressure. Consult with your physician to determine which wrist for taking your measurements.
- If the cuff position is not correct, a measurement error will occur.

### I Accurate measurement posture

If the position of the wrist is different from the height of the heart, the blood pressure results change due to the weight of the blood itself. The results show that when the wrist position is higher than the heart, the blood pressure value is lowered and vice versa. A change of 8 mmHg per 4 inch occurs.

However, since the blood pressure result is also affected by the measurement posture, it does not necessarily follow this exact result.

Clench your fist lightly and hold your arm in a position of the blood pressure monitor level is as the same as your heart.



<Correct Posture>



Do not lean back.



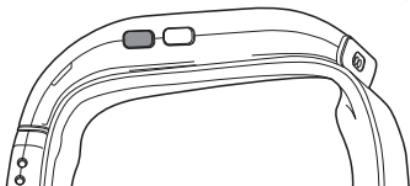
Do not bend in.



#### Caution

Remain still and do not talk during the measurement.

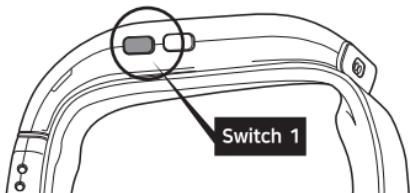
## | Power



- Press switch 1 for more than 2 seconds.

## | Blood pressure measurement

- ① While wearing the product, press switch 1.



- ② As pressure is applied to the wrist, the current pressure is displayed on the screen.



③ When the measurement is completed, the measured blood pressure result is displayed.



### Caution

Repeated measuring at intervals of about 10 minutes.

- If the band strap is loose, blood pressure measurement may not be possible.
- If the cuff is not positioned over the radial artery, a blood pressure measurement error may occur.
- During the measurement, you should not speak or move.
- Take and record several readings over a period of time because a single measurement does not provide an accurate measurement of your true blood pressure.
- Avoid bathing, drinking alcohol or caffeine, smoking, exercising and eating for at least 30 minutes before taking a blood pressure measurement.

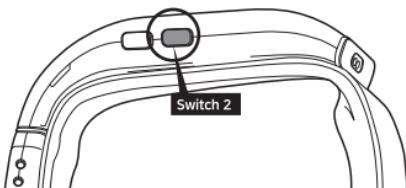


### Note

- Pressing switch 1 once automatically starts blood pressure measurement, and pressing it again during measurement cancels the measurement.
- If you want to stop in emergency situation or blood pressure measurement during measurement, press switch 1 to automatically stop measuring.

**I Display clock**

① Press switch 2.

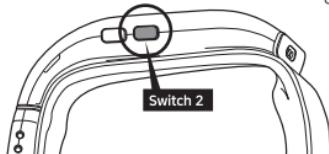


② The current time is displayed.

**I Display of stored blood pressure measurements**

① Press switch 2 twice.

② The blood pressure measurement date, time and index values are displayed.

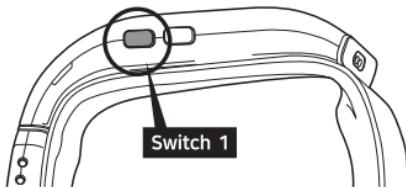


③ The blood pressure measurement result is displayed.

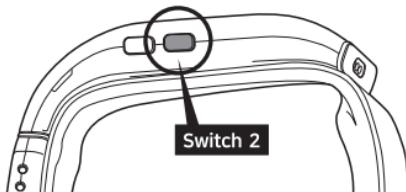
**Note**

- Every time you press switch 2, the displayed contents change.
- After confirming the last blood pressure result, press switch 2 again to display the clock.
- The screen automatically turns off after 5 seconds if no action is taken.

