

Industrial handheld terminals

F2 User Manual



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Chapter 1: Introduction and Appearance

1.1 Introduction

The F2 is an ultra-thin, full-screen smart handheld terminal based on the Android 15 operating system and equipped with an octa-core high-performance processor. The device integrates high-precision barcode scanning, NFC reading and writing, 4G communication, and GPS/BeiDou positioning. It comes standard with a 5050mAh removable high-capacity battery and is specifically designed for mobile data collection scenarios in industries such as logistics, warehousing, manufacturing, and retail, significantly improving on-site operational efficiency.

1.2 Appearance and Equipment Diagram Description

The industrial data acquisition terminal consists of a main screen virtual keypad and buttons on the left and right sides. The front panel has three function virtual keys (from left to right: Back, Home, and Menu), the left side has three buttons (from top to bottom: Power, Volume, and Custom Function Key), and the right side has one button (a Custom Function Key).





Chapter 2: Safety Precautions

2.1 Laser Safety



Do not look directly at the scanning laser to avoid eye injury!

2.2 Battery safety

1) Charger Usage Guidelines

The device must be charged using the official charger that came with it. Do not use fast charging adapters, USB power bank chargers, or any other non-official charging devices, as voltage or current mismatch can lead to overcharging, overheating, permanent damage, or safety risks.

2) Daily Charging and Power Management Recommendations

To extend battery life, it is recommended to maintain the battery level between 30% and 80% during daily use. After the device is fully charged, disconnect the charger immediately to avoid prolonged exposure to 100% high voltage saturation.

3) Handling Idle Devices

If the device will be idle for more than one month, please turn it off and charge it to approximately 50% before storing. Afterward, check and recharge to 50% every two months to prevent the battery from entering a deep discharge state due to self-discharge, which can lead to irreversible damage or even complete failure to recharge.

4) Ambient Temperature Requirements for Use and Charging

Please use and charge the device within the appropriate ambient temperature range. Avoid operating in excessively cold, hot, or direct sunlight environments. Extreme temperatures will severely accelerate battery capacity degradation and may trigger the device's protection mechanisms.

- 5) Do not charge under high load. The device generates significant heat when operating under high load (such as batch card reading, continuous data transfer, or running large applications). Do not use the device while charging for extended periods in such scenarios, as the cumulative heat generation can cause a rapid increase in battery temperature, accelerating aging and posing a safety hazard.

- 6) Handling Battery Abnormalities. If you find that the battery or device is bulging, leaking, abnormally hot, making unusual noises, or unable to charge, stop using it immediately and disconnect the charger. Do not disassemble or attempt to repair it yourself; contact after-sales technical support for safety testing and replacement.

- 7) Physical Safety and Storage Warnings. Avoid subjecting the device to strong impacts, punctures, or disassembly. When storing, place it in a dry, cool place, away from flammable materials, high-temperature sources, and humid environments.

- 8) Warranty Terms Related Reminders Battery performance degradation or device damage caused by using a non-standard charger, using in an unsuitable environment, or failing to comply with these specifications may not be covered under the product warranty.

Chapter 3: Quick Start

3.1 Battery Installation Instructions

The battery and back cover of this device are integrated into a single unit and are shipped as a single assembly. Users do not need to install, remove, or replace the battery separately.



Figure 1




Figure 2


Note: To avoid frequent disassembly which may affect the lifespan of components, it is recommended not to disassemble or install the battery unless absolutely necessary.

