

ibiomedi

Electronic Stethoscope Patch

ES-Patch

User' s Manual

Version : V1-4



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Electronic Stethoscope Patch

Please read the original instruction manual carefully before use and follow the instructions
Model : ES-Patch

1. Product Description

This product's electronic stethoscope patch is a wireless heart and lung sound electronic stethoscope. It is transmitted through wireless Bluetooth with the Apple iOS application, providing a wireless, comfortable and intelligent measurement experience. And built-in Active Noise Cancellation (ANC) function, reduce the impact of ambient sound, improve sound quality.

2. Statement

This product is not intended to replace the advice of a professional physician. If you have any doubts about the measurement results, please consult your professional physician.

3. Product Usage

This product is a general hospital medical device that can instantly display and detect sounds related to the heart, arteries, veins, lungs, and other internal organs, and can be used for long-term monitoring of any patient undergoing physical examination.

3.1 User Background

This product is specially designed for Stethoscope by medical personnel. This instruction manual provides the necessary information so that the user can operate the stethoscope without additional training.

3.2 Indications for Use

There are no known contraindications for ES-Patch, although care should be taken when considering using the device according to the warnings and precautions below.
ES-Patch is not life-supporting or life sustaining.

4. Safety Information

Please read, understand and follow all safety information instructions in this manual before using this product. Please keep this operation manual for future reference.

4.1 Symbol Description

Description of safety related labels and signs	
	Warning.
	Please refer to the instruction manual.
	Type BF (Body Floating) instrument label: This instrument provides protection against electric shock and leakage. The applied part is a complete chest piece with diaphragm.
	This product is subject to ambient temperature limitations.
	This product contains electrical and electronic components and must not be disposed of using standard refuse collection. Please consult local directives for disposal of electrical and electronic equipment.
	This product uses Bluetooth wireless transmission.
	Please try to avoid contacting this product with object that contains static electricity.
	Keep product away from moisture.
RX only	Federal (USA) law restricts this device to sale to or on the order of a clinician.
IP24	Protection class. 2: Dustproof grade 4: Waterproof grade
	This product is FCC certified for RF radiation.

Description of word signs	
NOTICE	It suggests to pay attention to the situation. If not avoided, it may cause property loss or damage.
WARNING	It suggests that the situation is dangerous. If not avoided, it may cause minor injuries and/or property loss or damage

4.2 Precautions

Precautions

- ◎ Keep this product away from direct sunlight, flammable materials and environments with high temperature and humidity.
- ◎ Do not modify the design of this product arbitrarily. Please have the product repaired by authorized service personnel. Any improper modification or maintenance shall be borne by the user as a result of the modification.
- ◎ This product is not safe to use in the MRI environment. Do not use this product in a MRI environment.
- ◎ Do not wear the device for bathing or swimming.
- ◎ Do not immerse the product in liquid, or immerse it in any disinfectant, it may cause damage to the device.
- ◎ This product should not be used close to or stacked on other instruments.
- ◎ In order to avoid affecting the medical electrical equipment, this product has the function of Bluetooth wireless communication. It is recommended to keep a safe distance of 30 cm for the electronic medical equipment that should be avoided.
- ◎ Pay attention to whether the charging induction pin on the charging base is short-circuited. Damage to the charging cradle or USB charging device may result.
- ◎ This product has been tested and found to comply with FCC RF exposure guidelines and may not be guaranteed to comply with FCC RF exposure guidelines when used with accessories that contain metal.

4.3 WARNING

WARNING

- ◎ When using this product for the first time, please attach it for 20 minutes. If there is any allergic reaction or any discomfort, please remove it immediately, please consult your professional physician.
- ◎ In order to reduce unknown problems, please do not use the electronic patch stethoscope on the patient for more than 12 hours.
- ◎ When using the electronic patch stethoscope, please avoid wounds, inflamed or infected areas. Apply it only to intact and clean skin.
- ◎ Do not swallow and store this product in a place that is not easily accessible to children.
- ◎ To reduce the risk of incorrect results, personal injury and equipment damage, please follow the recommended instructions in this manual for storage and operation of this product.
- ◎ To reduce the risk of electric shock, do not use this product on the patient if the Stethoscope patch is damaged in any way.
- ◎ To reduce the risk of damage to the Stethoscope head, do not let the Stethoscope head close to strong sound sources.
- ◎ To reduce the risk of infection, please follow the cleaning instructions in the manual to set up and follow a cleaning plan.
- ◎ In order to reduce the risk of extremely strong magnetic fields, when using this product, please avoid close to strong RF signals or portable and/or mobile RF devices. If you hear sudden or unexpected sounds, keep away from any radio transmitting antennas.
- ◎ Do not touch the USB charging socket of this product with metal objects or conductors.
- ◎ This product is not suitable for residential environments as it may not provide adequate protection against radio reception in this environment.

5. Usage Notice

Clean the electronic Stethoscope patch with a 75% medical alcohol wipe before starting the measurement and after the measurement.

The electronic Stethoscope patch can be fixed to different Stethoscope positions on the patient through commercially available medical adhesive materials, and the noise-cancelling microphone in the patch can reduce ambient noise and sound feedback. Stream audio to Apple iOS apps via wireless Bluetooth, and store digitized audio as audio files.

