UT-224 use and configuration manual

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Woxu Wireless Co., Ltd

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1 Basic introduction of UT-224

UT-224 have six interface and one situation bar，Six interfaces are main interface, heart rate interface, blood oxygen interface, step counting interface, message interface, setting interface. The interface can be switched by swiping left or right, ach interface is responsible for one function, each interface is described in a section below.

1.1 Main interface

The main interface is mainly responsible for the display of time and date. Slide to the right and there is no response. Slide to the left and switch to the heart rate interface, the real interface is shown below.

1.2 Heart rate interface

Heart rate interface is mainly responsible for heart rate measurement and heart rate display function, Swipe right to switch to the main interface, swipe left to switch to the blood oxygen screen.

1. Start heart rate detection

When switching from the main interface or blood oxygen interface to the heart rate interface, And stay in the heart rate interface for 6 seconds when the heart rate detection started（You can see the green light flashing on the back of UT-224）, Heart rate results will be detected in about 20 seconds, And updates the heart rate results to the screen in real time.

Heart rate interface reminder function：When the heart rate is activated, The heart rate picture flashes at a frequency of 1HZ, When the detection is not started or the result is detected, the icon light is on.

2. Turn off heart rate monitoring

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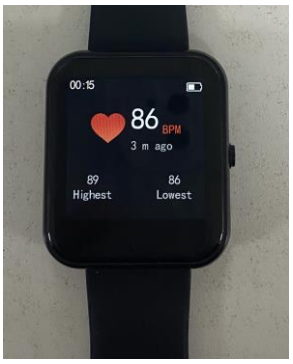
When switching from the heart rate screen to another screen or turning off the screen, Heart rate monitoring will stop.

Heart rate periodic detection function, In the resting situation, the test is performed every five minutes for 40 seconds each time.



1.3 Blood oxygen interface

Blood oxygen interface is mainly responsible for blood oxygen measurement and blood oxygen display function, Swipe right to switch to the pedometer screen, swipe left to switch to the heart rate screen.

1. Start the blood oxygen test

When you switch from another interface to the blood oxygen interface, And the blood oxygen detection started when the blood oxygen interface stayed for 6 seconds（You can see that the red light on the back of UT-224 is steady on）, After about 30 seconds, blood oxygen results will be measured and blood oxygen results will be updated to the screen in real time.

Blood oxygen interface reminder function：When the blood oxygen was activated，Blood oxygen images were flickered at a frequency of 1HZ， When the detection is not started or the result is detected, the icon light is on，Meanwhile, a warm reminder phrase "Warm reminder: Please keep your arm still" will be displayed during the detection process.

2. Shut down the blood oxygen test

When switching from blood oxygen screen to another screen or turning off the screen, Blood oxygen monitoring will be stop.

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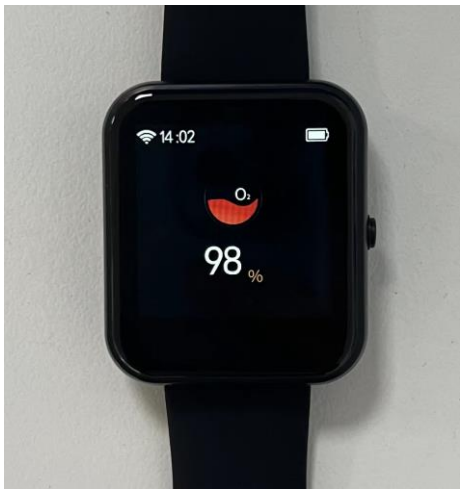
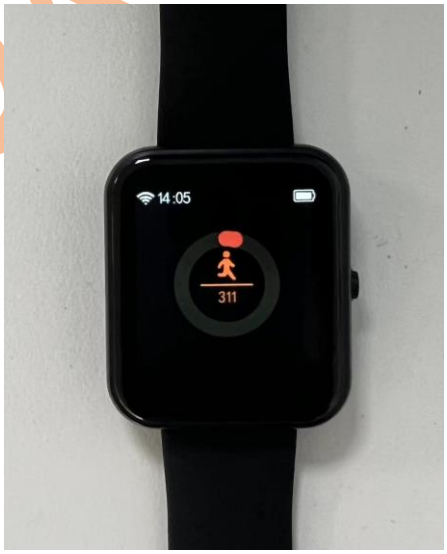


1.4 Step counting interface

Step counting interface includes step count and progress, Mainly responsible for step number display function, Swipe right to switch to the message screen, swipe left to switch to the blood oxygen screen.