3.2 Power on and power off

Power on

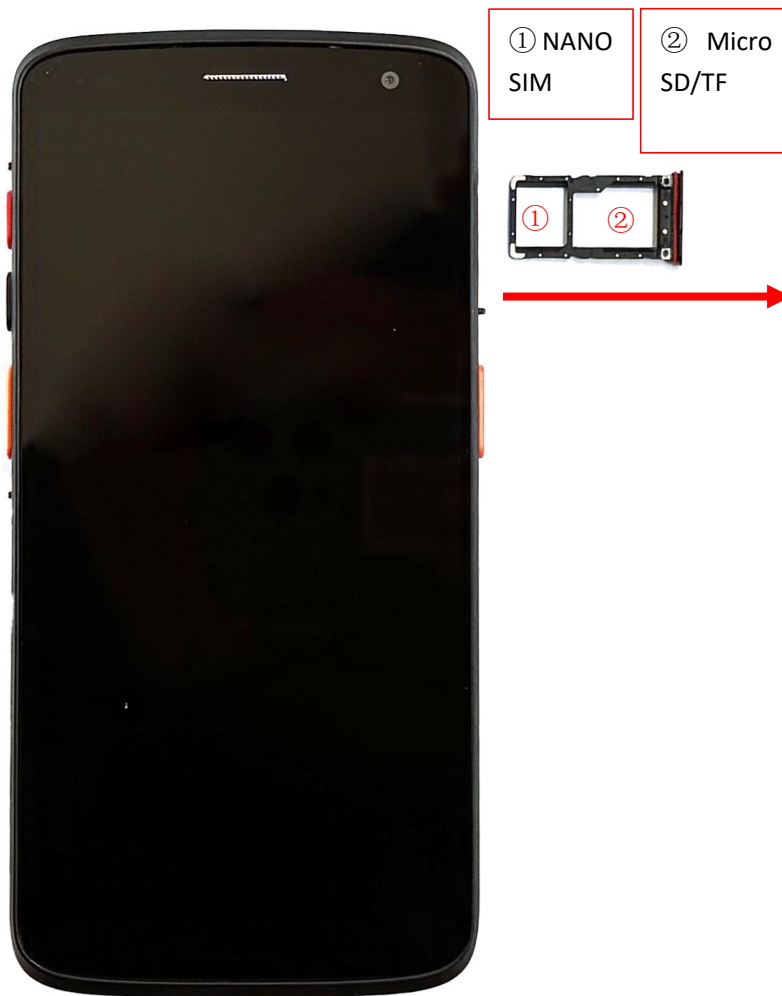
- 1) You can turn on the machine by pressing and holding the power button . In deep sleep mode, a short press of the power button will wake the system.

Power off

- 2) When the machine is turned on and not in sleep mode, press and hold the power button  until the option menu pops up in the middle of the vibration feedback screen. Select the power off option to shut down normally.

3.3 Install NANO SIM and Micro SD/TF card

- 1) Gently remove the SIM card tray from the right side using the SIM card eject tool.
- 2) Insert the SIM card and SD/TF card as indicated on the tray.
- 3) Smoothly push the tray back into the phone.




3.4 Direct charging/battery charging instructions

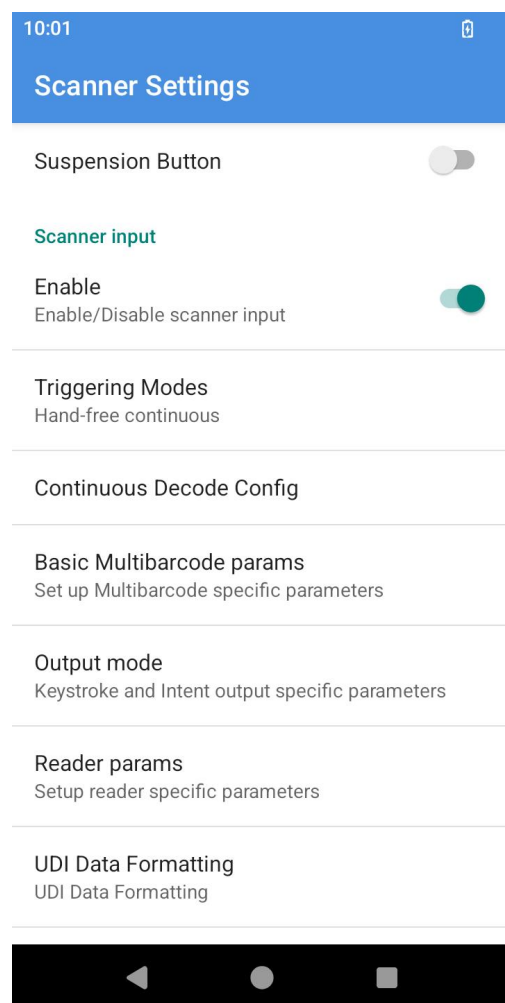
- 1) Please use the original power adapter and data cable to charge the device. Do not use adapters from other brands.
- 2) If you need to charge the battery separately, please use the original charging dock.

Chapter 4: Data Acquisition

4.1 Barcode scanning

- 1) Locate this icon  , on the PDA's main interface, open the app, and press the left/right scan button on the device to scan normally.
- 2) Click the settings button to configure basic scanning settings.