Remind patients that if the skin becomes itchy or allergic during wearing, they should remove the electronic patch stethoscope and consult a physician.

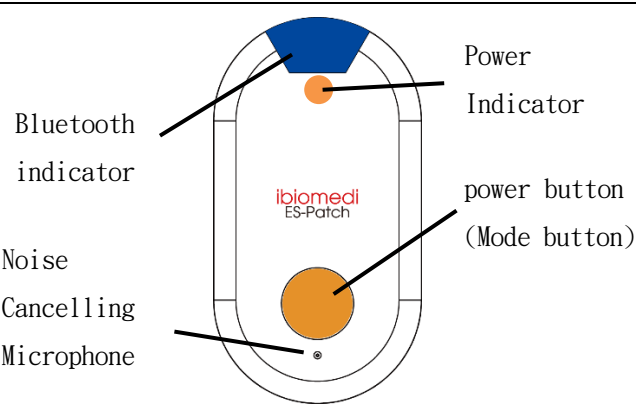
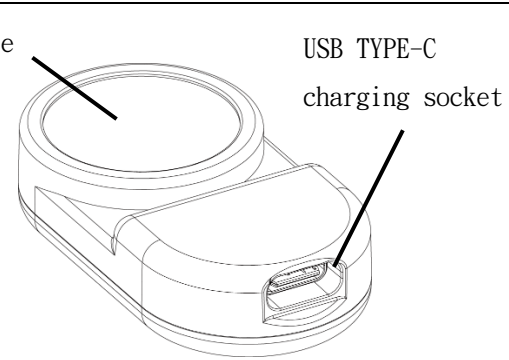
If the patient has no skin or other discomfort, the electronic patch stethoscope should not be removed from the body to avoid incomplete records.

NOTICE: In order to provide smooth operation of the APP, it is recommended to download and use the latest iOS application system for mobile devices.

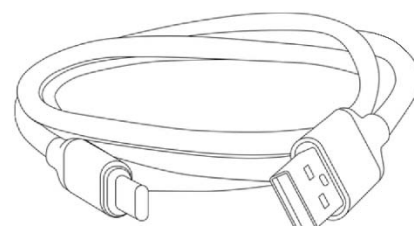
The ideal remote monitoring range is within 5 meters from the mobile device. Remote monitoring is affected by factors such as obstacles, the performance of the mobile device, and the position of the product attached to the human body.

6. Product components

Host :

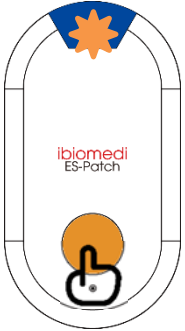
ES-Patch Electronic stethoscope patch	
	
NOTICE: It is recommended to clean the device with a 75% alcohol pad before each use.	

USB TYPE-C charging cable :

TYPE-C charging cable

NOTICE: This USB TYPE-C cable is for charging only.

7. Instructions

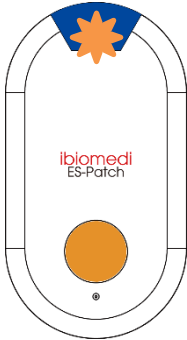
7.1 On/Off mode



Turn on: lightly press the button for 1.5 seconds, the orange light is always on and power on.

Stand-by: Press the button for 1.5 seconds in the power-on state, the orange light will be off and the machine will be turned off.

7.2 Light display



The power indicator light is solid orange: the power is sufficient.

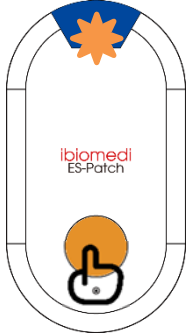
The power indicator flashes orange quickly 3 times: the power is insufficient.

NOTICE: After that, it flashes 3 times every 300 seconds.

The power indicator light orange slowly flashes 6 times: low battery, ready to shut down.

No power indicator light: no power to charge or damage.

7.3 Frequency response mode



It is full frequency mode when it is turned on;

When you tap the power button once, the power indicator light flashes twice slowly and switches to heart sound mode;

When you tap the power button again, the power indicator flashes slowly three times, and it switches to lung sound mode;

When you tap the power button again, the power indicator flashes slowly once, and switches to full frequency mode;

Repeat the above steps to switch the frequency response mode.

The sequence is: full frequency mode→heart sound mode→lung sound mode.

Users can choose from three different frequency response modes.

Full frequency mode: It can amplify the sound whose frequency is within 1200Hz.

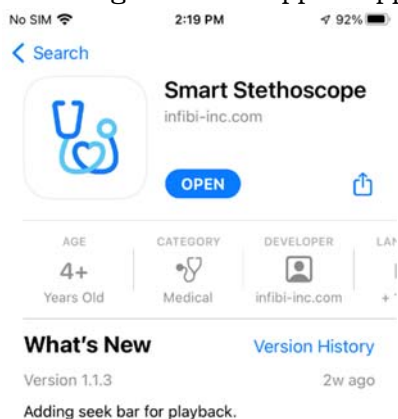
Heart sound mode: It can amplify and emphasize the sound in the frequency range of 20~200Hz.

