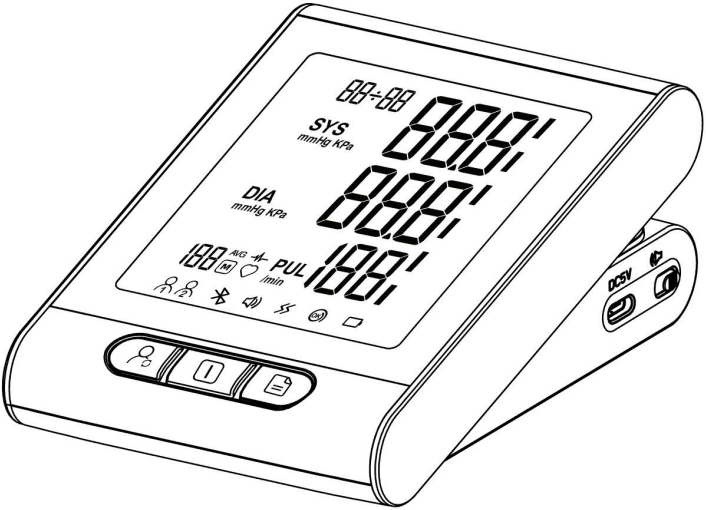
Bluetooth Electronic Blood Pressure Monitor



HAA11 User Manual

Version: V1.0

Revision Date: 2023.10

CE 0482

Product Composition

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

Intended use

The Electronic Blood Pressure Monitor is intended to measure the systolic and diastolic blood pressure as well as the pulse rate of adult person via non-invasive oscillometric technique at medical facilities or at home.

FCC ID:2ADYL-HAA11

Safety Precautions

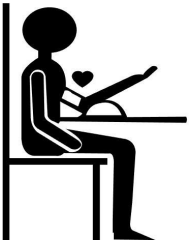
The warnings and illustrations shown in the User Manual enable you to use the product safely and correctly, thus preventing you and others from being injured, specifically as follows:

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.
CE 0482	This product complies with the MDD93/42/EEC requirements.
IP21	Degree of protection against the ingress of water.
	Information of manufacturer
	Date of manufacture
EC REP	Authorized European Representative

Quick Start Guide

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

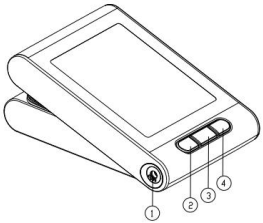
1. Sit upright in a chair with both feet on the floor.
2. Remove tight fitting clothing from your upper arm along with any thick clothing.
3. Pull on the end of the cuff until it wraps securely around your upper arm. Place your arm on a table so that the cuff will be at the same level as your heart.

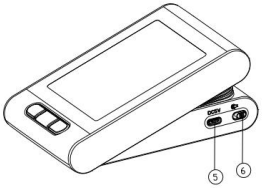


4. The cuff will automatically inflate and the measurement will start, upon pressing the "⏻" button.
5. When the measurement is complete, the cuff will automatically deflate and your systolic and diastolic pressure values and pulse rate will be displayed.

Overview

Structure





①Air Jack

②User Button

③Power Button

④Memory Button

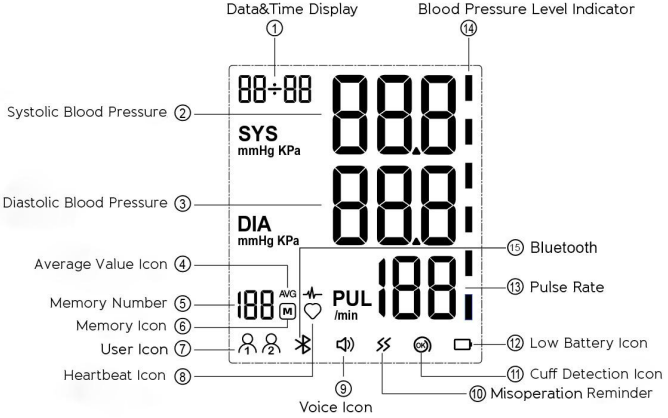
⑤USB External Power Supply Interface

⑥Volume Switch

Features

- **Dual users and guest mode**
- **199 Readings * 2 Users**
- **Voice Reminder Function**
- **Average Of Last 3 Readings**
- **Irregular Heartbeat Detector**
- **Auto-off Power Saving Feature**
- **Operated by 4 AA Batteries (USB 5V optional)**
- **Universal Cuff**

