

# **cHUB User Manual**

**BT101**

## **User Notice**

Dear customers, thank you very much for purchasing.

This user manual describes the product features and requirements, main structure, performance, specifications, correct transportation, installation, use, operation, maintenance, maintenance and storage methods, as well as the protection of users and product safety measures. See the chapters for details.

Before using this product, please read the user manual carefully and follow the relevant requirements of the user manual. This user manual will tell you about the operating procedures that you must pay attention to while using the product, the operations that may cause abnormal operation, and the dangers that may cause harm to the product or human. The company does not assume responsibility for safety, reliability, and performance assurance because of any abnormal phenomena or personal and machine hazards caused by use, maintenance, or storage not in accordance with the requirements of this user manual, nor does it provide free maintenance for such failures.

Due to product updates, your product may not be completely consistent with the description in the user manual. I apologize.

This user manual is prepared by the company and the copyright belongs to the company. The user's manual may not be photocopied, copied or translated into other languages without the written consent of the company.

# CONTENTS

USER NOTICE .....	1
1 PRECAUTIONS .....	4
<i>1.1 General Precautions</i> .....	4
<i>1.2 Safety Precautions</i> .....	4
<i>1.3 EMC Statement</i> .....	5
2 PRODUCT DESCRIPTION .....	5
<i>2.1 Features</i> .....	5
<i>2.2 Product Use Range</i> .....	5
3 MAIN TECHNICAL INDICATORS .....	5
<i>3.1 Environmental Conditions</i> .....	5
<i>3.2 Main Parameters</i> .....	6
<i>3.3 Main Performance</i> .....	6
4 EQUIPMENT INTRODUCTION .....	6
<i>4.1 Equipment Front</i> .....	6
<i>4.2 Above and Below</i> .....	7
<i>4.3 Annex</i> .....	7
5 INSTRUCTIONS FOR USE .....	7
<i>5.1 Start</i> .....	7
<i>5.2 Stop</i> .....	7
<i>5.3 Scan Code</i> .....	8
<i>5.4 Charging</i> .....	8
<i>5.5 WiFi Connection</i> .....	8

5.6 Bluetooth Connection .....	9
6 COMMON STATUS .....	9
6.1 Charging Prompt .....	9
6.2 Low Battery Prompt .....	10
6.3 Low Battery Automatic Shutdown .....	10
6.4 Bluetooth Disconnect Prompt .....	10
6.5 WiFi Disconnect Prompt .....	10
6.6 Alarm Prompt .....	10
7 COMMON TROUBLESHOOTING .....	10
8 MAINTENANCE .....	11
8.1 Cleaning and disinfection .....	11
8.2 Maintenance .....	11
9 Transport and Storage .....	12
10 SYMBOL MEANING .....	12
11 COPYRIGHT STATEMENT .....	13
12 DISCLAIMER .....	13
13 FCC NOTICE .....	13

## **1 Precautions**

### **1.1 General Precautions**

- 1) Do not wash the product with water. If the equipment is wet or water condensation occurs, stop the operation.
- 2) Do not use the device immediately when it is transferred from a cold environment to a warm and humid place.
- 3) The equipment has a service life of three years. When it is not available at the end of the equipment's arrival, do not dispose of it at will. If it is necessary to dispose of the equipment, it should comply with local regulations.
- 4) Keep the operating environment free of dust, vibration, corrosive or flammable substances, and excessively high or low temperature and humidity.
- 5) Disposal of equipment, its accessories and packaging (batteries, plastic bags, foam, paper boxes, etc.) is subject to local laws and regulations, otherwise it will cause pollution in the local environment.

### **1.2 Safety Precautions**

- 1) This product can only be connected to a DC power supply with a rated voltage of 5V and a minimum current of 1A.
- 2) Maintenance is not allowed while the equipment is in use.
- 3) When not in use for a long period of time, the device should be placed in a cool, dry place and charged once every three months.
- 4) Do not use this device in an environment where flammable substances such as anesthetics are placed.
- 5) When pressing the scan code button, please do not look directly at the light emitting device (including scan code light and scan code positioning light), otherwise it may be harmful to the eyes.
- 6) Check regularly to ensure that the equipment does not affect the damage to safety performance and monitoring performance. It is recommended to check it at least once a week. If there is obvious damage, stop using the device.

- 7) Dispose of equipment, its accessories and packaging (batteries, plastic bags, foam, paper boxes, etc.) in accordance with local laws and regulations.
- 8) The maintenance of this equipment is limited to qualified maintenance personnel designated by the manufacturer. Users should not repair the equipment by themselves.
- 9) This device is only suitable for use with the sensor or server specified by "RAIING".  
Use with devices not specified by RAIING is prohibited.

### **1.3 EMC Statement**

When the device is used, the influence of electromagnetic compatibility should be considered because other high-electromagnetic devices or environments will affect the normal operation of the device.

## **2 Product Description**

cHUB is a device that receives Bluetooth signal data and forwards the data to the network via WiFi.

### **2.1 Features**

Compact and beautiful appearance, easy operation, easy to carry.

