

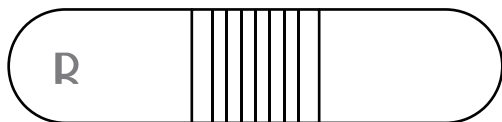
制作工艺：

80g书写纸；骑马钉，黑白印刷

尺寸：95*142mm

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Personal ECG Tracker

User Manual



User Manual

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1. Introduction

It is intended to record and store electrocardiogram (ECG) rhythms, and transfer records to the software for further research or analysis.

It is not a medical device and should not be used for any medical purposes or any medical conditions. It is intended only for general wellness use.

2. Warnings

- The ECG results (including regular heartbeat) do not guarantee that you are free from an arrhythmia or other health conditions. You should notify your physician of possible changes of your health.
- Do not use the device to self-diagnose heart-related conditions. Consult with your physician before making any



medical decisions, such as altering your use of any drug or treatment.

- Do not continue to use the device until further instructed by a physician if your skin is irritated or inflamed around the electrodes.
- The device makes no warranty for any erroneously collected data or information from misuse or malfunction as a result of abuse, accidents, alteration, negligence, or failure to maintain the products as instructed. The results made by this device are preliminary screening of cardiac conditions, not a complete diagnosis. All interpretations should be reviewed by a medical professional for clinical decision-making.
- The device has not been tested for and is not intended for pediatric use.
- Keep the device away from young children. Contents may be harmful if swallowed.



- Do not store in extremely hot, cold, humid, wet, or bright conditions.
- Do not take a recording if the electrodes are dirty. Clean them first.
- Do not immerse the device in or expose the device to excessive liquid.
- Do not drop or bump with excessive force.
- Do not expose to strong electromagnetic fields.
- Do not expose the device to a magnetic resonance (MR) environment.
- Do not use with a cardiac pacemaker, ICDs, or other implanted electronic devices.
- Do not use during cautery and external defibrillation procedures.
- Do not place the electrodes in contact with other conductive parts including the earth.



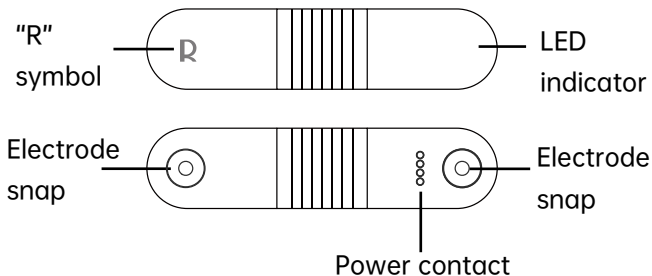
- Do not use with unapproved accessories. The use of unapproved accessories or transducers and cables may result in electromagnetic emission or decreased electromagnetic immunity of this device which will further lead to improper operation.
- Do not use the device adjacent to or stacked with other equipment because it may result in improper operation.

3. Packing List

- Main unit
- A USB clip
- A USB drive with the software
- A pack of disposable electrodes (10 pieces)
- Chest strap



4. Guide to Parts



Indicator	Status	Description
/	OFF	Out of battery
Green light	On with high brightness	Fully charged
Orange light		Charging



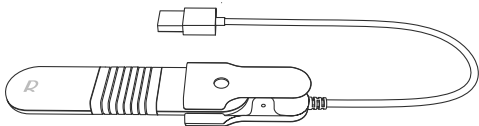
Green light /Orange light (low battery)	Flashing every 5 seconds with medium brightness	In standby mode
	Flashing with medium brightness	Downloading data
	On with low brightness	Lead off
	On with low brightness and flashing with medium brightness when detecting R wave	Recording your ECG



5. Activate the Device

5.1. Charge the device

- a) Connect the device with the USB clip, as shown below.



- b) Connect the other end of the clip to a power supply, like a laptop or power adapter.

Note:

- The power adapter is not included in the package.
- Compatible power adapter output: DC 5V, 1A.
- Do not use the device while charging.



5.2.Download software and sync time

a) Download the software

For MacOS & Window:

Visit the website

www.livenpace.com/pages/download for free download.

For macOS:

- Search for "Livenpace" in the App Store.

For Windows:

- Find the accompanied USB drive and copy the installation file to your local drive for installation.

b) Install the software.

c) Connect the device to your PC or laptop with the power/data cable and run the software. It will automatically connect to the device and synchronize time.



Note:

- Failed time synchronization may result in wrong recording time.
- For more information on how to use the software, visit the website <https://livenpace.com/pages/support> or scan the QR code below.