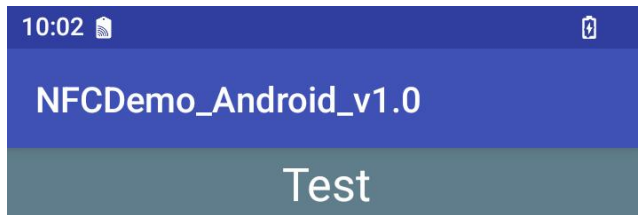
For more detailed feature information, please contact our technical support personnel, who will provide user manuals.



4.2 NFC reading



- 1) Locate this icon, on your desktop and tap to open the application.
- 2) Once open, you can perform the following tests: card test, NFC tag test, Mifare card test, 15693 test, CPU test, etc.



Reading/writing, please
Tips: bring the tag close to the device

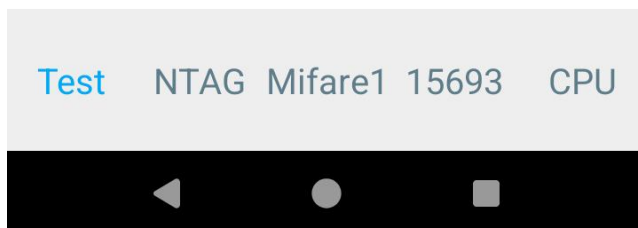
AboutTagTechnology

UID(hex):

HEX





TagTechnology:

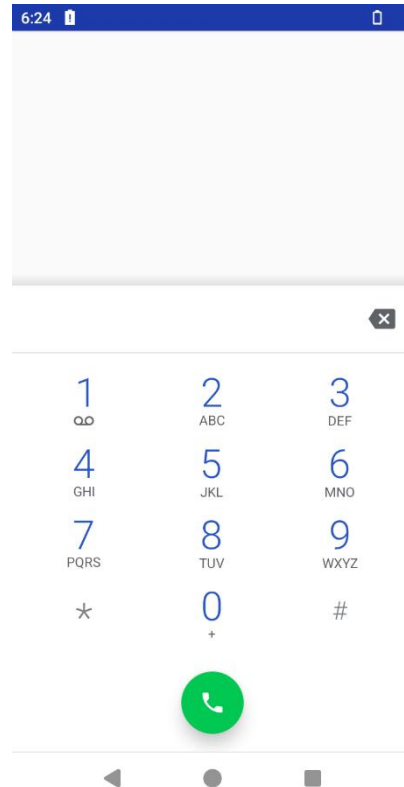
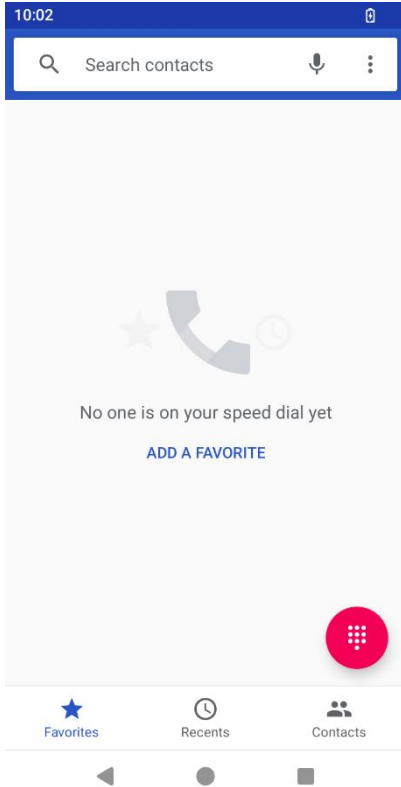
tech