Display



Packing List

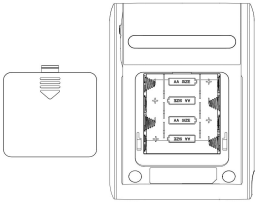
No.	Name	Quantity
1	Electronic Blood Pressure Monitor	1
2	Cuff	1
3	Dry Battery (AA)	4
4	User Manual	1
5	Zipped Carrying Bag	1

Preparation

2.1 Battery Installation

a） Open the battery cover as shown in the picture.

b） Place 4 AA 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;

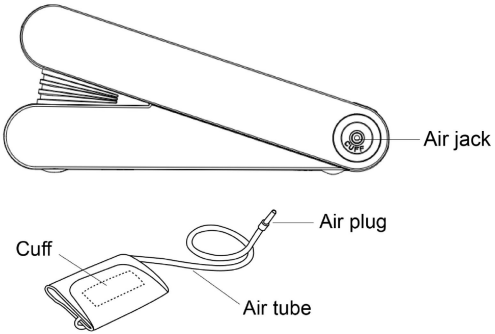
If the product is not used for over 3 months, please take out the batteries.

2.3 USB Power Supply

USB line can be connected for power supply of the product without battery.

2.4 Cuff

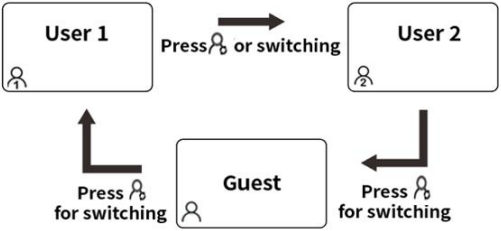
The applicable arm circumference range of the cuff is 22-36cm or 22-42cm.



Connection: Insert the air plug of cuff air tube into air jack of the Electronic Blood Pressure Monitor. Figure as shown above.

3.1 User mode

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



(**Note:** In the shutdown state, press “User” button to view the current time and the current user)

3.2 Year/Month/Date/Time setting

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

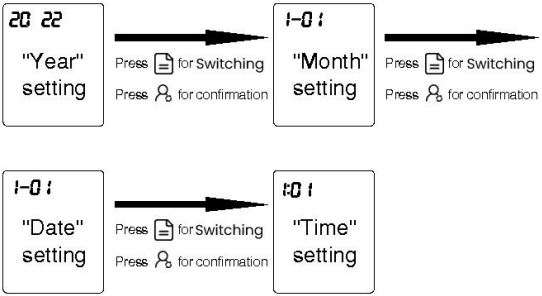
After entering the “Year” setting mode, 20XX will flash on the screen. Press the “Memory” button, and the value will be incremented among 2019 and 2039. Press the “User” button for “Year” value confirmation and move to the “Month” setting mode.

After entering the “Month” setting mode, 1-1 will flash on the screen. Press the “Memory” button and the value will be incremented among 1 and 12. Press the “User” button for “Month” value confirmation

and enter the “Date” setting mode.

After entering the “Date” setting mode, 1- 1 will flash on the screen. Press the “Memory” button and the value will be incremented among 1 and 31. Press the “User” button for “Date” value confirmation and enter the “Time” setting mode.

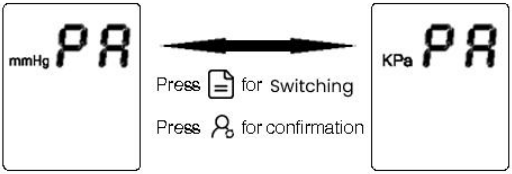
After entering the “Time” setting mode, XX:XX will flash on the screen. Press the “Memory” button, and the “Hour” value can be setting. Press the “User” button for “Hour” value confirmation and enter the “Minute” setting mode. Press the “Memory” button, and the “Minute” value can be setting.



