

Electronic Blood Pressure Monitor



HWA21 User Manual

Version: V1.0

Revision Date: 2022.5

CE 0482

Product Composition









The product is comprised of the host machine and the wrist cuff of Electronic Blood Pressure Monitor.

Application Scope

The Electronic Blood Pressure Monitor is used to measure the diastolic pressure, systolic pressure and pulse rate of adults by oscillometric method for diagnostic reference.


Safety Precautions

The warnings and illustrations shown in the User Manual enable you to use the product safely and correctly, thus preventing you and others from being injured, specifically as follows:

Legend, mark and meaning	
	Warning message
	Anti-electric shock degree is Type BF of the application part
	When the product life expires and the end users discard the products, send them to the designated collecting and separating place for disposal according to the requirements from the local environmental protection authority.
	Consult the instructions for use.
	This product complies with the MDD93/42/EEC requirements.
IP21	Degree of protection against the ingress of water.
	Information of manufacturer
	Date of manufacture
	Authorized European Representative

Quick Start Guide

Avoid smoking, eating, drinking caffeinated drinks or exercising for 30 minutes before taking measurement.

1. Sit upright in a chair with both feet on the floor.
2. Remove tight fitting clothing from your upper arm along with any thick clothing.
3. Pull on the end of the cuff until it wraps securely around your wrist. Place your arm on a table so that the wrist cuff will be at the same level as your heart.
4. The wrist cuff will automatically inflate and the measurement will start, upon pressing the “” button.



5. When the measurement is complete, the wrist cuff will automatically deflate and your systolic and diastolic pressure values and pulse rate will be displayed.



Overview

Monitor

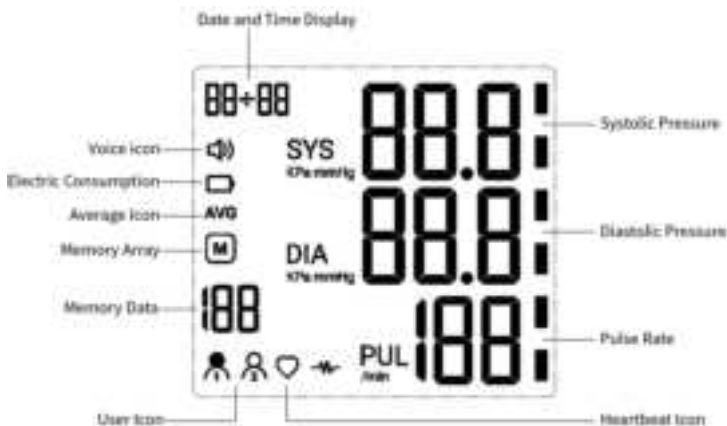


Features

- Universal Cuff
- Irregular Heartbeat Detector

- 199 Readings * 2 Users and No Readings*the Guest
- Auto-off Power Saving Feature
- Operated by 2*AAA batteries

Display



Packing List

No.	Name	Quantity
-----	------	----------

1	Electronic Blood Pressure Monitor	1
2	Wrist Cuff	1
3	Dry Battery (AAA)	2
4	User Manual	1
5	Zippered Carrying Bag	1


Preparation

2.1 Battery Installation

- a) Open the battery cover as shown in the picture.
- b) Place 2*AAA dry batteries. Pay attention to the battery electrode indication.



2.2 Battery power indication and replacement

After the product is turned on, if low power symbol  appears on the screen, the measurement cannot be performed, and the battery must be replaced.



Do not use any expired battery;



If the product is not used for over 3 months, please take out the batteries.


2.3 Cuff

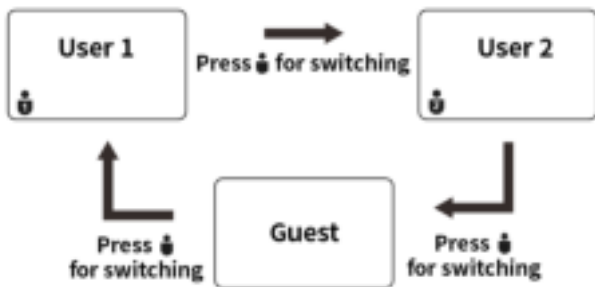
The applicable wrist circumference range of the cuff is 13.5-19.5cm

Function Setting Mode


3.1 User mode



Switch between “User 1” 、 “User 2” and “Guest” can be processed in the “OFF” state or upon the measurement completion, by short press on the

“User  ” button.