Chapter 5: Communications and GPS

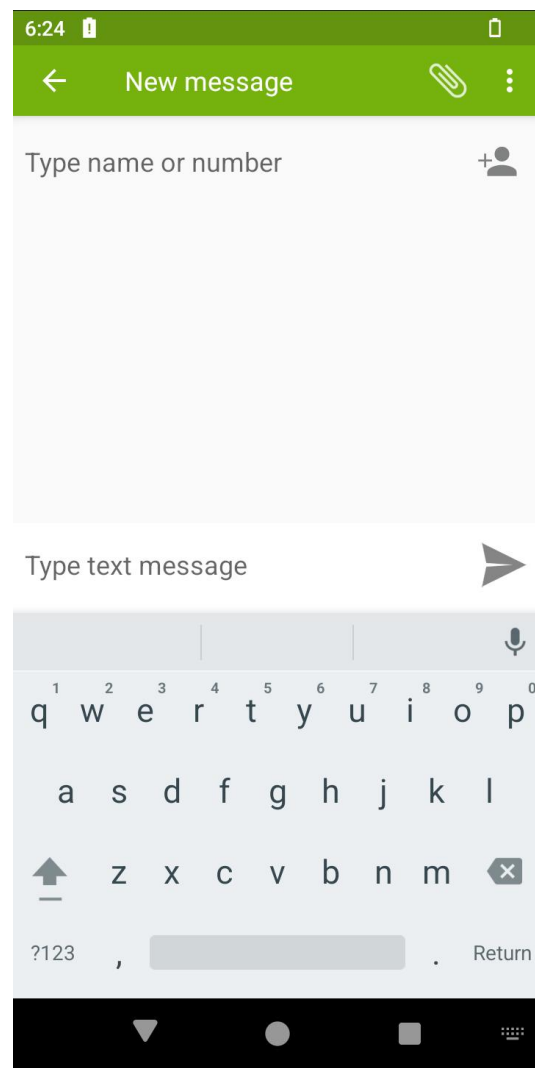
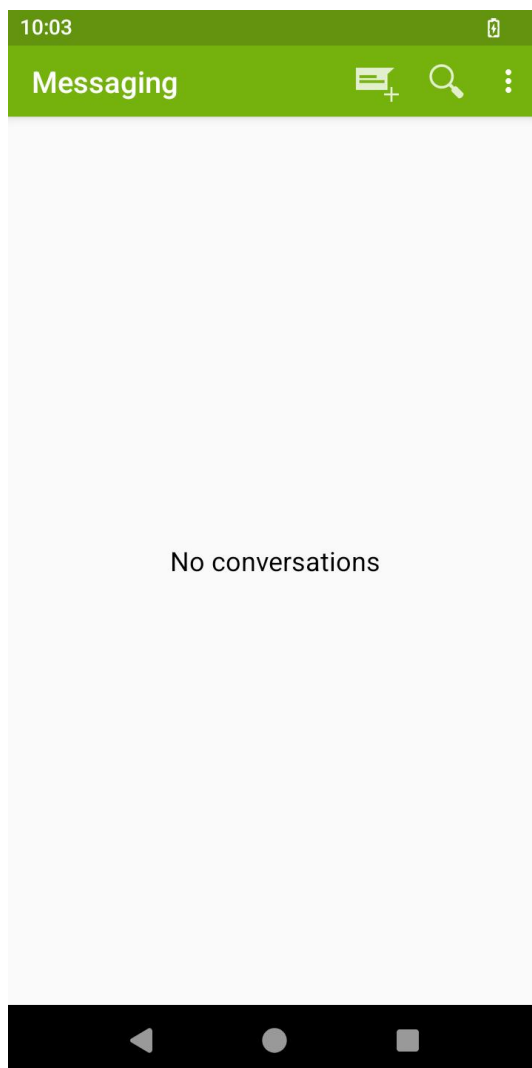
5.1 Dial

- 1) Click on the icon : The bottom of this page contains three parts: speed dial, call history, and contacts.
- 2) Click on the right side , Enter the dialing interface, press the number keys, and enter the phone number
- 3) Tap , make a phone call
- 4) tap , End the call