The default target number of steps is 10000, The progress follows the new progress based on the current number of steps，For example, the current walk 2500 steps, the progress into the degree of 25%. As shown in the figure below, 0 represents the number of steps taken, and the small yellow circle represents the progress circle. One round of the progress circle means that 10,000 steps have been taken, and the progress is 100%. If the number of steps exceeds 10,000, steps will continue to be counted and displayed normally, but the circle will not change. Step counting starts at 0 am, step count and progress are cleared the next day. Restart the device will clear the number of steps.



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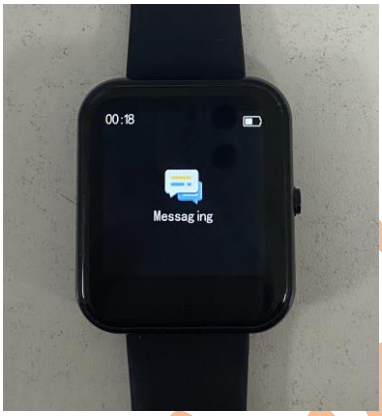
1.5 Message interface

1、Message interface is mainly responsible for message display function，Swipe right to switch to step counting interface, swipe left to switch to setting interface, and click the icon to enter the message interface, Click the button to exit, A maximum of 10 messages can be saved. After 11 phrases are sent, only 10 phrases are displayed. The first phrase is replaced.



1.6 Set interface

The setting interface is mainly responsible for setting functions. Swipe right to switch to the message interface, swipe left to get no response, click the icon to enter the setting interface, slide down to click the button to exit.

Language Mode The interface supports switching between Chinese and English, which takes effect immediately after setting the language mode.

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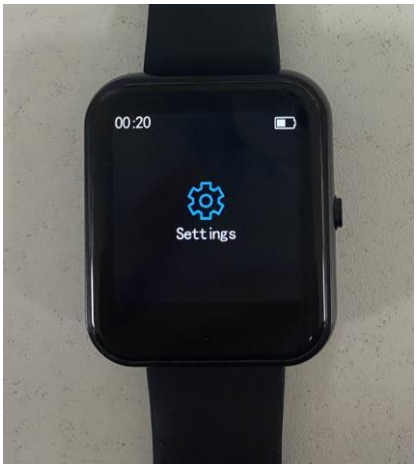

1.7 Situation bar

The situation bar consists of signal icon, Bluetooth icon, battery percentage icon, and battery icon.

Power percentage displays real-time power，When the charger is connected, the electric quantity is displayed in green；When the charger is disconnected, the electric quantity is displayed in white. The battery icon changes dynamically in real time according to the current battery quantity, as shown in the following figure：

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1.8 Button

The button is used to turn off the screen, turn on the screen, and restart the screen. When you press the button, the screen turns on or off. Hold down the button for 10 seconds and release the button to restart the system. Press and hold down the button for 3s to send an SOS alarm.

1.9 UWB

UWB support to channel 5 and9, default ID is 0x10000000, The default ranging mode is TOF when it online.