## I Setting switch description



◀ Switch 1: To complete the change



◀ Switch 2: To change a menu or value

## How to set up

SETUP	SETUP	SETUP	SETUP	SETUP	SETUP
EXIT	AUTO	TIME	DEL	COUNT	LANG
AUTO	TIME	DEL	COUNT	LANG	EXIT
TIME	DEL	COUNT	LANG	EXIT	EXIT

- AUTO: Automatic clock display setting mode
- TIME: Current date, time settings
- DEL: Delete stored blood pressure values
- COUNT: Display the number of measurements
- LANG: Language setting
- EXIT: Exit setup

② Selected menu: Press switch 2 to move to selected menu and press switch 1 to complete menu selection.

③ Settings change: Press switch 2 to change the selected setting, then press switch 1 to complete the setting change.



## Note

- If no switches are pressed for 10 seconds, the setting menu is exited.
- Press and hold switch 2 for 3 seconds to quickly change the setting.
- Press switch 1 for 3 seconds to cancel the change and move to the upper menu.
- After saving all setting values, go to the upper menu and press EXIT button to exit the setting menu.

## | Automatic clock display mode by operation

① Select the AUTO menu.



② When ON is selected, the screen auto-on by motion is activated.  
③ When OFF is selected, the screen auto-off by motion is activated.



## Note

If the screen auto-on is set, the battery may run out quickly.

## | Date and Time Setting

① Select from the TIME menu.



② Set the year.



③ Set the month, day



④ Set the hour, minute



## Note

This function is a menu to set the date and time if you cannot synchronize with the app. When you synchronize with the app, the time is automatically set to the date and time on your mobile phone, so you do not need to set it manually.

### I Delete Data

① Select from the DEL menu.



② If you select YES, the data will be deleted.



#### Caution

If you delete the data, it will not be possible to recover it, so please be careful before deleting data.

### I Count



① Select the COUNT menu to see the number of measurements.

### I Language

① Select the Language menu

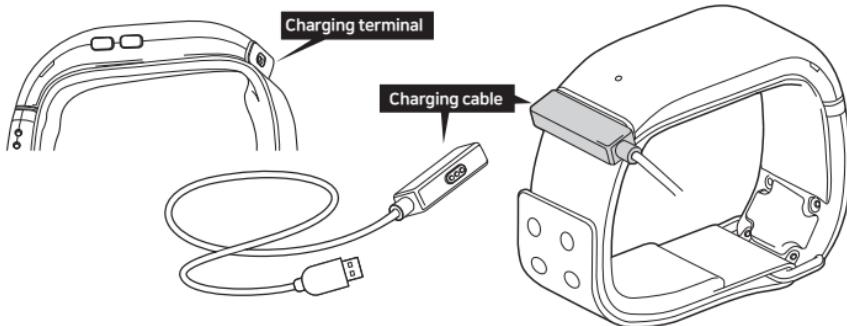


② Select your language.



### I How to use the charger

Lightly place the charging cable on the charging terminal as shown in the figure.



#### Warning

- Do not pull the charging cable. When handling the charging cable:
  - Do not damage it.
  - Do not tamper with it.
  - Do not twist it.
  - Do not place it under heavy objects.
  - Do not break it.
  - Do not forcibly bend or pull it.
  - Do not use it if it is gathered in a bundle.



#### Note

- Charging time is around 1 hour and 30 minutes.
- Make sure that the USB voltage is 5 V.

## I Battery Status

Power						
	Less than 10%	10% ~ 25%	26% ~ 50%	51% ~ 80%	81% or more	
Charging						
	0% ~	25% ~	50% ~	75% ~	75% or more	Complete



## Note

If it is less than 10%, blood pressure cannot be measured and only the clock and the stored blood pressure measurement results can be checked.

## I Smartphone Application

How to pair the H2-BP with the application.

- 1) Search for H2-BP in your app store and install.
- 2) Open the H2-BP application after turning Bluetooth on and register your H2-BP through the application.

\*Bluetooth connectivity is available for Bluetooth 4.0 version and above.



## Note

- This application allows you to correctly transfer data from your H2-BP to your smartphone.
- Be aware that Charmcare will not be held responsible for any loss of data or information in the app.
- If you change your smart device that was paired with your monitor, delete the pairing information from your old smart device to avoid any communication issues.