3.3 Unit setting

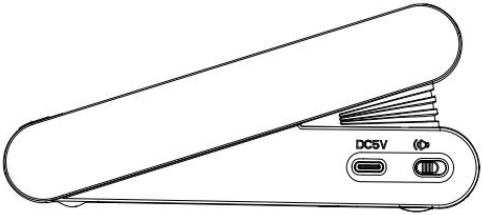
Either mmHg or KPa will show up on the screen, upon entering the “Unit” setting mode by pressing the “User” button (after the “Minute” setting mode). Display of mmHg indicates that the mmHg unit is selected; display of KPa indicates that the kPa unit is selected. Unit

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.



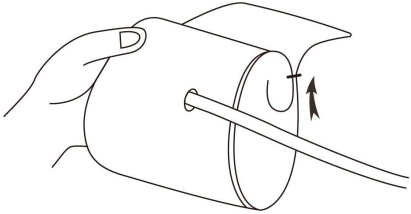
3.2 Talking function

The talking function can be turned on/off by toggling the voice switch button on the left side of the device. The voice icon will be displayed on the screen when the voice is on, and will disappear when the voice is off. The switch button is shown as below:

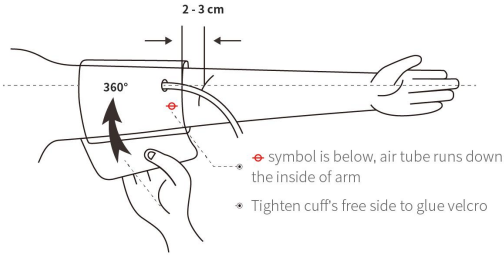


4.1 How to use the cuff

(1) Place the cuff flat on the table, leave the hook & loop downwards, and pass the end of cuff through the metal ring to form a loop. The hook & loop shall point outwards.

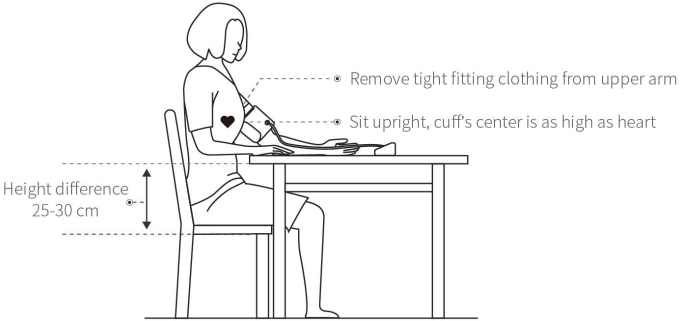


(2) Pull the cuff through the upper arm to be measured, and wear the cuff correctly based on the downward icon “ Φ ”, the air tube runs down the inside of your arm. Hook up the cuff on the upper arm according to the illustration, ensure that the lower edge of cuff is 2~3cm away from the elbow joint. Tighten the free edge of cuff to stick the hook & loop.



(3) The cuff should be wrapped on the upper arm comfortably, with tight space for two fingers. Before measurement, remove tight fitting clothing from your upper arm along with any thick clothing.

(4) Place the lower arm flat on the desktop, leaving the center of palm naturally upwards, sitting upright, and ensuring the center of cuff and the heart are at the same level. Note that the tube of cuff cannot be folded or bent.



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 cuff correctly, the "cuff detection icon (OK)" lights up, 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 cuff, and the screen will display the change of the pressure in the cuff.

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

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

Note:

(1) When the icon shows up, it means body movements during the measurement, which may result in incorrect measurement.

(2) Irregular heartbeat symbol appears in the result when irregular rhythm is detected 2 or more times during a measurement. If it continues to appear, we recommend you to consult with and follow the directions of your physician. (An irregular heartbeat rhythm is defined as a rhythm

that is 25 % less or 25 % more than the average rhythm detected while your monitor is measuring blood pressure)

(3) If you suffer from an irregular heartbeat, measurements taken with this device should be evaluated with your doctor.

