

# PWS 472 Product manual



Operation manual

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**Version 1.0**

# Matters needing attention

## Battery precautions

Battery life depends on the type of battery and how it is used. The battery life can be extended by avoiding the battery in a state that is completely electrically powered, which is prone to damage the battery. A few full discharges are more damaging than often charging the batteries. Charging a part of the battery does not damage the battery, because lithium batteries have no memory function. Keep the batteries in a cool state and avoid overheating. If you want to place a long time, make the battery charge at about 40% percent. Avoid the battery long time completely no electricity or long time placement, because the battery power will be exhausted, the resulting damage will make it more life than normal use of battery life shortened by half.

## Battery charging considerations

The ambient temperature has a great relationship to the lithium battery charging, and the battery charging efficiency is the highest in ambient or slightly cooler temperature. Charging the battery between 10 °C to 45 °C, exceeding this range of charging may cause damage to the battery and shorten its service life.

**Note:** Do not charge the battery in the temperature environment below 0 °C because it increases the internal resistance of the battery and increases the heat of the battery so that the battery is unstable and unsafe. Please use the battery temperature test charging device to ensure that the charging is carried out within a safe temperature range. In addition, in order to protect the batteries, avoid swelling, please use battery thermal protection to ensure that batteries will not charge at temperatures exceeding 50 °C.

## Storage and security considerations

Rechargeable lithium Batteries If they are not used for a few months, the battery's power will be exhausted by the depletion of the internal resistance. If this happens, fill the battery with electricity before you use it. The storage temperature of lithium batteries is between -20 °C to 60 °C, the higher the storage temperature, the faster the battery consumption, so it is best to store the batteries below room temperature.

## Laser safety precautions

Do not direct the laser line to the naked eye to prevent damage.

# Catalog

Matters needing attention.....	I
1. Parts .....	1
2. Introduction.....	1
2.1 Product overview.....	2
2.2 SIM card and SD card installation.....	3
2.3 Battery charging.....	3
2.4 Data transfers between PC.....	4
2.5 Check the battery and enter the power use menu.....	4
3. Basic operation .....	6
3.1 Application program.....	6
3.2 Barcode scanner.....	9
3.3 WiFi Roam.....	9
3.4 <b>RFID Sensing</b> .....	10
4. Product specification .....	11