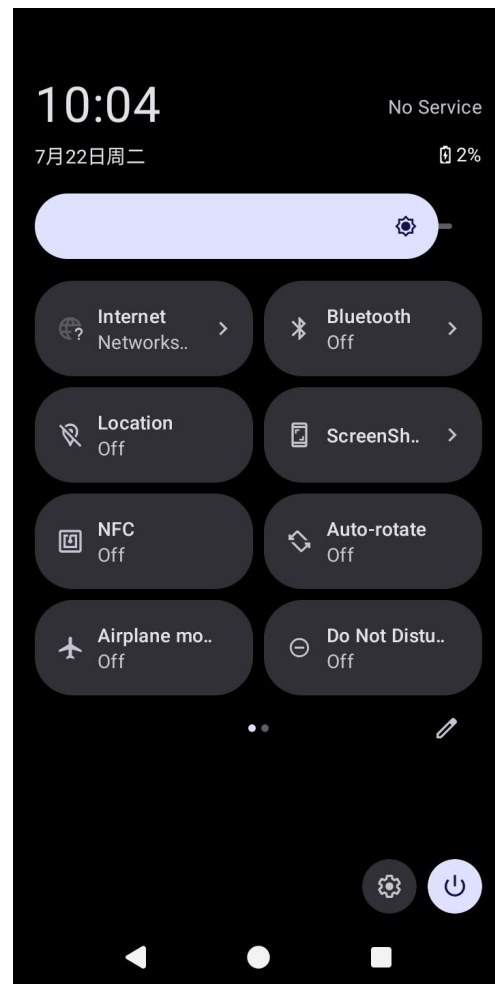
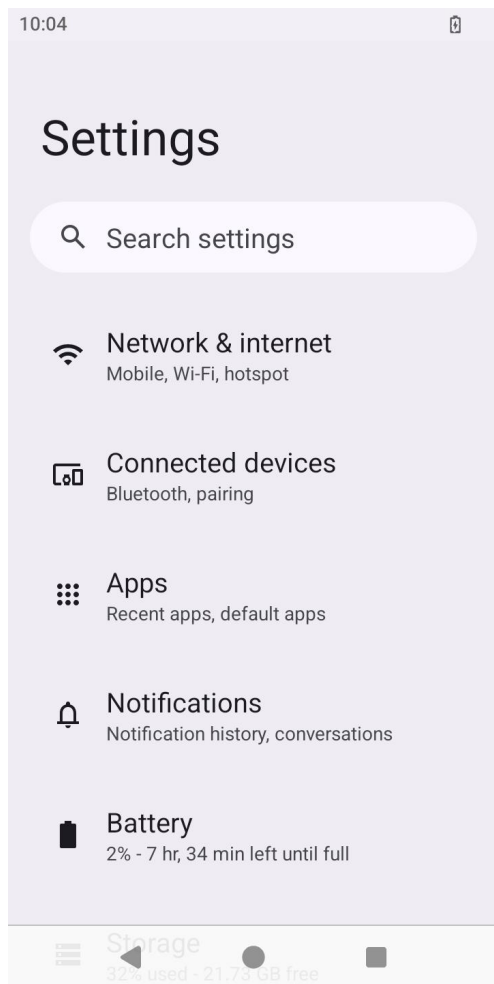
5.2 Text message

- 1) Tap , Open the SMS window
- 2) Tap , Enter a new conversation
- 3) After the recipient confirms their phone number or name, they can input text for SMS communication
- 4) Tap , Add pictures, videos, etc; Tap , Insert common phrases.