Lung sound mode: It can amplify and emphasize the sound in the frequency range of 100~1000Hz.

8. APP Instructions

8.1 Download and install APP

Please go to the Apple App Store and search for "Smart Stethoscope" to download the APP.



8.2 Turn on bluetooth and bind with mobile device.

When the product is turned on, when the Bluetooth indicator keeps flashing, it means that the Bluetooth has been turned on;

Turn on Bluetooth on the mobile device to search for the device name (ES-Patch) of the product and select it for connection binding.

When the Bluetooth indicator is off, it means that it has been successfully bound to the product.

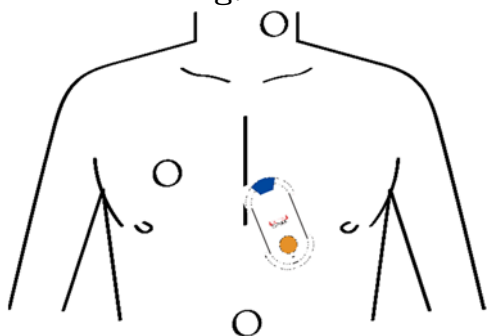


NOTICE:It is recommended to fully charge this product before using it.

After the product is turned on, if there is no binding for more than three minutes, it will automatically shut down.

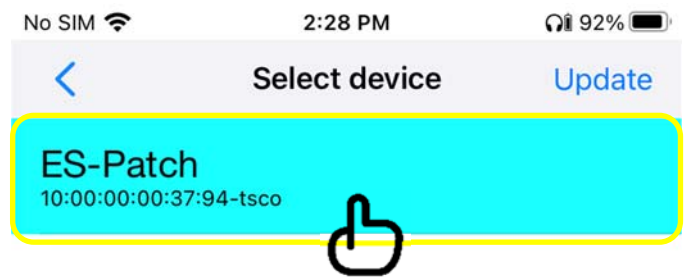
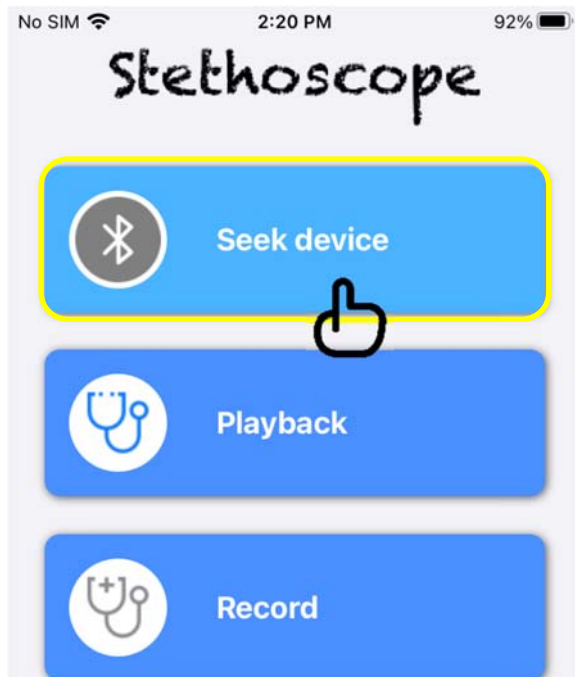
8.3 Apply the ES-Patch Stethoscope patch

After the button position of this product faces the outside of the human body, it is attached to an appropriate position on the human body for monitoring and recording.



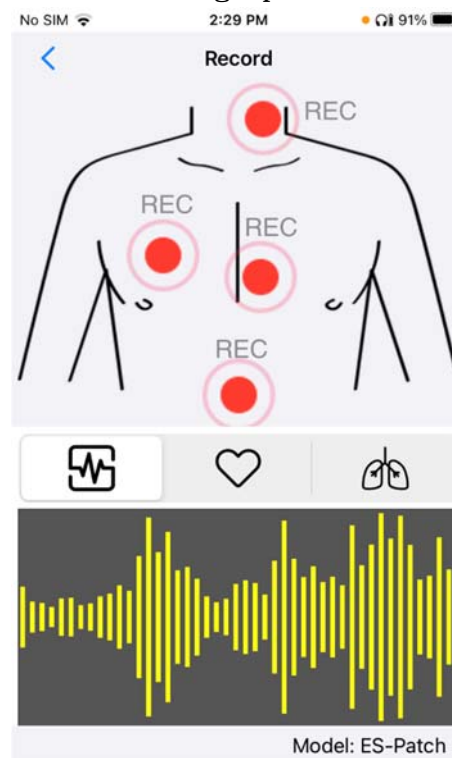
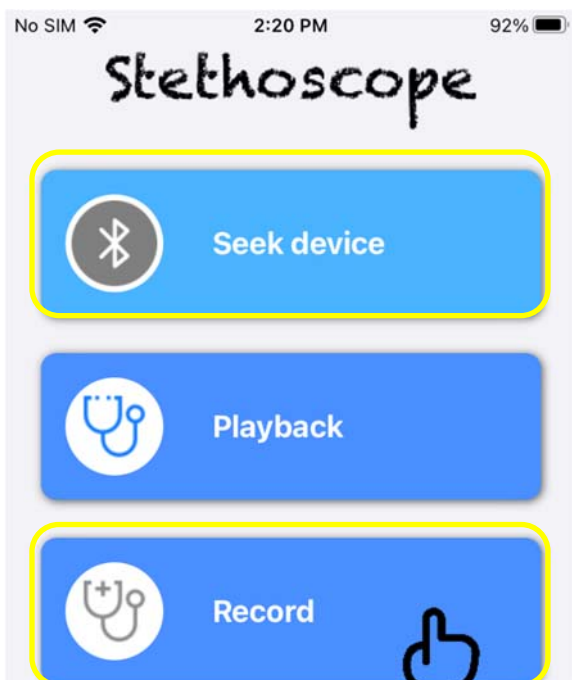
8.4 The measurement data is automatically uploaded to the bound mobile device via Bluetooth