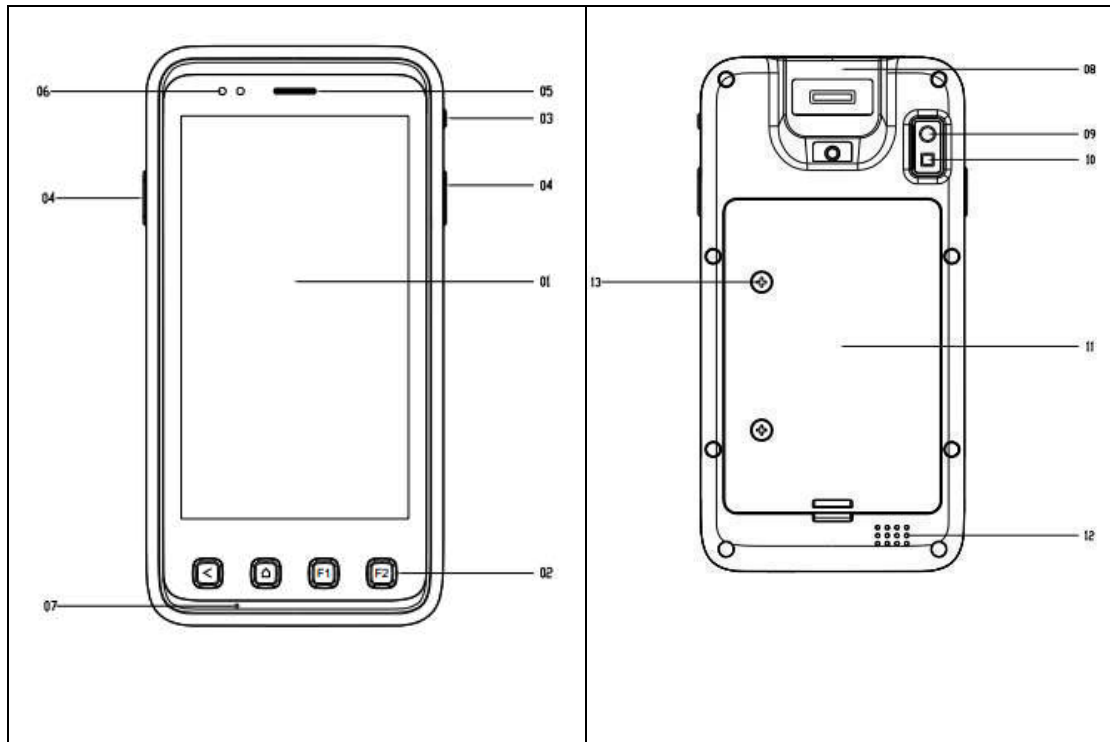
# 1. Parts

	
<p><b>PWS 472 terminal</b></p>	<p><b>USB Connecting line (Standard USB to Micro USB)</b></p>
	
<p><b>Power adapter</b></p>	<p>Battery</p>
	
<p>Wristband</p>	

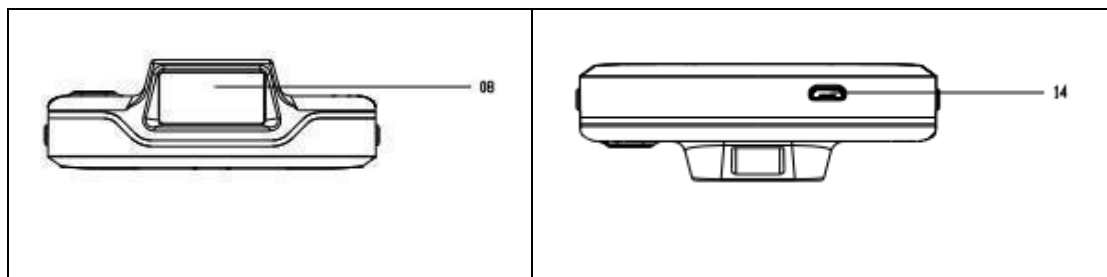
# 2. Introduction

PWS-472 based on Android development, with four core processors and 5-inch high-resolution screen, the use of industrial grade design and development with waterproof, dustproof, anti-fall, can replace the large capacity batteries, with more than 8 hours of endurance. At the same time support GPS/Beidou, RFID (NFC), 1D/2D barcode scanning and other functions. PWS-472 can be widely used in medical, retail, warehouses, factories and electricity, land, surveying, forestry and other industries.

## 2.1 Product overview



1. Main screen	7. Microphone
2. Push-button	8. Scan engine
3. Power button	9. Camera
4. Scan button	10. Fill-in light
5. Receiver	11. Battery cover 13. Back cover screw
6. LED lamp	12. Speaker



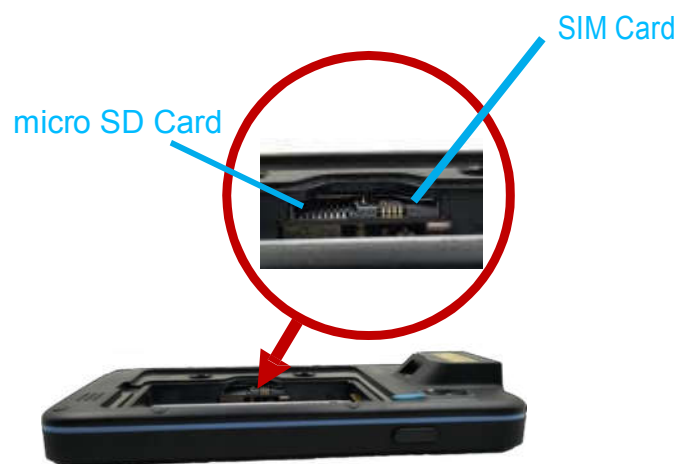
08. Scan window	14. MicroUSB Interface
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## 2.2 SIM card and SD card installation

Assembly of batteries, SD cards and SIM cards

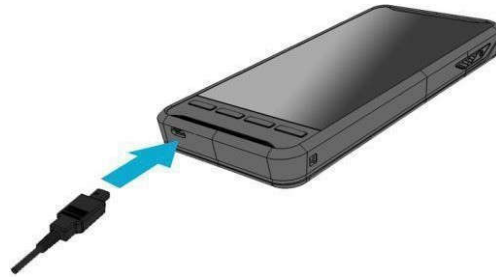
1. Use a screwdriver counterclockwise to loosen the two screws on the battery lid.
2. Open the rear cover and remove the battery.
3. You can now use the Micro SD card slot and the SIM card slot.  
(SIM card support Mobile/Unicom 4G)
4. Insert SIM/SD Card

SIM/SD card metal contact face downward, referring to the fuselage card slot insert diagram, along the SIM/SD card groove to push into the smooth.