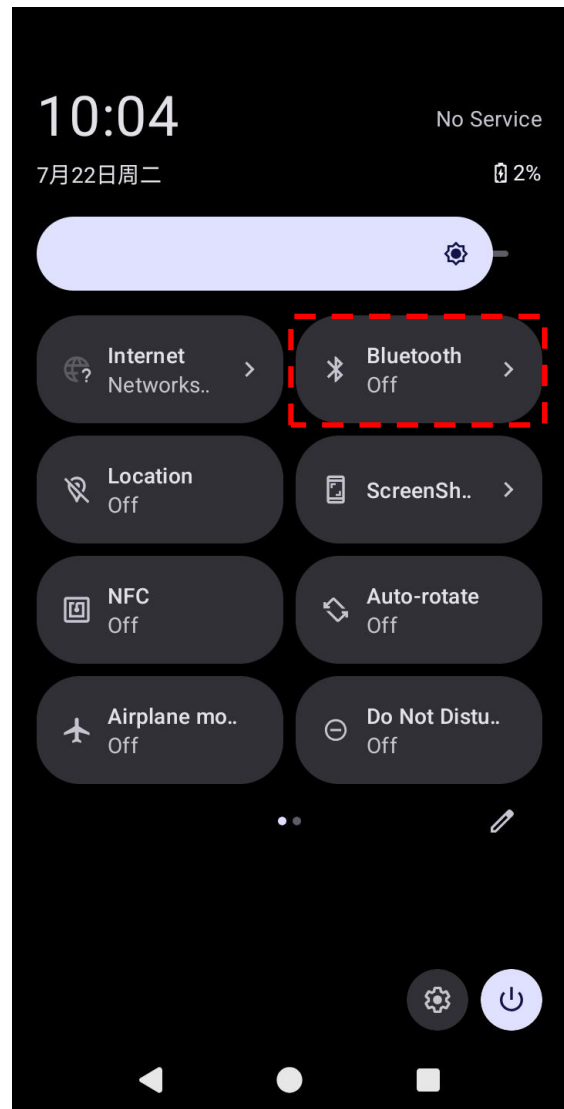
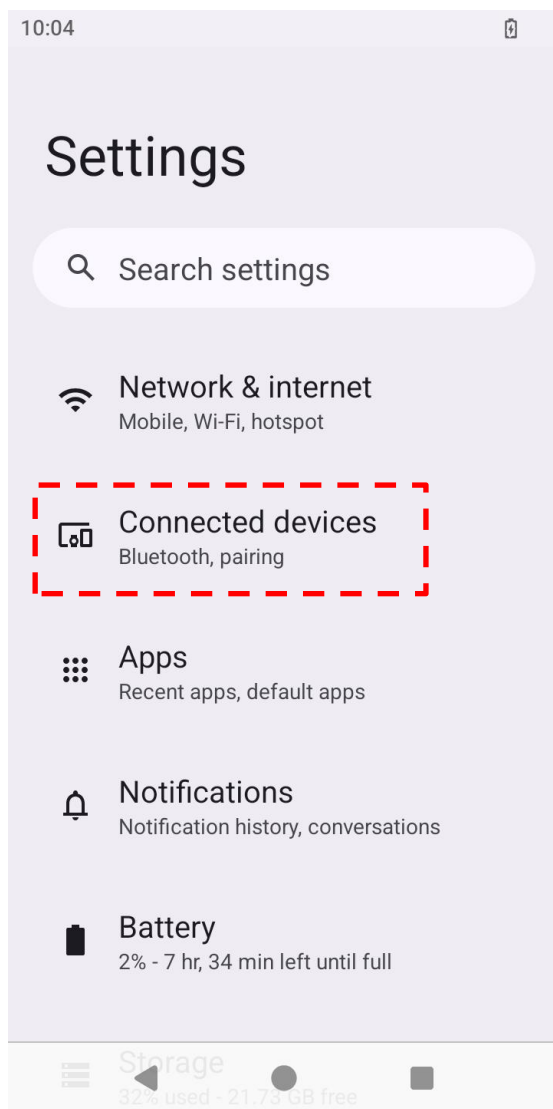
5.3 Network Connection

- 1) Access the device's "Settings" menu.
- 2) Select the "Network & Internet" option.
- 3) Tap "Internet" to enter the wireless network management interface.
- 4) Turn on the "WLAN" switch. The system will automatically scan and list available networks.
- 5) Select the desired wireless network from the list.
- 6) Enter the correct password (if required) according to the network requirements to complete the connection.
- 7) Alternatively, you can pull down the notification bar at the top of the screen (quick settings panel), tap the "Internet" icon, and then select the target network from the pop-up list and enter the password to quickly connect.




5.4 Bluetooth Connection

- 1) Access the device's "Settings" menu.
- 2) Select the "Connected Devices" option.
- 3) Tap "Connection Preferences" to enter the management interface.
- 4) Tap "Bluetooth," then turn on the "Use Bluetooth" switch to use the Bluetooth function normally.
- 5) You can also enable Bluetooth by pulling down the notification bar (quick settings panel) at the top of the screen and tapping the "Bluetooth" icon.