Select the device and click ES-Patch.



8.5 Recording using the auscultation recording function

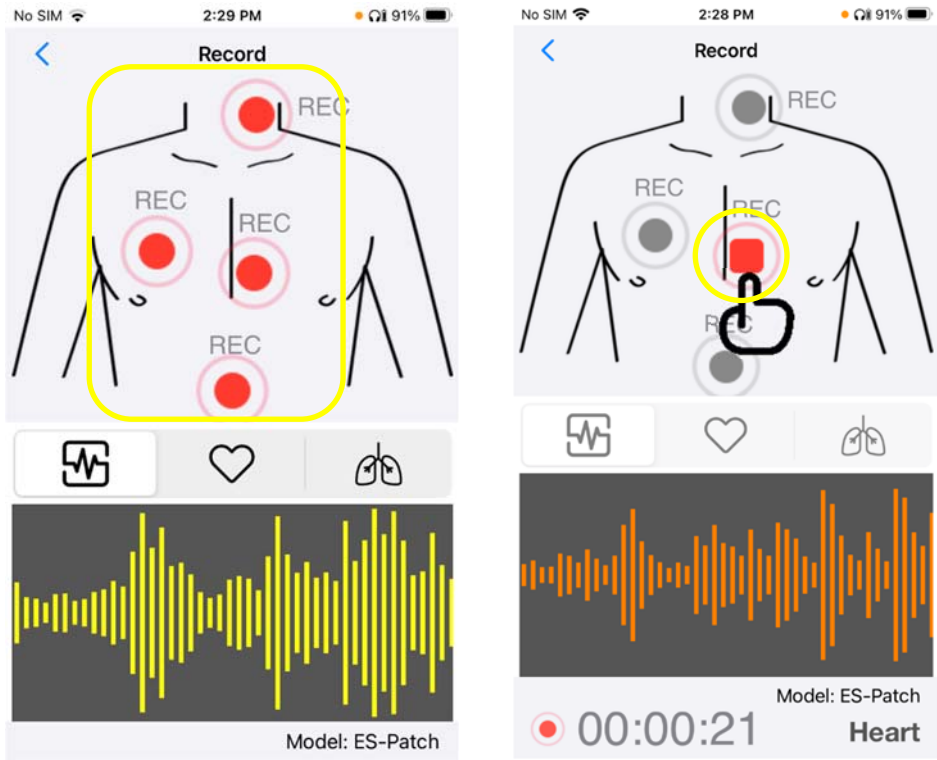
Confirm that [device is connected] is displayed on the screen, and click [Auscultation Recording] to enter the recording screen for recording operation.



Note: Enter the auscultation recording, and the real-time auscultation waveform will be displayed at the bottom of the screen.

For the body part you want to record, press the record button to start recording, and press

it once to end the recording.



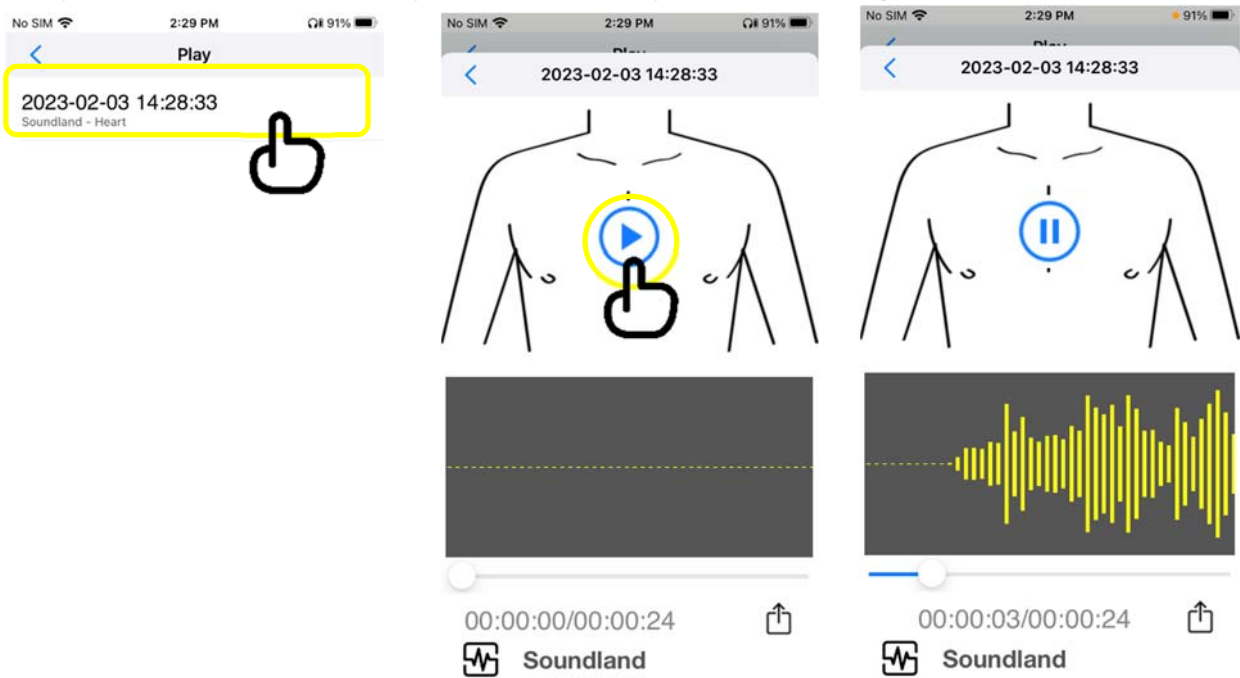
The value of this product will reach a stable voice data transmission state after being worn for 10 seconds.