Error Number	Cause	Tip
MOVING	Movement during measurement	Do not move while taking the measurement.
21, 22	Poor cuff condition or loose band strap	Wear the cuff correctly and refer to the instructions. Check the cuff is inflating properly by pressing the switch 1.
31, 32	Safety function operation	
41, 42, 43	System error	Please contact Charmcare or it's distributor.

This page describes simple troubleshooting when problems occur during use. Sometimes it does not work as intended or you do not know what to do. Do not think of it as a 'failure' at this point and check the following.

### I General Information

Situation	Cause	Quick Treatment
Power does not turn on.	The battery is not charged or is fully discharged.	Charge the battery.
The power is turned off during pressurization.	The battery is completely discharged.	Charge the battery.
Nothing is displayed when you press any switch.	The battery is completely discharged.	Charge the battery.
The blood pressure value is low or high.	The height of the wrist is not maintained at the heart height.	Keep wrist at heart level.
	The blood pressure monitor cuff is not properly worn.	Wear the cuff correctly and refer to the instructions.
	When you are nervous and there is a force on your shoulders or arms.	Measure in a comfortable position.
	If you talk or move your arm during the measurement.	Measure it quietly and do not move.
The pressure does not rise.	In case of air leakage from the cuff.	Check the condition of the cuff.
Under no malfunctions and proper measurements if you have lower/higher results than the one at the hospital or various results for each measurement.		Refer to measurement Part 10 Q&A.
Other situations		Press the measurement switch again to newly begin from scratch.
		Charge the battery.
		If the treatments above do not solve the problem, please contact Charmcare or its distributor.

## I Electrical

Power Input	5 Vdc
Battery	160 mAh
Battery Type	3.7 V LI-ION POLYMER Battery
Charging Time	1 h 30 min
Battery Life	3 days; decreasing with the increase of measurements.
Warranty	1 year

## I Performance

Measurable Girth Size of Wrist	6.7 ~ 8.7 inch (17 ~ 22 cm)
Blood Pressure	Measurement Range: 30 mmHg ~ 60 mmHg / Accuracy: $\pm 5$ mmHg Measurement Method: Oscillometric/ Measurement Time: 30 ~ 80 seconds
Pulse Rate	Range: 40 bpm ~ 180 bpm/ Accuracy: $\pm 5\%$
Resolution	1 mmHg

## I Physical Characteristic

Material	Urethane, PC
Weight	About 43 g
Dimensions	60 (H) X 75 (D) X 24 (W)
Display	OLED (96 X 39 Pixel)
Memory	Up to 200 readings

## I Environmental

Pressure Method	Micro pump
Transmission Method	BLE 4.0
Operating Temperature	10 °C ~ 40 °C
Operating Humidity	0% ~ 85%
Storage Temperature	-20 °C ~ 70 °C
Storage Humidity	10% ~ 85%

## I How to store and manage this product after use

- ① Do not store it near water.
- ② Do not store it under the influence of air pressure, temperature, humidity, wind or the like.
- ③ Be careful of the unstable state such as vibration and accidental impact including transportation.
- ④ Do not place it in an area used of chemicals-storing or gas-generating.

### | Classification of BP(Blood Pressure)

- ACC/AHA 2017 hypertension guidelines define categories of BP in adults as below.

Categories for BP in Adults\*

BP Category	Systolic BP		Diastolic BP
Normal	< 120 mmHg	and	< 80 mmHg
Elevated	120 ~ 129 mmHg	and	< 80 mmHg
Hypertension Stage 1	130 ~ 139 mmHg	or	80 ~ 89 mmHg
Hypertension Stage 2	≥ 140 mmHg	or	≥ 90 mmHg
Hypertensive crisis	> 180 mmHg	and/ or	> 120 mmHg

\* Individuals with Systolic BP and Diastolic BP in 2 categories should be classified into the higher BP category.

BP stands for blood pressure.

Blood Pressure should be measured on 2 or more occasions to be classified in a category.