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2 UT-224 Firmware Upgrade Process

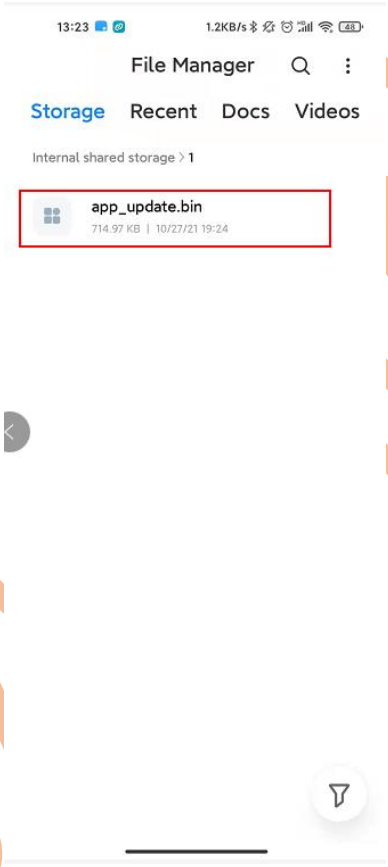
Ut-224 firmware upgrade tools required: a smart phone（iOS、Android）、nRF Connect software、one UT-224、UT-224 firmware.

2.1 Preparation

1. Before upgrading, please kindly confirm that the UT-224 has sufficient power. If the power is not sufficient, please connect it to the charger to ensure that the power will be not off during the firmware upgrade process.

2. Download and install the nRF Connect software in the phone.

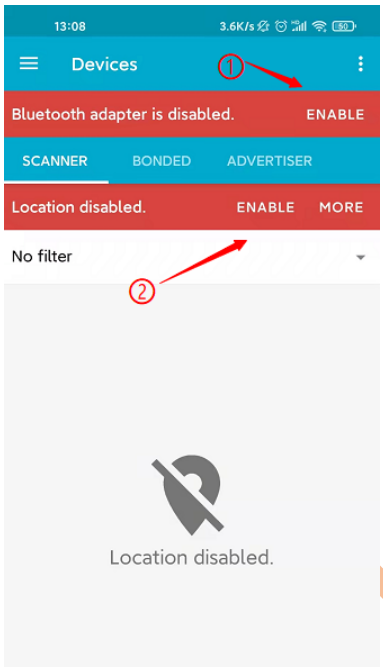
3. Please kindly save the firmware of UT-224 in the directory of the mobile phone, the name of firmware may not be “app apdate”, please refer to the actual name, as shown in the following picture.



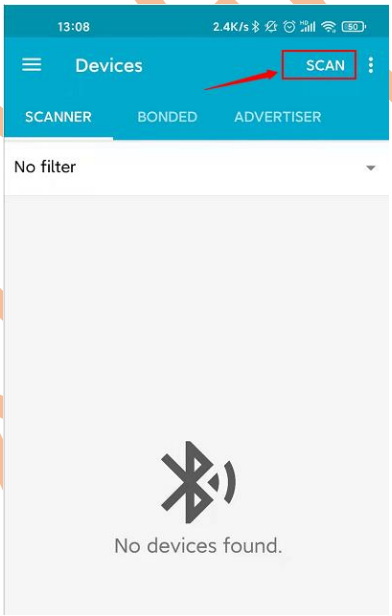
2.2 Use nRF Connect software to upgrade the firmware of UT-224

Before upgrading the firmware, please place the UT-224 as close as possible to the mobile phone.

1. Open the nRF Connect software, click the two ENABLE buttons on the interface, the interface is as shown in the picture below.



1. After finishing the previous step, the interface will enter the following interface. If you enter the interface of this step directly after opening the software, you do not need to operate the first step.



2. Click the "SCAN" button and you will see a lot of Bluetooth devices, find the Bluetooth device named "nus_netcore" (this device is the UT224 device), if you can't find the "nus_netcore" Bluetooth device, click the "SCAN" button again to find.