The sound waveforms related to the heart, arteries, veins, lungs, and other internal organs can be displayed in real time through the APP.

WARNING: When the Bluetooth of the mobile device is not paired with this product ES-Patch, it is impossible to operate the APP to record.

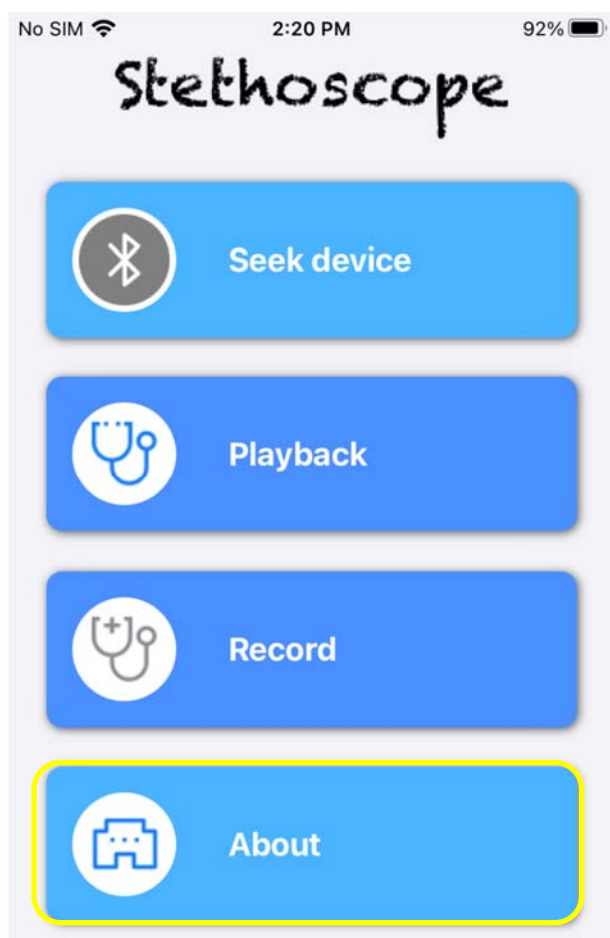
8.6 Use the recording to play the recorded waveform and sound

Click [Auscultation Play] to enter the recording screen, select the recording audio to be played, and press the play button to play the recording audio.



8.7 About information related to this APP

Click [About] to enter the About screen, which contains the software version and company website.



NOTICE: Only supports playback of sound after recording, real-time monitoring cannot be performed during recording.

Running or any strenuous exercise is not recommended after wearing.

9. Charging Instructions

9.1 Charge confirmation

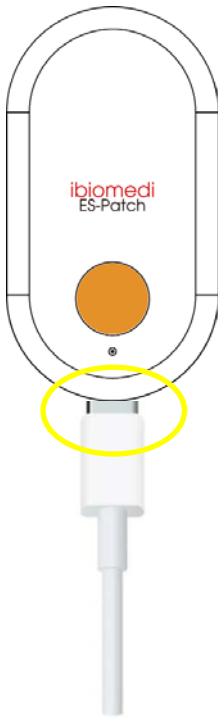
Please take out the included accessory USB TYPE-C charging cable.



NOTICE: The ES-Patch Stethoscope patch must be charged immediately when it is out of power.

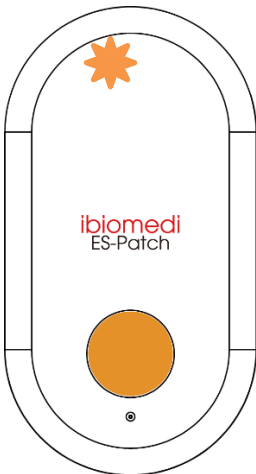
9.2 Insert the USB plug into this product

Insert the USB TYPE-C head into the USB socket below the product.



