The Manual is written for the current product. In case of modifications and software upgrades, the information contained in this document is subject to change with notice.

The Manual describes, in accordance with the product's features and requirements, main structure, functions, specifications; correct methods for transportation, installation, usage, operation, repair, maintenance and storage, etc. as well as the safety procedures to protect both the user and equipment. Refer to the respective chapters for details.

User Notice

Dear Users, thank you very much for purchasing our product.

Please read the Manual very carefully before using this equipment. These instructions describe the operating procedures to be followed strictly; Failure to follow these instructions can cause measuring abnormality, equipment damage and personal injury. The manufacturer is NOT responsible for the safety, reliability and performance issues and any monitoring abnormality, personal injury and equipment damage due to user's negligence of the operation instructions. The manufacturer's warranty service does not cover such faults.

Warn:

- For some special patients, it is recommended that the tested parts should be examined more carefully
- For the details of correlative clinic restriction and contraindications, please refer to the related medical literatures
- **This device is not intended for treatment.**

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1. Safety

1.1 Instructions for safe operations

- Periodic inspection, make sure that there is no visible damage that may affect patient's safety or monitoring performance. It is recommended that the device should be inspected once a week at least. When there is obvious damage, stop using the monitor.
- Necessary maintenance must be performed by qualified service engineers ONLY. Users are not permitted to maintain it by themselves.
- The oximeter cannot be used together with devices not specified in User's Manual. Only the accessories appointed or recommended by the manufacturer can be used.

1.2 Warning

- Explosive hazard—DO NOT use the device in environment with inflammable gas such as some ignitable anesthetic agents.
- DO NOT use the device while the tastee measured by MRI and CT .
- The disposal of scrap instrument and its accessories (including battery) should follow the local laws and regulations.

1.3 Attentions

- Keep the device away from dust, vibration, corrosive substances, explosive materials, high temperature and moisture.
- If the oximeter gets wet, please stop operating it.
- When it is carried from cold environment to warm and humid environment, please not use it immediately.
- DO NOT operate keys on front panel with sharp materials.
- High temperature or high-pressure steam disinfections of the oximeter is not permitted. Refer to User Manual for instructions of cleaning and disinfection.
- Do not have the device immerged in liquid. When it needs cleaning, please wipe its surface with disinfect solution by soft material. Do not spray any liquid on the device directly.

2. Overview

The visual electronic stethoscope takes lithium battery for power supply. After amplification and filtering treatment of the hearing voice, the heart sound and lung sound can be heard clearly by the earphone, what is more, it adds the functions of HR and cardiogram display, sound adjustment and dark-degree screen adjustment. The device uses color LCD of high resolution to display the cardiograph in real time, and figure out the HR according to the cardiograph, help the doctor diagnose on time.

2.1 Technology Specifications

A Display format: 65K color OLED display;
30～240bpm； PR measurement bound: 30～240bpm;
OLED 符号； Power display: OLED sign

B Power supply requirement: lithium battery, voltage scope: 3.5--4.2V;

C Power: less than 60mA;

D Measurement precision: HR is ±2bpm or big value of ±2%.

E Running time:

In normal temperature, one 600mAh lithium battery can last more than 10 hours.

2.2 Environment Requirement

Transportation and storage environment

a）Environmental temperature scope：-20℃～+55℃

b）Relative humidity scope：≤95%

c）Atmospheric pressure scope：500hPa～1060hPa

Working temperature

a）Environmental temperature scope：10℃～40℃

b）Relative humidity scope：30%～75%

c）Atmospheric pressure scope：700hPa～1060hPa

2.3 Function Features

- ECG signal recording through the integral three point electrodes;
- Accurate, real-time and high-resolution display of the ECG and heart rate data;
- High-sensitivity sensor signal acquisition, which can adjust stethoscopy sound.
- Minimal energy requirement, the chargeable lithium battery can last more than 10 hours.
- Portable.