3.2 Year/Month/Date/Time setting

In the “OFF” state, enter the setting mode by long press on the “User  ” button over 3s.



After entering the “Year” setting mode, the flashing 20XX will show on the screen. Press the “Memory  ” button, the “Year” value can be setting. Press the “User  ” button for “Year” value confirmation and

move to the “Month” setting mode.




After entering the “Month” setting mode, 1-01 will flash on the screen.

Press the “Memory  ” button, the “Month” value can be setting. Press the “User  ” button for “Month” value confirmation and enter the “Date” setting mode.

After entering the “Date” setting mode, 1-01 will flash on the screen.




Press the “Memory  ” button, the “Date” value can be setting. Press the “User  ” button for “Date” value confirmation and enter the “Time” setting mode.

After entering the “Time” setting mode, XX:XX will flash on the screen.

Press the “Memory  ” button, and the “Hour” value can be setting. Press the “User  ” button for “Hour” value confirmation and enter the “Minute” setting mode. Press the “Memory  ” button, and the “Minute” value can be setting.



3.3 Unit setting

Either mmHg or KPa will show up on the screen, upon entering the “Unit” setting mode, by pressing the “User  ” button. Display of mmHg indicates that the mmHg unit is selected; display of KPa indicates that the kPa unit is selected. Unit will be switched upon every press on the “Memory  ” button. After the unit is selected, press the “User  ” button again to save the unit setting.



3.3 Talking function setting (voice version only)

The device has an independent voice switch function. When the voice switch is dialed to the voice symbol, the voice broadcast function is opened, and the voice icon on the display screen is displayed. Otherwise, when the voice switch is dialed to the no-voice symbol, the voice broadcast function is turned off.



Correct Method of Use

4.1 How to use the wrist cuff

(1) The palm up, please put the wrist band directly on the exposed wrist, ensure that the sphygmomanometer is located on the same side of the palm, the wrist band close to the skin and roll up, do not roll the cuff of the clothes in the wrist band. As shown on the right.



(2) The wristband was tied to the naked wrist, so that the lower edge of the wristband ring is about 1 to 2 cm from the lowest point of the palm, and the measurable wrist range of the wristband is 13.5~19.5cm. As shown on the right.





(3) Grab the end of the wristband and stick the velcro, pull against the wrist and roll it up, elastic for comfort. As shown on the right.




(4) Stand up and sit properly and don't lean forward or bend; After 3-4 deep breaths before the measurement, restore natural breathing, relax the shoulders and arms, and relax the whole body;

(5) When measuring, the middle of the wristband was consistent with the heart height, and the body and wrist could not shake. To do this, it is recommended to use a soft pad on the outside of the lower arm.

 Do not press the on / off key button before holding the wrist cuff;


 If you cannot place the wrist cuff on your left wrist, please measure it with the right wrist;

 If all the cloth of the wristband buckle is not fastened, measure the pressure is easy to release, affecting the measurement results, please fasten the wristband properly.

Note: If you cannot use the left arm for measurement, please use the right arm for measurement. All the measurements must be performed on the same arm for comparison.

4.2 Starting measurement

Power on state, after you wear the wrist cuff correctly, then you can start the measurement:


(1) Press the “Power  ” button, and the device will return to zero automatically, the air pump will start to inflate the wrist cuff, and the screen will display the change of the pressure in the wrist cuff.

(2) When reaching the stable pressure upon inflation, the air pump will stop the inflation, and the pressure in the wrist cuff will be reduced gradually and displayed on the screen. If the inflated pressure is insufficient, the device will reinflate the wrist cuff automatically for a



higher pressure;

(3) When the pulse is measured, the screen will display the “heart” symbol and start flashing. The flashing “heart” symbol will be displayed on the screen.



(4) Upon measurement completion, the measured values of systolic pressure, diastolic pressure and pulse will be displayed on the screen.

(5) The screen will continue to display the measurement results, unless you press on the “Power  ” button to turn off the device. If there is no operation, the device will be powered off automatically in 30s.