9.3 Start Charging

Insert the USB charging cable into the mobile phone charger (not included with this product) to use.



LED light display

Blinking orange: charging

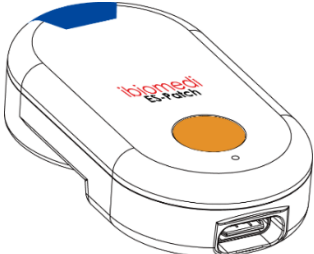
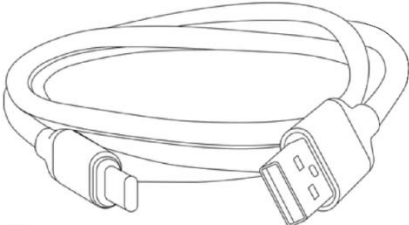
Orange light off: fully charged or charging stopped

Note: When charging via USB, please use an adaptor that conforms to IEC62368-1 or IEC60601-1.

10. Other operating precautions

- ◆ The operating ambient temperature shall be within 41° to 104°F (5° to 40°C), the relative humidity shall be within the range of 15 to 95%, and the atmospheric pressure shall be within the range of 1002hPa to 1008hPa.
- ◆ Storage and Shipping Conditions The temperature range should be -4° to 140°F (-20° to 60°C) and the relative humidity should be 15 to 95%.
- ◆ To prolong the life of the electronic patch stethoscope, avoid extreme cold, heat, exposure to solvents or oils.
- ◆ Medical personnel recommend wearing medical gloves when using this product.
- ◆ Failure to follow the recommended care and maintenance instructions may result in damage to the internal parts of this product. Internal damage can lead to product failure, ranging from minor Stethoscope to complete damage.
- ◆ Do not disassemble or reassemble this product by yourself, it may cause damage to this product.
- ◆ If you experience any problems with the electronic Stethoscope patch, do not attempt to repair it yourself. Please notify the original customer service center to contact the follow-up matters.
- ◆ If the electronic patch stethoscope will not be used for several months, please charge it first to get enough power before using it.
- ◆ When the power is turned off, the power will gradually decrease. Please confirm whether the power is sufficient before use.

11. Parts List

Host 1 Set	USB TYPE-C 1 charge
	

WARNING: Do not use unauthorized accessories to avoid unexpected hazards.

12. Cleaning and Maintenance

- ◆ Before starting cleaning, please check the structure of the product for damage and make sure the charging cover is properly closed to avoid liquid seepage.
- ◆ ES-Patch electronic stethoscope patch can be sprayed on the product with 75% alcohol solution, and then cleaned and wiped with cotton cloth. After drying, put it back in its original box and store it under the conditions of "Storage Environment" in point 9 of this instruction manual.
- ◆ Regularly check the electronic stethoscope patch and accessories USB TYPE-C charging cable for damage. If damaged, do not continue to use it and contact the original factory designated customer service department for replacement.

WARNING: To reduce the risk of infection, the ES-Patch must be cleaned after each user.

13. Warranty and Service Life

If it is operated normally according to the user manual, the service life is one year, unless improper operation may shorten the service life.

Original Factory Guarantee During the 1 year warranty period, return the product to the original factory and it will be repaired or replaced free of charge.

14. Troubleshooting

Question	Possible reason	Approach
Can not boot	low power	Please connect the USB charging cable to charge.
Bluetooth can't connect	The mobile device has not turned on the Bluetooth function	Make sure that the Bluetooth on the mobile device is available.
	ES-Patch has not been opened	Please press the power button of the ES-Patch and confirm that the power indicator is flashing normally.
	low power	When the power indicator flashes 3 times quickly, it means that the power is insufficient, please connect the USB charging cable to charge.
Mobile device not receiving signal	ES-Patch is not yet bound to mobile devices.	Please download the official iOS system APP and perform the binding operation.
Connection disconnected while monitoring	Out of valid connection range	Please place your mobile device as close to the ES-Patch electronic stethoscope as possible.
	low power	Please connect the USB charging cable to charge.

NOTICE: If you have tried all the solutions to the problem and still cannot solve the problem, please call the original local service department for assistance.

15. Maintenance and Repair

For maintenance or repair service, or any questions or comments, please feel free to contact the original customer service center. We will do our best to assist you and solve your problems.

NOTICE: Do not disassemble this product without authorization. Only authorized service personnel should repair this product; if the equipment is modified by the user, the user is solely responsible.

Name of producer : Sound Land Corp.

Producer address : No. 32, Keji 1st Rd., Guishan Township, Taoyuan
County, 33383 Taiwan R.O.C.

Name of manufacturer : Sound Land Corp.

Manufacturer address : No. 32, Keji 1st Rd., Guishan Township, Taoyuan
County, 33383 Taiwan R.O.C.

Email : service@soundland.com.tw

Tel : +886-3-396-1958

Fax : +886-3-396-0231

Website : <https://soundland.com.tw/>

16. Transport, storage and disposal

16.1 Transport and storage

General transportation of the equipment is subject to the conditions described in the "10. Other operating precautions " section of this manual.

This product needs to be sent to an authorized service center for inspection and repair. Storage environmental conditions must comply with the "10. Other operating precautions " section of this manual.