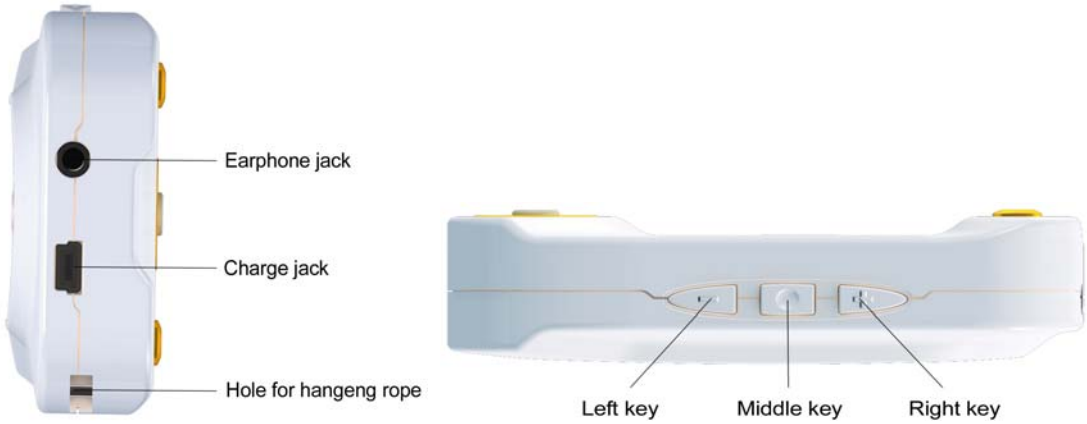
3. Accessories

- One User Manual
- One Charger
- One USB Cable
- One earphone
- One piece of hang rope

4. Installation

4.1 Front Panel Instructions

Pic 1 Front Panel Sketch Map



(a) (b)

Pic 2 Side Sketch Map

Pic 3 Back Sketch Map

4.2 Hang Rope Installation

- Drill the thin side of the hang rope through the small hole in the device.
- Drill the thicker side of the hang rope through the thin side and tighten it.

5. Operating Instruction

5.1 ：Operating Process:

1）Long press power switch to enter the interface, then the instrument begins working.

2） Test the ECG waveform

Coat a few gel on the surface of three electrodes. Closely stick the three electrodes to the tested parts .It can display the real-time ECG and heart rate while diagnosing.

3） Monitor the sound

Insert the earphone to the socket, put the stethoscope sensor on tested part, then you can

hear the biological sounds from the heart and lung.

Note:

①The stethoscope sensor is highly delicate. If only to hear the sound, gel is not needed, you can measure directly through the sensor.

②Strenuous Exercise may affect the accuracy of the measurement.

4) Long press power switch again to turn off the instrument.

5.2 Function Adjustment:

1) ECG waveform pause

When the device is normally working, shortly press the button in middle to pause the ECG waveform. Then press it again to show the waveform again.

2) Shift the sound mode

When the device is normally working, press and hold the middle key to shift three modes, which would be: Heart, Lung, H&L.

3) Volume Adjustment

When the device is normally working, shortly press the left key on top to reduce the sound, right key to increase the sound.

4) Brightness adjustment

When the device is normally working, press and hold the left key on top to make backlight darker, while long press right key to brighten it.

5.3 Attention items on battery operation :

1）Inside the device there is lithium chargeable battery. Connect the adapter to charge. It can be charged on computer through USB or on power supply socket. When charging, there will be display on the screen; when the charging display disappears, the charging finishes.

2）The device can work more than 10 hours in full power. When power is used up, the device will automatically cut off the power supply to avoid damage of battery.

3）Charge as soon as possible after the battery totally without power. Charge every six month if don't use the machine for a long time. Follow this rule can extend the battery life.

4）The four states of power supply display are as follows:

	Full power
	Incomplete power
	
	Low power

5）Replace the battery when it works out in 30 minutes after full charged or can not be

recharged.

6）When "  " appears on the screen, it shows that the battery needs to be charged for lacking of electricity, or it will power off automatically.

6. Maintenance

1) When "  " appears on the screen, please charge in time.

2) Before use, please clean the surface of the device.

3) Disinfect the device by medical alcohol after use each time to avoid cross infection.

4) Transportation or storage environment of the device: environment temperature is -20℃～50℃，relative humidity is lower than 95％RH.

To assure the normal use of the device, please care about the maintenance.

5) Cleaning

Use dry and soft cloth (dampened by alcohol) and clean.

6) The device should be adjusted each year (or according to the adjustment procedure). Adjust the device in national recommended check body, or contact our company.

⚠ **Do not disinfect the device in environment of high-voltage.**

⚠ **Under no circumstances must the instrument be held under liquid.**

- **Keep the device in dry environment, or it will affect the life of the device, or even damage the device.**
- **Because inside the device are sensitive electronic parts, please do not open the back cover if not professional people.**

7．Simple trouble shooting

Malfunction	Reason	Resolution
Can not turn on	1、Battery without electricity; 2、Device damage。	1、 Charge the battery。 2、 Contact us。
Can not record ECG	Electrode not contact with skin well	Coat gel and press the electrode heavily
Noise	The sources of disturbance exits.	Remove the sources of disturbance and other electrical equipment (maintain a distance of at least 1 m)
Power off accidentally	Low Power	Charge the battery

Please contact with our authorized agent if the trouble still exist.