4.3 Using memory function

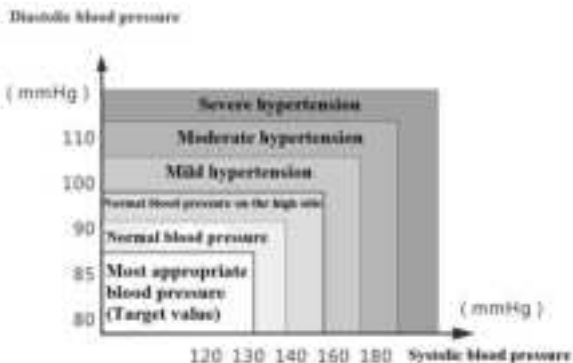
This blood pressure monitor is available for 2 users with 199 memories per user, and the guest mode does not save the measurement data. If the 199 groups of memory data are full, they will be replaced automatically. After the blood pressure monitor has been used for several times, in the OFF state, you can press the “Memory  ” button to display the latest measurement result, and track the rest data one by one via pressing the “Memory  ” button.

4.4 Clearing stored measurement data

In the shutdown state, long press the "Memory  " key for 3 seconds, and then long press the "User  " key for 3 seconds until "ALL" is displayed in the high-voltage area and "EE" is displayed in the low-voltage area, thus all of the memory values of the current user are deleted.


4.5 Classification standard for blood pressure condition


There is no definition of hypotension yet. Generally, if the systolic blood pressure is less than 100mmHg (13.3kPa), it is hypotension.



Contraindications, Precautions, Warnings and Prompt Instruction

(1) Warning:

Keep the device out of the reach of the children under 12 and people who can't express their intention. When children of 12~18 use the  device, they should be accompanied by the adults. Pregnant women shall use under the guidance of doctors.

 Do not wrap the wrist cuff over a wound, as this can cause further injury.

This model of Electronic Blood Pressure Monitor is suitable for the wrist circumference range of 13.5-19.5cm, and if the wrist



circumference exceeds this range, you might fail to obtain the correct measured value of blood pressure;

This model of Electronic Blood Pressure Monitor is not suitable for newborns or young children;



The blood pressure is constantly changing. You shall not judge



the blood pressure condition with just one measurement result.



The repeated measurement data over a period of time will be

more reliable;

Do not make self-diagnosis according to the measurement results. Please consult your professional doctor with the measurement result record(s). The treatment based on the self-diagnosis of measurement results is very dangerous;



(2) Precautions:



Do not repair, disassemble or modify the Electronic Blood Pressure Monitor without permission;



Do not collide or drop the host to avoid collision or strong impact on the device;

Do not mix old and new batteries of different brands for use.

Indoor temperature, environment, noise, user's body position, speech or exercise might affect the blood pressure measurements. The body movement, magnetic field and improper wearing of wrist cuff and sensor will affect the measurement as well.

Abnormal phenomena and handling

* When the measurement is abnormal, the following symbols will appear. Please use the correct method for measurement.



LCD display information	Reason / Meaning
Err is displayed in the high-pressure area, 1 is displayed in the low-pressure area	The leakage is too fast or the pulse signal is too weak. Please check the cuff, tie it up and try again
Err is displayed in the high-pressure area, 2 is displayed in the low-pressure area.	The blood pressure signal cannot be detected due to too much noises. Please remove the noise sources and measure again




Err is displayed in the high-pressure area,	The test result is abnormal. Please measure again
---	---

3 is displayed in the low-pressure area	
Err is displayed in the high-pressure area, P is displayed in the low-pressure area.	The inflation fails. Please check the cuff, tie it up and try again.
HI is displayed in the low-pressure area	The inflation pressure is greater than 307 ± 8 mmHg ($41 \text{ kPa} \pm 1 \text{ kPa}$), Please measure again.