5.5 GPS




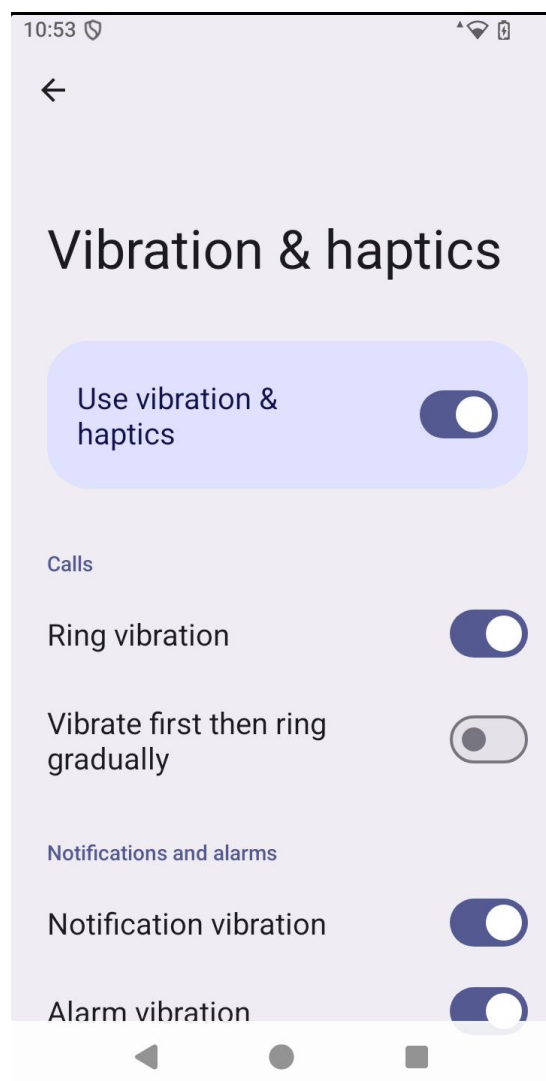
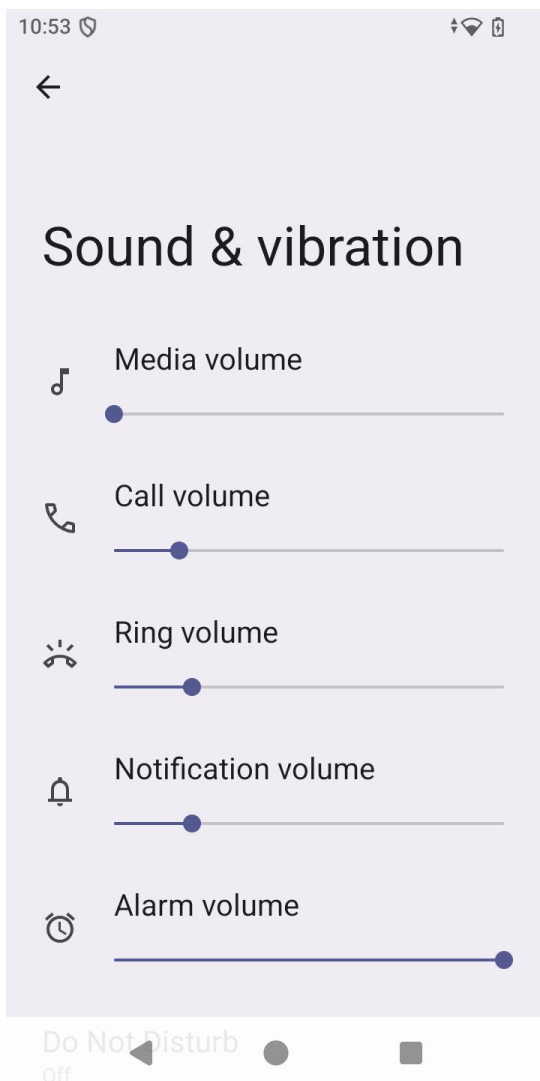
- 1) Click on the icon , open the "GPS positioning test".
- 2) Set GPS parameters to obtain GPS data information.




Chapter 6: Setup and Management

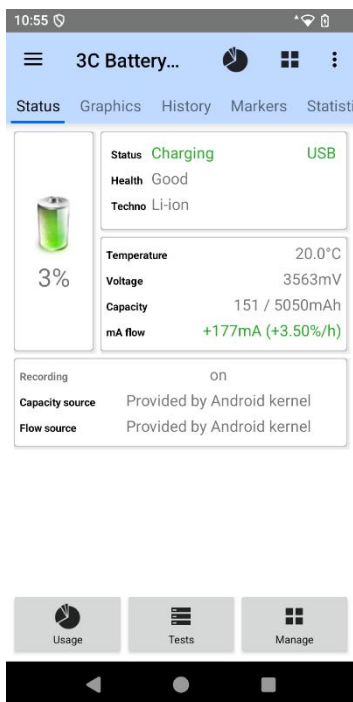
6.1 Volume adjustment

- 1) Find this icon in settings:  : You can set the volume, ringtone and notification sound, and turn the following functions on or off: ring vibration, dial keypad tone, touch notification sound, charging notification sound, lock screen notification sound and touch vibration.



6.2 Power and Battery Management

- 1) Due to the fact that the battery only has a small amount of power for testing purposes when it leaves the factory, it is important to charge the machine before using it.
- 2) Charging the battery through a power adapter takes about 4 hours or more for the first charge. The LED light stays on red during charging and turns green when the battery is fully charged.
- 3) The optimal operating temperature is room temperature of 18-25 °C .
Temperatures below -10 or above 50°C will not charge the battery.
- 4) If the wireless network service or data collection program is enabled, the battery power will be significantly reduced. It is recommended to turn off the program when not using this function to save power.
- 5) Enter the  3C Battery Monitor Pro program to understand the battery status.