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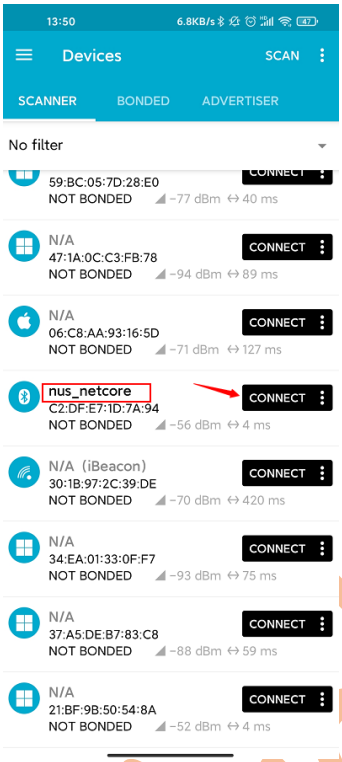
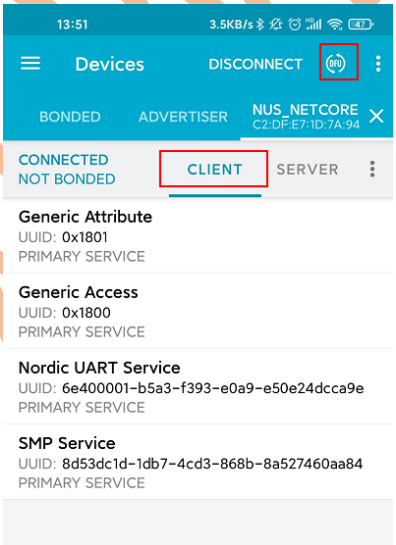


3. Click the connect button, the interface will jump to the CLIENT sub-interface, if there is no jump, please manually change to this page.



4. Click the "DFU" button in the upper right corner of the CLENT sub-interface to enter the interface of file management, and then find the firmware in the third step of section 2.1, then click the file named "app_update.bin", finally click the " OK" button.

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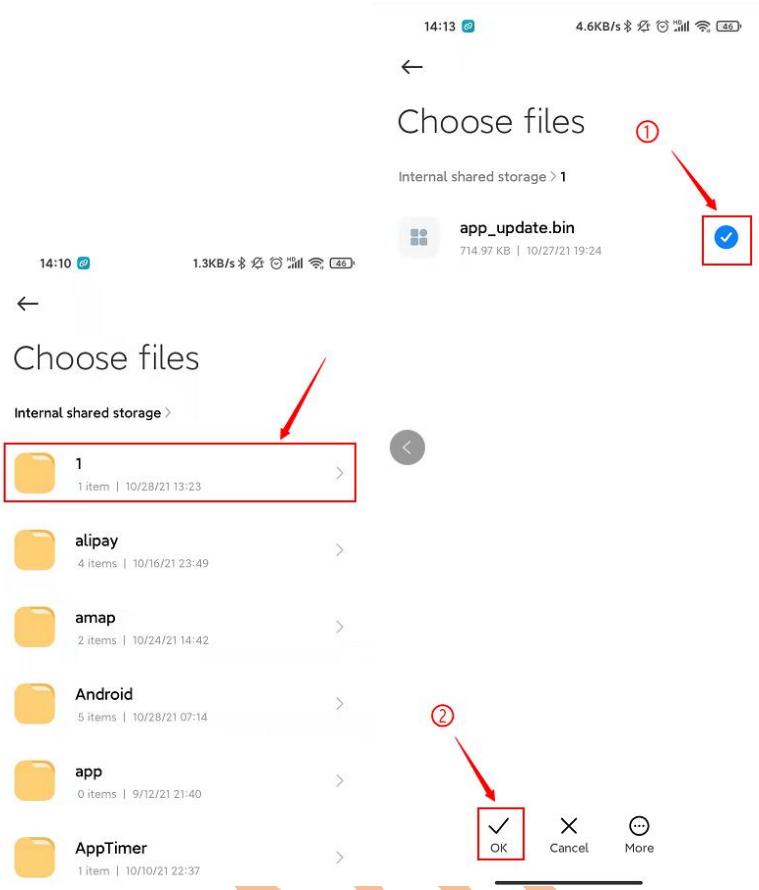