*Trouble shooting

Abnormal phenomenon	Item to be checked	Measure
No display by pressing the power switch	Check whether the battery level is low	Replace the batteries with new ones .
	Are the positive and negative poles of the batteries reversed?	Install in accordance with the positive and negative poles of the batteries
Multiple measurement failures or abnormally high (or low) measurements	The wrist cuff does not remain level with the cardiac position	Measured with the correct posture
	The wrist cuff is not rolled	Roll the wristband correctly
	Talk or move the arm during the measurement	Keep quiet, relax your body, and re-measure
	The rolled up clothes	Unruffling the arm

	pressed on the arms	and remeasure
No pressure	The wrist cuff is not well connected and there is an air leak	Please entrust repair
	The wristband was damaged over age	Please buy a new product
The wrist cuff is exhaust for a short time	Is the wrist cuff wrapped too loose?	Please wrap the wrist cuff properly
Sudden power-off during compression	Not used for long periods, the dry battery is energy exhausted due to temperature changes	Replace the new battery
Error display, unable to measure	Whether your arm is moved when you apply pressure	Keep your arms and body free from random movements
	Whether you talks in the course of measurement	Keep quiet and measure blood pressure
The equipment was normal, but the results varied from each measurement	Both the mental status and the time of measurement will cause changes in blood pressure values	Please measure it in a quiet state after taking a deep breath Note: Blood pressure is dynamic, so there will be some differences between each measurement.
 If blood pressure still cannot be measured normally with the above method, please contact the distributor and do not disassemble it by yourself!		

Storage & Maintenance

- Keep the device away from direct sunlight, extreme temperatures, humidity or moisture.
- Use a dry, soft cloth to clean the device, or if desired, use a cloth lightly dampened with water.
- Do not use corrosive cleaner, benzene, thinner or other volatile liquids to clean the device.
- Do not wash or expose the wrist cuff to liquid.
- Remove batteries from the device when it will not be used for more than 3 months.

Disinfection:

Recommended disinfecting agent:

- Isopropanol solution with 70% concentration
- Medical alcohol with 75% concentration

Specifications

Product Name	Electronic Blood Pressure Monitor	
Model	HWA21	
Display Mode	Digital display mode	
Measuring Mode	Oscillographic method	
Measuring Body Part	Wrist	
Measuring Range	Pressure value	0-295mmHg(0kPa-39.3kPa)
	Pulse value	40-199 pulse beats/min
Static measurement accuracy	Pressure value	$\pm 3\text{mmHg}(\pm 0.4\text{kPa})$
	Pulse value	$\pm 5\%$ of read value
LCD display	Pressure	Unit : mmHg/ kPa
	Pulse	Pulse rate per minute, displaying three digits
Storage capacity	It can store 199 groups of measurement data for each of user one and user two, and the guest does not save measurement data	
Power supply	2*AAA dry batteries	
Power Off Mode	Manual power-off/ Auto power-off	
Device weight (without batteries)	About $115.2 \pm 5\text{g}$	

Monitor Size	86mm (length) *61mm (width) * 24mm (height)		
Screen Size	41mm (length) *41mm (width)		
Wrist cuff	measured wrist circumference 13.5-19.5cm		
Annexure	User Manual, Dry battery, Zipped Carrying Bag		
Battery Life	High-performance dry battery can be used for about 300 times at normal temperature		
Service Life	5 years		
Date of Production	See label		
Operating environment	Temperature Condition	5 °C -40 °C	If the device is stored and used in the environment out of the designated temperature & humidity ranges, it cannot operate normally.
	Humidity Condition	15%-85 %RH	
	Atmospheric Condition	70kPa-106kPa	
Transportation and	Avoid strong impact, direct impact, exposure or		

Storage Environment	rain during transportation. The packaged Blood Pressure Monitor shall be stored indoors at the temperature of -20℃~55℃ and the relative humidity of 10%~93%, atmospheric Condition: 70kPa-106k, without corrosive gas and with good ventilation.
---------------------	--

FCC Compliance Statements

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.

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

the equipment.

US Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End user must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

After-sale Service

After-sale service unit: Shenzhen Jumper Medical Equipment Co., Ltd.

Address: D Building, No. 71, Xintian Road, Fuyong Street, Baoan,
Shenzhen, Guangdong, China

Tel: +86-755-26696279

Fax: +86-755-26852025

E-mail: info@jumper-medical.com

Website: www.jumper-medical.com

Authorized European Representative:



MedPath GmbH

Mies-van-der-Rohe-Strasse 8, 80807 Munich,
Germany

JUMPER



Shenzhen Jumper Medical Equipment Co., Ltd.

Address: D Building, No. 71, Xintian Road, Fuyong Street,
Baoan, Shenzhen, Guangdong, China

Tel: +86-755-26692192, 26696279

Fax: +86-755-26852025

E-mail: info@jumper-medical.com

Website: www.jumper-medical.com

Postal Code: 518103