Tip: If the product is not used for a long time, please charge the whole machine at least once every two months.

Chapter 7: Equipment Maintenance

7.1 Troubleshooting

Common faults and solutions

Fault 1: The device cannot start

Fault description: After the user presses the power button, the device does not respond and cannot start.

Troubleshooting steps:

- Check if the device has battery life, and if necessary, charge or replace the battery.
- If the above steps do not solve the problem, it is recommended to backup the data and restore the factory settings.

Fault 2: Equipment experiencing lagging phenomenon

Fault description: The device experiences lag, no response, and other phenomena during operation, which affects its use. Troubleshooting steps:

- Check the device memory to ensure it is not overloaded. You can try clearing the cache or closing other applications.
- Check the device memory to ensure it is not overloaded. You can try clearing the cache or closing other applications.
- Check the device for viruses or malicious software, and if necessary, run antivirus software for scanning.
- If the above steps do not solve the problem, it is recommended to backup the data and restore the factory settings.

Fault 3: The device cannot connect to the network

Fault description: The device cannot connect to Wi Fi or mobile networks.

Troubleshooting steps:

- Check if the device has turned on the Wi Fi switch or mobile data switch
- Check if the device is within the signal coverage range and try to connect close to the signal source.
- If it is a Wi Fi network issue, try restarting the Wi Fi router or entering the WiFi password again to connect.
- If it is a mobile network issue, you can try replacing the SIM card or contacting the operator for consultation.
- If the above steps do not solve the problem, it is recommended to backup the data and restore the factory settings.

Fault 4: Abnormal display on the device screen

Fault description: Abnormal display phenomena such as splash screen and

flashing screen appear on the device screen

Troubleshooting steps:

- Check if the equipment has been physically damaged by external factors. If necessary, seek assistance from professional maintenance personnel.
- Try restarting the device to see if it can solve the issue of abnormal display.
- Check if the device needs to update the system or application, and if so, update it.
- If the above steps do not solve the problem, it is recommended to backup the data and restore the factory settings.

Fault 5: The device cannot be charged

Fault description: After the device is connected to the power adapter and powered on, the charging light does not light up and the device screen has no response

Troubleshooting steps:

- Replace the power adapter for charging and eliminate any issues with the power adapter and charging cable;
- If the user has purchased a matching charging dock, try charging with the dock to see if it can be charged, because when the battery is completely empty, the battery will enter a sleep state and needs to be activated by charging with the dock.
- When using the Ethernet charging dock for charging, please turn off the internet switch on the dock.
- If the above steps do not solve the problem, it is recommended to backup the data and restore the factory settings.
- The above steps did not solve the problem. It is recommended to contact after-sales service for further processing.

7.2 Precautions

- 1) During the troubleshooting process, it is essential to follow the steps to avoid operational errors that may cause more serious problems
- 2) If the user is unable to successfully resolve the issue, it is recommended to contact after-sales service or professional repair personnel for assistance. Do not disassemble the equipment or use improper repair methods without authorization.
- 3) When troubleshooting, users should pay attention to their own safety and avoid personal injury caused by improper maintenance.

- 4) This troubleshooting manual is only applicable to the troubleshooting of common faults, and more complex issues require professional maintenance personnel to handle.

7.3 Preventive measures for faults

- 1) Regular maintenance and cleaning**

Regularly clean the surface and heat dissipation holes of the product to avoid the accumulation of dust and dirt that may affect its performance.

- 2) Proper use of power adapter**

Use a power adapter that meets the requirements to avoid overloading the power supply and ensure the stability of the power supply.

- 3) Prevent the product from getting damp**

The product should avoid prolonged exposure to humid environments such as kitchens, bathrooms, etc. to prevent circuit short circuits or component corrosion.

- 4) Prevent product collision**

Avoid external impacts or drops on the product to prevent internal components from becoming loose or damaged.

- 5) Timely backup of data**

Regularly backup important data to prevent data loss or irreparable situations.

Chapter 8: Explanation of Secondary Development

If you need a secondary development package or other technical assistance, please contact your corresponding business manager or technical engineer.