4.3 Using memory function

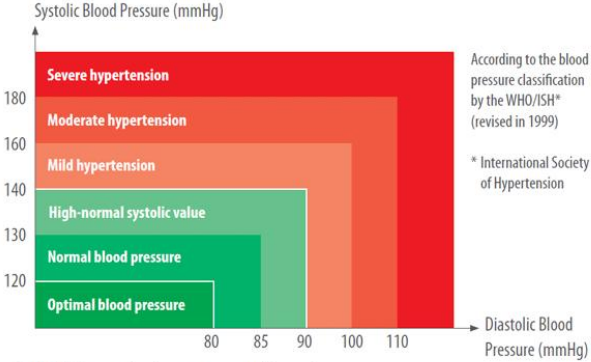
This blood pressure monitor is available for 2 users with 199 memories per user(The data of guest mode is not stored). If the 199 groups of memory data are full, they will be replaced automatically. After the blood pressure monitor has been used for several times, in the OFF state, you can press the “Memory ” button to display the latest measurement result, and track the rest data one by one via pressing the “Memory” button. When there are over 3 measurement data, press “Memory” button for the average values of the latest 3 measurement data, recorded as “3 AVG”. Track the memory data by pressing “Memory” button from the latest measurement, recorded as “ 1 M”. Then track “ 2 M ”, “ 3 M ” or more via the same operation.

4.4 Clearing stored measurement data

In the off state, long press the "Memory" and "User" button at the same time for 3 seconds until "ALL"and" EE" are displayed on screen, thus all of the memory values 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 90mmHg (12kPa), it is hypotension.



WHO/ISH standard most commonly used.

There is no real definition of hypo-tension (too low blood pressure)

Contraindications, Precautions, Warnings & 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 cuff over a wound, as this can cause further injury.

⚠ This model of Electronic Blood Pressure Monitor is suitable for the arm circumference range of 22-36cm or 22-42cm, and if the arm 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 cuff and sensor will affect the measurement as well.

Troubleshooting

* If you have troubles using the device, please check the following instruction.

Problem	Possible cause	How to correct
No display when press the Power button	Low battery	Replace new batteries or use the USB for power supply.
	The polarities of batteries are installed wrongly.	Install the batteries in correct polarities.
No pressurizing	The air plug is loosely installed.	Make sure the air plug is securely inserted in the main unit
	The air tube is broken or leaked.	Purchase a new cuff.
The cuff leaks	The cuff wrapped too loose	Please tighten the cuff
	The cuff is broken	Replace with a new cuff
“Er 1” displayed	The leakage is too fast or the pulse signal is too weak	Please check the cuff, tie it up and try again
“Er 2” displayed	The blood pressure signal cannot be detected due to too much noises.	Please remove the noise sources and measure again

“ Er 3 ” displayed	The result of blood pressure is abnormal.	Please remeasure in the right way.
“Er P” displayed	The inflation fails	Please check the cuff, tie it up and try again.
“HI” displayed	The inflation pressure is greater than 295 mmHg (39kPa)	Please measure again.
⚠ **Note: If your problem cannot be solved by the above, please contact customer service. Do not disassemble the device!**		

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 arm 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	Bluetooth Electronic Blood Pressure Monitor	
Model	HAA11	
Display mode	Digital display mode	
Measuring mode	Oscillographic method	
Measuring body part	Upper arm	
Measuring range	Pressure value	0-295mmHg（0kPa-39.3kPa）
	Pulse value	40-199 pulse beats/min
Static measurement accuracy	Pressure value	±3mmHg（±0.4kPa）
	Pulse value	± 5% of read value
LED 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 user, and the data of guest mode is not stored	
Power supply	4 AA dry batteries /DC 5V USB external power supply	
Power off mode	Manual power-off / Auto power-off	
Device weight	About 346g(without batteries)	

Monitor size	147mm (length)*108mm (width)*62.7mm (height)
Screen size	91mm (length) *77mm (width)
Cuff	Upper-arm-type cuff (measured arm circumference 22-36cm or 22-42cm)
Annexure	Cuff, 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	The packaged blood pressure monitor shall be operated indoors at the temperature of 5℃~40℃ and the relative humidity of 15%~85%, atmospheric condition: 70kPa~106kPa. If the device is stored and used in the environment out of the designated temperature & humidity ranges, it cannot operate normally.
Transportation and storage environment	Avoid strong impact, direct impact, exposure or 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-106kPa, without corrosive gas and with good ventilation.