### **2.2 Product Use Range**

Bluetooth transmission and WiFi transmission transfer each other to achieve different signal data transmission.

## **3 Main Technical Indicators**

### **3.1 Environmental Conditions**

#### **1) Jobs:**

- Temperature: 10°C ~ 40°C
- Relative humidity: 0%RH ~ 75%RH
- Working power: Built-in rechargeable lithium battery, voltage 3.7V

- Charger: Output: DC 5V; 1A

## 2) Transport and Storage:

- Temperature:  $-40^{\circ}\text{C} \sim +55^{\circ}\text{C}$
- Relative humidity:  $\leq 95\%$

## 3.2 Main Parameters

- 1) Support WiFi protocol standard: IEEE 802.11b/g/n
- 2) Support Bluetooth 4.0

## 3.3 Main Performance

- 1) Connect a Bluetooth transmission device.
- 2) Connect to the specified WiFi.
- 3) Receive the converted Bluetooth signal data to the network via WiFi.
- 4) Data caching function.
- 5) The cached data is transmitted to the network via WiFi.
- 6) Low battery indicator.

## 4 Equipment Introduction

### 4.1 Equipment Front



- 1) Power Indicator
- 2) Bluetooth Indicator
- 3) WiFi Indicator
- 4) Alarm Indicator

Figure 4-1

## 4.2 Above and Below

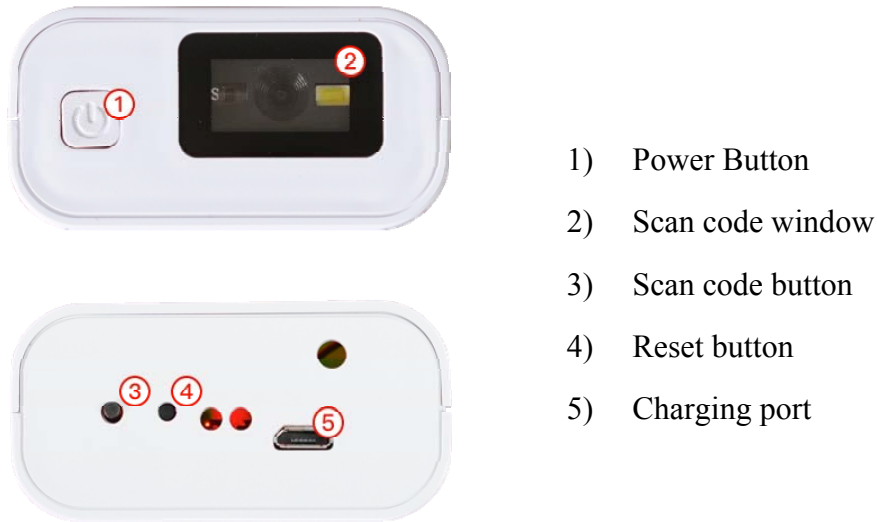


Figure 4-2

## 4.3 Annex

- |                   |   |
|-------------------|---|
| 1) cHUB           | 1 |
| 2) User manual    | 1 |
| 3) USB data cable | 1 |

## 5 Instructions For Use

### 5.1 Start

Press and hold the “Power button” for 2 seconds. When all four front indicators are on, it indicates that it is starting. After waiting for 40 seconds, the indicator will exit full bright state and enter the normal flashing state, indicating that the startup is successful.

***Note: It is not recommended to start when charging. When charging, the charging prompt will interfere with the correct judgment of the startup indicator light.***

### 5.2 Stop

Press and hold the “Power button” for 2 seconds. When all four indicators on the front are



off, it means the completion of the stop.

**Note: If you need to restart the device, wait for the device to shut down completely before pressing the power button to turn on the device.**

### 5.3 Scan Code

Press and hold the scan code button. At this time, the lighting LED and positioning indicator of the scan code window are on or blinking. Place the positioning cursor on the bar code or QR code. After hearing the drop sound, release the scan code button.

**Note: If the barcode or QR code is not recognized for a long time, the scanning LED and positioning indicator will be automatically extinguished. Release the “Scan code button” and press again to scan the code again.**

### 5.4 Charging

Connect one end of the Micro USB data cable to the power adapter that outputs DC5V 1A, and connect the other end to the "charging port" of the device, which is about 2 to 3 hours full.

### 5.5 WiFi Connection

- 1) Open URL: <http://web.remotely.raing.cn/wifi>
- 2) Enter the SSID and password for the WiFi connection in the web page and click Generate QR Code to generate the QR code. As shown below:

Raiing Medical

\* SSID/User Account  
Raiing-Wireless

Please use your 2.4G Wifi network only.

Wifi Password  
Raiing12345

Security Type  
WPA/WPA2

Generate QR Code

Figure 5-1



Figure 5-2

- 3) Press Scan Code to scan the generated WiFi configuration code.
- 4) After the scan code is successful, it will wait for a period of time. The “WiFi indicator” on the front of the device will be in the steady state, indicating that the WiFi connection is successful. If it is unsuccessful, please check whether the type of SSID, password or password you filled in is correct and try again.