16.2 Disposal

Discarded electronic Stethoscope patches and charging bases must be disposed of in accordance with local general electronic waste recycling methods.

17. Product Specifications

Product name :	Electronic Stethoscope Patch
Model number :	ES-Patch
Compatible mobile devices :	Applicable to mobile devices with operating system iOS14.0 (inclusive) or above, with Bluetooth version 5.0 or above
Battery Specifications :	Li-ion battery DC3.7V / 110mah
Use current :	12mA
Charging voltage and current:	5V/100mA
Battery life cycle :	500 次
Estimated battery power :	about 8 hours of use in a fully charged state
Estimated battery charging time :	about 4 hours
Power display :	Through LED or APP
Audio transmission :	Bluetooth, iOS mobile device
Frequency response mode :	Full Frequency / heart sound / breathing (lung) sound
	Full Frequency (20~1200Hz)
Frequency Response Mode	heart sound (20~200Hz)
Frequency Range :	lung sound (100~1000Hz)
Appearance dimensions :	length 56 X width 30 X thickness 12.7mm
Body weight :	20g
Dust and Waterproof :	IP26
Safety specifications :	No fire, No combustion, In line with telecommunications, EMC related regulations
Compliant with medical device standards :	EN12470-4, IEC60601-1, IEC60601-1-2, IEC/EN62366-1, IEC62304, IEC60650
Compliant with telecom and EMC regulations :	Bluetooth5.1, FCC Part15, NCC LP0002, Conform to CE-R&TTE
Operating ambient temperature and humidity :	41° to 104°F (5° to 40°C), 15 to 95% relative humidity
Storage ambient temperature and humidity :	-4° to 140°F (-20° to 60°C), 15 to 95% relative humidity
Digital wireless transmission :	Bluetooth (Transmitter): Bluetooth v5.2 specification compliant. 2.402GHz ~ 2.480GHz unlicensed ISM band. GFSK, pi/4-DQPSK, or 8-DPSK modulated digital signals in polar format for 1 Mbps, 2 Mbps, and 3 Mbps transmission data rate, respectively. Bluetooth (Receiver): Bluetooth v5.2 specification compliant. 2.402GHz ~ 2.480GHz unlicensed ISM band. GFSK, pi/4-DQPSK or 8-DPSK coded bit stream and provides RSSI information.

Appendix: Guiding Principles and Manufacturer's Declaration

Recommended separation distance between portable and mobile RF communications equipment and the <u>ES-Patch</u>			
The <u>ES-Patch</u> is intended for use in an electromagnetic environment (for Professional healthcare environments) in which radiated RF disturbances are controlled. The customer or the user of the <u>ES-Patch</u> can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the <u>ES-Patch</u> as recommended below, according to the maximum output power of the communications equipment.			
Rated maximum output power of transmitter W	Separation distance according to frequency of transmitter m		
	150 kHz to 80 MHz $d = 1, 2\sqrt{P}$	80 MHz to 800 MHz $d = 1, 2\sqrt{P}$	800 MHz to 2,7 GHz $d = 2, 3\sqrt{P}$
0,01	N/A	0,12	0,23
0,1	N/A	0,38	0,73
1	N/A	1,2	2,3
10	N/A	3,8	7,3
100	N/A	12	23
For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where p is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.			
NOTE1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.			
NOTE2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.			

Manufacturer's declaration-electromagnetic emissions		
The <u>ES-Patch</u> is intended for use in the electromagnetic environment (for Professional healthcare environments) specified below.		
The customer or the user of the <u>ES-Patch</u> should assure that it is used in such an environment.		
Emission test	Compliance	Electromagnetic environment-guidance (for Professional healthcare environments)
RF emissions CISPR 11	Group 1	The <u>ES-Patch</u> uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment. The <u>ES-Patch</u> is suitable for use in all establishments other than domestic and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
RF emissions CISPR 11	Class A	
Harmonic emissions IEC 61000-3-2	Not applicable	
Voltage fluctuations /flicker emissions IEC 61000-3-3	Not applicable	

Manufacturer' s declaration-electromagnetic immunity

The ES-Patch is intended for use in the electromagnetic environment (for Professional healthcare environments) specified below.

The customer or the user of the ES-Patch should assure that it is used in such an environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment-guidance (for Professional healthcare environments)
Electrostatic discharge(ESD) IEC 61000-4-2	Contact:±8 kV Air±2 kV, ±4 kV, ±8 kV, ±15 kV	Contact:±8 kV Air±2 kV, ±4 kV, ±8 kV, ±15 kV	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%
Electrical fast transient/burst IEC 61000-4-4	+ 2kV for power supply lines + 1kV for input/output lines	Not applicable Not applicable	Mains power quality should be that of a typical Professional healthcare environments
Surge IEC 61000-4-5	+ 0.5kV, +1kV line(s) to line(s) + 0.5kV, +1kV, + 2kV line(s) to earth	Not applicable Not applicable	Mains power quality should be that of a typical Professional healthcare environments
Voltage Dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	Voltage dips: 0 % U_t ; 0,5 cycle 0 % U_t ; 1 cycle 70 % U_t ; 25/30 cycles Voltage interruptions: 0 % U_t ; 250/300 cycle	Voltage dips: Not applicable Not applicable Not applicable Voltage interruptions: Not applicable	Mains power quality should be that of a typical Professional healthcare environments. If the user of the <u>ES-Patch</u> requires continued operation during power mains interruptions, it is recommended that the <u>ES-Patch</u> be powered from an uninterruptible power supply or a battery.
Power frequency(50, 60 Hz) magnetic field IEC 61000-4-8	30 A/m 50 Hz or 60 Hz	30 A/m 50 Hz and 60 Hz	The <u>ES-Patch</u> power frequency magnetic fields should be at levels characteristic of a typical location in a typical Professional healthcare environments.