EMC Information-Guidance and Manufacture's Declaration

1* WARNING: Use of this equipment adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, this equipment and the other equipment should be observed to verify that they are operating normally."

2* WARNING: Use of accessories, transducers and cables other than those specified or provided by the manufacturer of this equipment could result in increased electromagnetic emissions or decreased electromagnetic immunity of this equipment and result in improper operation."

3* WARNING: Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of the ME equipment, including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result."

Table 1

declaration - electromagnetic emission	
Emissions test	Compliance
RF emissions	Group 1

CISPR 11	
RF emissions CISPR 11	Class B
Harmonic emissions IEC 61000-3-2	Not applicable
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Not applicable

Table 2

declaration - electromagnetic immunity		
Immunity test	IEC 60601 test level	Compliance level
Electrostatic discharge (ESD) IEC 61000-4-2	±8 kV contact ±2 kV, ±4 kV, ±8 kV, ±15 kV air	±8 kV contact ±2 kV, ±4 kV, ±8 kV, ±15 kV air
Electrical fast transient/burst IEC 61000-4-4	± 2 kV for power supply lines ± 1 kV for input/output lines	Not applicable
Surge IEC 61000-4-5	± 0.5kV, ± 1 kV line(s) to lines ± 0.5kV, ± 1 kV, ± 2 kV line(s) to earth	Not applicable

Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	0 % UT; 0.5 cycle At 0°, 45°, 90°, 135°, 180°, 225°, 270°and 315° 0 % UT; 1 cycle and 70 % UT; 25/30 cycles Single phase: at 0° 0 % UT; 250/300 cycles	Not applicable
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	30 A/m	30 A/m
NOTE: UT is the a.c. mains voltage prior to application of the test level.		

Table 3

declaration - electromagnetic immunity		
Immunity test	IEC 60601 test level	Compliance level
Conducted RF IEC 61000-4-6	3 V 0.15 MHz to 80 MHz 6 V in ISM bands between 0.15 MHz and 80 MHz	Not applicable
Radiated RF IEC 61000-4-3	10V/m 80 MHz to 2.7 GHz	10V/m

Table 4

declaration - IMMUNITY to proximity fields from RF wireless communications equipment					
Immunity test	IEC60601 test level				Compliance level
	Test frequency	Modulation	Maximum power	Immunity level	
Radiated RF IEC 61000-4-3	385 MHz	**Pulse Modulation: 18Hz	1.8W	27 V/m	27 V/m
	450 MHz	*FM+ 5Hz deviation: 1kHz sine	2 W	28 V/m	28 V/m
	710 MHz 745 MHz 780 MHz	**Pulse Modulation: 217Hz	0.2 W	9 V/m	9 V/m
	810 MHz 870 MHz 930 MHz	**Pulse Modulation: 18Hz	2 W	28 V/m	28 V/m
	1720 MHz 1845 MHz 1970 MHz	**Pulse Modulation: 217Hz	2 W	28 V/m	28 V/m

	2450 MHz	**Pulse Modulation: 217Hz	2 W	28 V/m	28 V/m
	5240 MHz 5500 MHz 5785 MHz	**Pulse Modulation: 217Hz	0.2 W	9 V/m	9 V/m
Note* - As an alternative to FM modulation, 50 % pulse modulation at 18 Hz may be used because while it does not represent actual modulation, it would be worst case. Note** - The carrier shall be modulated using a 50 % duty cycle square wave signal.					

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

E-mail: info@jumper-medical.com

Website: www.jumper-medical.com

Postal Code: 51810

Authorized European Representative

EC REP

MedPath GmbH

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

JUMPER

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