5. In the "Select mode" interface, select the option of "Confirm only", and then click the "OK" button to enter the upgrade interface

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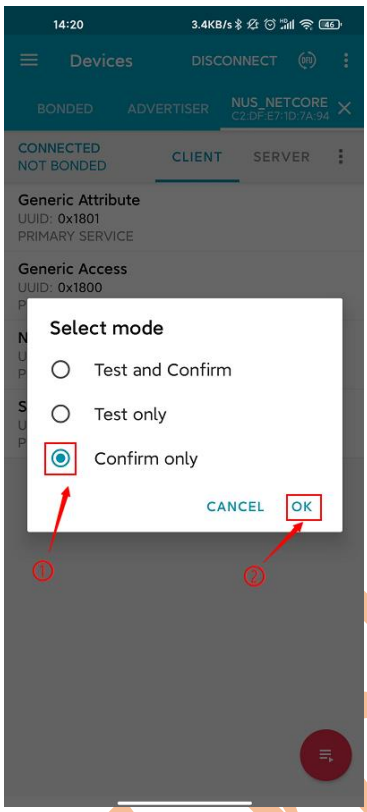
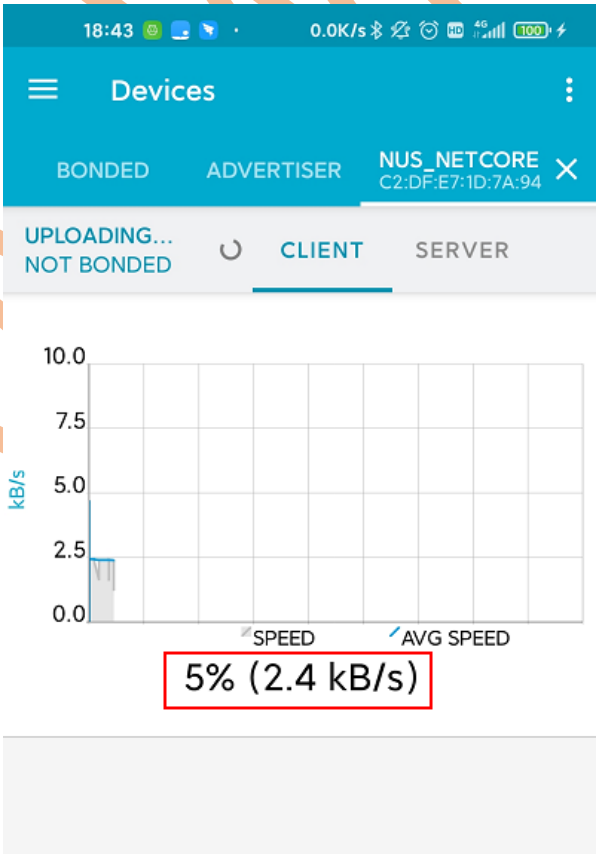


6. The upgrade interface is shown in the picture below. Please be patient and wait for the progress bar to reach 100% (the upgrade process takes about 6 minutes). During this process, please try not to perform other operations on both UT224 and the mobile phone to ensure the stability of the upgrade process.



7. After the progress bar reaches 100%, UT-224 will be upgraded internally. And this process will take about two minutes. Do not perform any operation on UT-224 at this time! ! ! After the upgrade is finished, the UT-224 will automatically turn on the screen, which means that the upgrade is complete. At this time, the UT-224 interface is shown as the picture below.

8. After the upgrade is complete, you can turn off the Bluetooth and nRF Connect software

9. Other description

The phones used in this document are Android phones，The nRF Connect software is also available on Android, Note If you use an IOS mobile phone, download the latest VERSION of nRF Connect. The operating process of nRF Connect for IOS is the same as that for Android.

FCC Statement

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.

RF warning for Portable device:

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

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 product may not be employed for the operation of toys. Operation onboard an aircraft, a ship or a satellite is prohibited. Class B (damped wave) emissions does not apply to it.

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