Source: ACC/AHA 2017 High Blood Pressure Clinical Practice Guideline



#### Warning

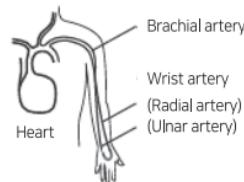
Never diagnose or treat yourself based on your readings. Always consult with your physician.

### | About wrist and upper arm blood pressure

- Normally, when measuring blood pressure, the blood pressure of the brachial artery is measured.

Because the arterial blood vessels of the wrist are connected to the upper arm, the wrist blood pressure is close to the upper arm blood pressure value and reflects the change of the upper arm blood pressure.

However, when there is circulatory disturbance such as arterial occlusion, the blood pressure of the upper arm and wrist may show significantly differences. Please consult with a specialist and hopefully you will be able to adjust your upper arm blood pressure.



### | The difference between wrist and upper arm blood pressure

There is approximately  $\pm 10$  mmHg difference between the measured values of the wrist and upper arm blood pressure when you are in a good condition. However, the blood pressure of the upper arm and wrist value may vary significantly immediately after excersing or bathing.

### | Wrist and upper arm blood pressure values in case of illness

Diabetes, hyperlipidemia, hypertension and the like promote atherosclerosis especially as the symptoms progress. It can develop into dangerous diseases such as stroke or myocardial infarction, and it can also cause arterial stenosis or periphera circulatory disorder.

In the case of those with such diseases, there may be a large difference between the wrist and the upper arm blood pressure value. (Even a healthy person may differ by as much as 20 mmHg if the measurement conditions are not appropriate, so please do not self-diagnose and follow the specialist's instructions.)

In addition, the difference between the wrist and upper arm blood pressure values may be influenced somewhat by one's physiological condition, but the blood pressure values measured on the wrist and the upper arm are generally the same.

Therefore, it is possible to confirm the tendency of the blood pressure to change by measuring the wrist blood pressure.

### | Daily life and wrist blood pressure

- In relation with meals generally there is no significant difference between the preprandial upper arm and wrist blood pressure as well as the postprandial one.

However, in case of entering a bath with a high water temperature, the blood pressure goes high due to the contraction of the blood vessels of the skin. On the other hand, when bathing slowly in lukewarm water, the peripheral blood vessels expand and the blood pressure goes down. At this moment, the blood pressure of the wrist tends to be lower than the blood pressure of the upper arm.

### | Differences in blood pressure according by posture

- There is a distinct blood pressure difference between lying down, sitting and standing.
- The blood pressure of the standing posture is about 5 mmHg higher than that of the lying down posture on diastole while the blood pressure of the lying down posture is 8 mmHg higher than that of the sitting posture.
- The blood pressure of legs-crossed is about 28 mmHg higher than that of the legs-spread posture.
- When you sit at a table without armrests and measure it, diastolic blood pressure is about 6 mmHg higher.
- According to statistics from several studies, there is a significant decrease in blood pressure in sitting posture (upright) and standing (standing) posture rather than in both upper and lower (lying) postures. This posture also affects blood pressure, but illness, stress and weight can also affect blood pressure. Undoubtedly, there is a difference in blood pressure by posture according to age. Young adults in 20s and 30s have little or no difference in blood pressure depending on their posture.

### | Why posture makes a difference in blood pressure

- Due to gravity pulling blood towards the legs and abdomen, the heart uses more force to pump blood to the head than them. On the other hand, in a supine posture since the head, abdomen, and legs are effected by the same gravity, it takes less force for the heart to pump blood to the head.
- If the position of the wrist is higher than that of the heart on measurement, the blood pressure result of the wrist can be measured lower than the same level of the wrist cuff as the heart.
- If you lean forward or sit on a desk, sofa and low table, pressure will be given to your abdomen. So then your blood pressure can increase because the wrist cuff position is lower than your heart.

**| Measured results at home vs. at the hospital**

- In some cases, the results of the blood pressure measured at home may be to the maximum extent of 20 ~ 30 mmHg lower than those of the blood pressure measured at the hospital because you feel nervous there. So, knowing your blood pressure results measured at home is needed.