## 5.6 Bluetooth Connection

- 1) Press the scan code button to scan the SN barcode on the Bluetooth device package or product.
- 2) After the scan code is successful, the Bluetooth indicator on the front of the device will remain on for a while. This indicates that the Bluetooth device is connected successfully. If unsuccessful, rescan the SN barcode of the Bluetooth device.

*Note: Please consult the manufacturer to confirm the availability of Bluetooth devices.*

## 6 Common Status

### 6.1 Charging Prompt

- 1) Normal charge state:  
The power indicator light on the front of the device flashes slowly (flashes every 2s).
- 2) Off State:
  - ① Battery is not full: Four indicators on the front of the device flash alternately.
  - ② Battery is full: Four indicators on the front of the device are flashing slowly (flashing every 2s).

## **6.2 Low Battery Prompt**

Only alert when the device is switched on and not charging. When the power is low, the power indicator will flash slowly (flashing once every 2s). Please connect the charger as soon as possible.

## **6.3 Low Battery Automatic Shutdown**

When the power of the device is seriously insufficient, the device will shut down.

## **6.4 Bluetooth Disconnect Prompt**

When the Bluetooth device is not connected, the Bluetooth indicator will enter a slow-flashing state (flashing every 2s). If you have configured a Bluetooth device that needs to be connected, check the working status of the Bluetooth device or shorten the distance to the Bluetooth device.

## **6.5 WiFi Disconnect Prompt**

When WiFi is not connected, the WiFi indicator will enter a slow-flashing state (flashing every 2s). If you need to configure WiFi connection, check the working status of the router or shorten the distance from the router.

## **6.6 Alarm Prompt**

When the wearable Bluetooth device is wearing poor quality, the alarm indicator will enter the slow flashing state (flashing once every 2s), at this time check the state of the patient wearing the device.

## **7 Common Troubleshooting**

If there is a problem with this product, refer to the following table to solve it and still cannot solve it, please contact the manufacturer.

<b>Problem</b>	<b>Reason</b>	<b>Method</b>
Power light blinks	Battery is low	Connect the charger
Sudden shutdown of the device during use, automatic shutdown after power on again	Battery is low	Connect the charger
Bluetooth light blinks	Bluetooth device disconnected	Check the working status of the Bluetooth device or shorten the connection distance
WiFi light blinks	Not connected to WiFi or disconnected from WiFi.	Please check the working status of the router or shorten the distance from the router
Alarm light blinks	Bluetooth device wearing abnormal	Please check the wearing status of Bluetooth device

## **8 Maintenance**

### **8.1 Cleaning and disinfection**

Before cleaning the equipment, it must be shut down. Use 75% medical alcohol to wipe and disinfect, and then air dry or use a clean, dry cloth to clean the equipment. When cleaning, avoid the liquid from penetrating into the equipment.

### **8.2 Maintenance**










- 1) Do not open the outer casing of the equipment not designated by our company, so as to avoid damage to the internal components.
- 2) Any repairs and upgrades to the equipment must be performed by professionals trained and authorized by the company.
- 3) Prevent liquid from penetrating into the equipment and affect the performance and safety of the equipment.
- 4) This product should be used to avoid severe vibration or impact.




- 5) Do not place other objects on the product. This may cause damage to the device housing.
- 6) Avoid dust when storing, temperature should not be too high, and humidity should not be too high. To prevent violent oscillations and collisions.
- 7) If foreign matter adheres to the surface of the device, do not wash it with a highly corrosive cleaner; use a neutral detergent for cleaning.
- 8) When the low battery indicator appears, charge the machine in time.

## 9 Transport and Storage

- 1) The packaged equipment can be transported in the form of general transportation or in accordance with the contract, and severe shocks, vibrations and rain and snow showers should be avoided during transportation.
- 2) The packaged equipment is stored in a room with an ambient temperature of -40°C to +55°C, a relative humidity of no more than 95%, an atmospheric pressure of 600hpa to 1060hpa, and no corrosive gas and ventilation.

## 10 Symbol Meaning

Symbol	Meaning
	Caution
	Consult instructions for use
	Manufacturer
	Date of manufacture
	Batch code
	Serial number
	Recyclable
	Do not discard
	Bluetooth

	Battery indication
	WiFi
	Alarm

## 11 Copyright Statement

© Raiing Medical Company all rights reserved, and it retains to this handbook and this statement final right to interpret and the revision power.

This manual copyright belongs to Raiing Medical Company. Without the prior written permission, no company or individual is allowed to reproduce, copy or translate this manual and any information contained therein.

Rights reserved!

## 12 Disclaimer

This manual is based on existing information and its content is subject to change without notice. Raiing Medical Company has done its best to ensure that its contents are accurate and reliable when compiling this manual. However, Raiing Medical Company shall not be liable for any loss or damage caused by omissions, inaccuracies or typographical errors in this manual.

## 13 FCC Notice

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. (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.

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

### **RF Exposure**

The equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This device should be installed and operated with more than distance 20cm between the radiator & your body.



Raiing Medical Company

FL4-E BLDG.8, Changliu Rd. 738 Machikou Town,

Changping Dist. Beijing, China

Number: RR-JS-08CE-02

Revision: A/0

Date: 2018-01-15