6. Record your ECG

6.1. Wear the device

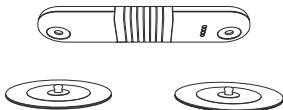
Choose one of the following methods for recording ECG:



- **With electrodes**

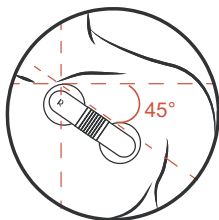
a) Remove the body hair and moisturize the skin of the contact area.

b) Attach the device to the disposable electrodes.



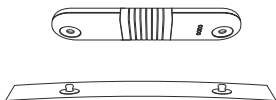
c) Remove the protective film from the electrodes.

d) Apply the device to the left chest. The "R" symbol is rightward and near the middle of sternal notch, and the other end is leftward and 45° lower than the horizontal level.

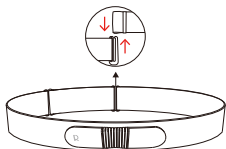


- **With chest strap**

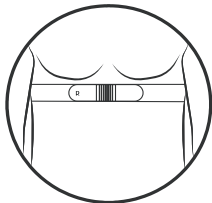
- a) Attach the device to the chest strap.



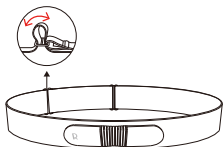
- b) Moisturize the skin with water or water-based lotion on the contact area.



- c) Untie the strap and position the device across the front of the chest just below your pectoral (chest) muscles.



- d) Adjust the strap so that it wraps around tightly yet comfortably.



6.2.Start recording

Once you wear the device properly, it starts acquiring ECG data.

6.3.Stop recording

The device will automatically stop recording and enter the standby mode one minute after it is taken off.

Note:

- The device can store 10 recordings, 30 hours in total. When the recordings exceed 10 pieces, or the total time reaches 30 hours, the earliest data will be covered with a new one.
- One single recording can only store 24 hours of data at most.
- Please download the data as soon as possible after the ECG recording is completed.



7. View ECG Measurement Results

Connect the device to your PC or laptop with the power/data cable and run the software. You can download ECG waveform and detail reports including overview, supraventricular rhythm, ventricular rhythm, HRV, ECG report conclusion, hourly statistics table of ECG data, and ECG Fragment.

Note:

- The ECG waveform and report are saved in the default directory. If you change the storage directory, the previously stored recordings will not be seen in the task list.

Caution:

- If you are experiencing any symptoms or have concerns, contact your physician.



8. Maintenance

No service or repair should be performed on the hardware other than the maintenance listed in this section.

It is important to keep the electrodes clean by spraying with an alcohol-based sanitizer and wiping with a soft cloth when needed.

- Do use a clean, lint-free cloth
- Do not use abrasive cleaners or materials
- Do not immerse device or expose device to excessive liquid

Exterior Visual Inspection:

- Inspect electrodes for warping, surface damage, or corrosion
- Check for any other forms of damages



9. Troubleshooting

If you experience difficulties in operating your device, refer to the troubleshooting guide below.

Problem:	Solution
My device is not working.	Option: Charge the device.
Problem:	Solution
I have a lot of artifact, noise, or interference in my recordings.	Option 1: Replace the disposable electrodes. Option 2: Moisten the electrode areas of the strap and adjust the strap length to fit tightly but comfortably.
Problem:	Solution
I cannot download the recordings.	Option 1: Charge the device. Option 2: Try another operating system.



10. Specifications

Operating conditions

Temperature: 5 °C to 45 °C

Relative Humidity: 10% to 95 % (non-condensing)

Atmosphere pressure: 700 hPa to 1060 hPa

Storage / Transport conditions

Temperature: -25 °C to 60 °C

Relative Humidity: 10% to 95 % (non-condensing)

Atmosphere pressure: 700 hPa to 1060 hPa

Power and supply

Rechargeable lithium-polymer battery

Capacity: 90mAh

Charging time: 2 hours (to 90% power)



ECG

Lead type: Single-lead ECG

Input impedance: $\geq 10\text{M}\Omega$, 10Hz

Linearity and dynamic range: 10mV (peak-to-valley)

Common mode rejection: $\geq 60\text{dB}$

Frequency response: 0.67 - 40 Hz

Gain error: Maximum error $\pm 10\%$

Others

Dimension: 100×23×8.3 mm

Weight: <35 g (with battery)

IP classification: IP 22

Expected service life: 5 years



11. Symbols

Symbol	Description
	Indicates a medical device that is not to be disposed of as unsorted municipal waste.
IP22	Resistant to liquid ingress
FC	This product complies with the rules and regulations of the Federal Communication Commission.
	Non-ionizing radiation



12. FCC Statement

FCC Warning:

FCC ID: 2A728-0001

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.





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Product name: Personal ECG Tracker Model: HHM1
PN: 255-05295-00 Version: A Date: July 18, 2022