**| It is higher than the figures at the hospital**

- Did you take your blood pressure medication?

If you measure your blood pressure after taking antihypertensive drugs in the morning, your blood pressure may be higher than the blood pressure measured at the hospital.  
This is called hypertension. Please consult with your physician.

- Is the position of the wrist cuff correct?

If the position of the wrist cuff is wrong, it is difficult to catch the signal from the artery and blood pressure is measured high.

Check the position of the wrist cuff.

- Did you lean over, or were you sitting cross legged when you measured?

If you lean forward, or sit on the edge of a desk or sofa, or on a low table, pressure may be applied to your abdomen or blood pressure may increase because the wrist cuff position is lower than your heart.

**I The measured results for each intraday measurement**

- Are you always measuring under the same conditions?  
Nonstop measuring of the blood pressure in one day is likely to give you different results, therefore it must be done under the same conditions. Ensure you are in the correct guided posture.
- Frequent measuring of your blood pressure is to give you different results, varying by the following factors.

- 1 hour after meals
- After drinking alcohol, coffee, tea
- After smoking
- After bathing
- After exercise
- After urination, bowel movement
- Speaking during a measurement
- When you are not resting, or have tension or anxiety
- When the room temperature suddenly changes
- When the measurement place or environment is different from normal

**| Pain and numbness by tightening the cuff**

This product needs to be tightened until the arterial blood flow is temporarily stopped. In such a case, you may feel pain or numbness. However, you will be ok when you take it off for a while.

**| Blood pressure management at home**

You can check the fluctuations of your daily blood pressure results by keeping track of them and your daily routine as well. And also, it is more helpful to consult with your physician.

**| A comparative measurement between a household upper arm blood pressure meter and this product on the wrist of the other arm**

There may be some differences in results from the two blood pressure meters at the same time even though the cuffs of the two blood pressure meters are at the same level as your heart. The reasons are as follows.

The blood pressure varies from time to time just as Table 1.

\*In general, blood pressures on both arms are not always the same: if the difference in blood pressures between two arms is significant, it is necessary to know the left and right arms blood pressure tendency by the alternate and several measurements of the two arms



Product name	Automated Electronic Sphygmomanometer
Model name	H2-BP
Product license number	17 - 4808
Product approval date	Oct. 26, 2017
Manufacturing number	Marked on product label
KC compliance certification number	R-CRM-CC1~4A017A0001
Warranty	One year from purchase date
Purchase date	
Packing unit	ea
Customer	Address:
	Name:
	Tel:
Distributor	
Manufacturer	Charmcare Co., Ltd.
Homepage	www.charmcare.com

※ Thank you for purchasing our product.

※ This product has passed strict quality control and rigorous inspection.

※ Charmcare is not responsible for loss of use or any indirect or incidental damages or any other losses.

## | Product Warranty

Manufacturing license number: 2130 Product License number: 17-4808

FDA Registered Establishment Number : 3006056594

Product Name: Automated Electronic Sphygmomanometer, Model Name: H2-BP

Packing unit: ea, Weight: 46 g

Internal battery: LI-ION POLYMER, 3.7 V, 160 mAh

Production from electrical shock: Internal power type product/BF type

Manufacturing number: Manufacturing date:

KC compliance certification number: R-CRM-CC1-4A017A0001 

Performance, usage and usage precautions: refer to user's manual 'Medical Product'

Manufacturer: Charmcare Co., Ltd.

Rm714, 2, Gasandigital1-ro, Geumcheon-gu, Seoul, 08591, Korea

LA-ENG-14 Rev.0(08.24.20) Tel: +82 70-4756-8355 Fax: +82 2-862-5065

Product Name: Automated Electronic Sphygmomanometer

User manual Rev.0(08.24.20)

User manual Rev.0(08.24.20)

Document Number:

FCC ID: 2AUYU-4A01

FCC Information to User

This equipment 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. This equipment 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 this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment 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.

**Caution**

Modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**FCC Compliance Information :** This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.