NOTE UT is the a.c. mains voltage prior to application of the test level.

Manufacturer' s declaration-electromagnetic immunity

The ES-Patch is intended for use in the electromagnetic environment (for Professional healthcare environments) specified below.
The customer or the user of the ES-Patch should assure that it is used in such and environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment-guidance (for Professional healthcare environments)
Conducted RF IEC 61000-4-6	3 Vrms: 0,15 MHz - 80 MHz 6 Vrms: in ISM bands between 0,15 MHz and 80 MHz 80 % AM at 1 kHz e)	Not applicable Not applicable	Portable and mobile RF communications equipment should be used no closer to any part of the <u>ES-Patch</u> including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance: $d = 1,2\sqrt{P}$ $d = 1,2\sqrt{P}$ 80MHz to 800 MHz $d = 2,3\sqrt{P}$ 800MHz to 2,7 GHz Where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in metres (m). Interference may occur in the vicinity of equipment marked with the following symbol:
Radiated RF IEC 61000-4-3	3 V/m 80 MHz - 2,7 GHz 80 % AM at 1 kHz	3 V/m 80 MHz - 2,7 GHz 80 % AM at 1 kHz	

NOTE1 At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

Manufacturer's declaration-electromagnetic immunity

Test specifications for ENCLOSURE PORT IMMUNITY to RF wireless communications equipment

The ES-Patch is intended for use in the electromagnetic environment (for Professional healthcare environments) specified below.

The customer or the user of the ES-Patch should assure that it is used in such an environment.

Test frequency (MHz)	Band ^{a)} (MHz)	Service ^{a)}	Modulation ^{b)}	Maximum power (W)	Distance (m)	IMMUNITY TEST LEVEL (V/m)	Compliance LEVEL (V/m) (for Professional healthcare environments)
385	380 – 390	TETRA 400	Pulse modulation b) 18 Hz	1,8	0,3	27	27
450	430 – 470	GMRS 460, FRS 460	FM c) ±5 kHz deviation 1 kHz sine	2	0,3	28	28
710	704 – 787	LTE Band 13, 17	Pulse modulation b) 217 Hz	0,2	0,3	9	9
745							
780							
810	800 – 960	GSM 800/900, TETRA 800, iDEN 820, CDMA 850, LTE Band 5	Pulse modulation b) 18 Hz	2	0,3	28	28
870							
930							
1720	1700 – 1990	GSM 1800; CDMA 1900; GSM 1900; DECT; LTE Band 1, 3, 4, 25; UMTS	Pulse modulation b) 217 Hz	2	0,3	28	28
1845							
1970							
2450	2400 – 2570	Bluetooth, WLAN, 802.11 b/g/n, RFID 2450, LTE Band 7	Pulse modulation b) 217 Hz	2	0,3	28	28
5240	5100 – 5800	WLAN 802.11 a/n	Pulse modulation b) 217 Hz	0,2	0,3	9	9
5500							
5785							

NOTE If necessary to achieve the IMMUNITY TEST LEVEL, the distance between the transmitting antenna and the ME EQUIPMENT or ME SYSTEM may be reduced to 1 m. The 1 m test distance is permitted by IEC 61000-4-3.

- a) For some services, only the uplink frequencies are included.
- b) The carrier shall be modulated using a 50 % duty cycle square wave signal.
- c) 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.

FCC and NCC regulations statement

FCC Part 15.19 This device complies with Part 15 of the FCC Rules.

ES-Patch Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference.
- (2) this device must accept any interference received, including interference that may cause undesired operation FCC Part 15.21 information for user You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment. FCC Section 15.105 Information to the user.

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.

IMPORTANT NOTE:FCC Radiation Exposure Statement : This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

NCC Regulation Statement:

According to NCC LP0002 Technical Specification for Low Power Radio Frequency Equipment Chapter 3.8.2:

For the low-power radio frequency equipment that has obtained the verification certificate, without approval, the company, firm or user shall not change the frequency, increase the power or change the features and functions of the original design without authorization.

The use of low-power radio frequency equipment shall not affect flight safety and interfere with legal communications; if any interference is found, it should be stopped immediately, and it can be continued to be used until there is no interference.

The aforesaid legal communication refers to the radio communication operated in accordance with the provisions of the Telecommunications Management Act.

Low power radio frequency equipment must endure interference from legal communication or radio wave radiating electrical equipment for industrial, scientific and medical use.

NCC form certification number :