## 2.3 Battery charging

1. Connect the device's USB connector to the charger.  
(Note: Battery charging temperature 0 ° C to 40 ° C)
2. Connect the micro USB connector on the other end of the connector to the micro USB port at the bottom of the device.



3. Plug the AC charger into the power outlet.

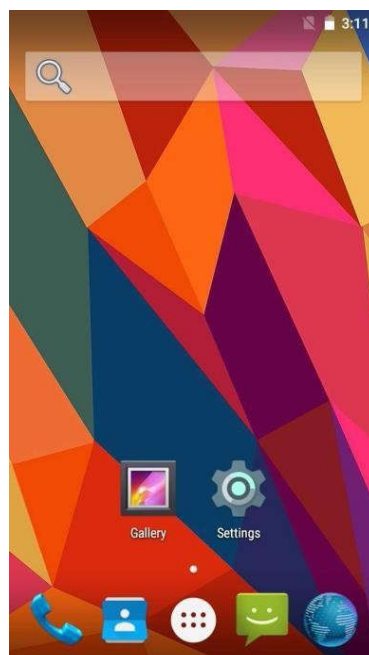
## 2.4 Data transfers between PC

1. Connect a standard USB connector to the PC's USB port.
2. Connect the micro USB connector in the connector to the micro USB port at the bottom of the device.
3. To make it easier to synchronize with your PC, you can download mobile management software from the Android Market.

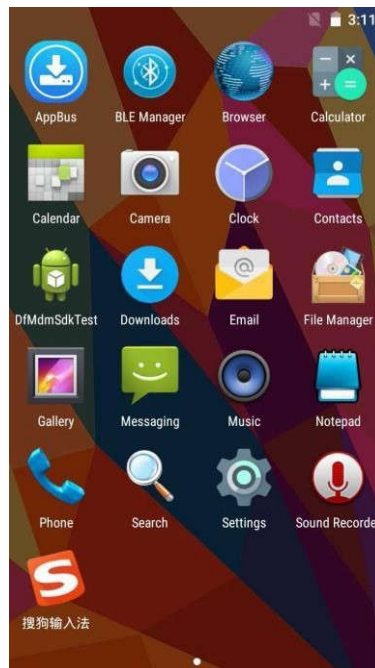
## 2.5 Check the battery and enter the power use menu




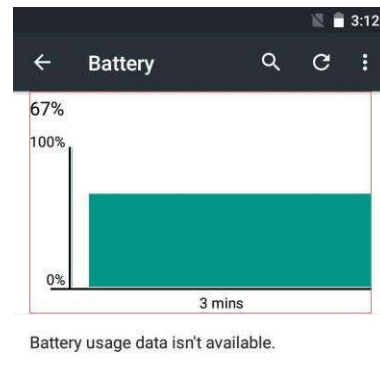
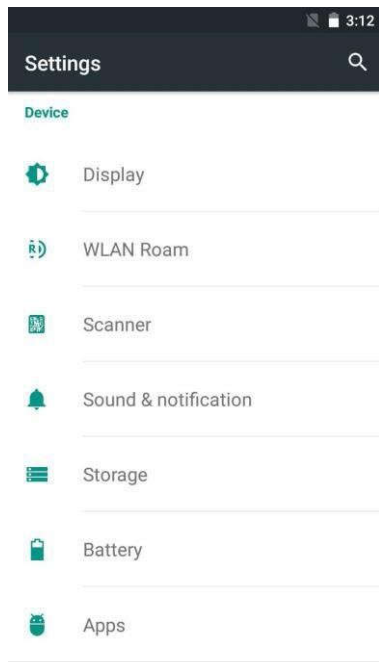
- 1 On the main screen, click the button.



2 Enter settings



3 Select battery. 






## 3. Basic operation

### 3.1 Application program


How do I open the application interface?

On the main screen, click  button can.

How to connect WiFi, BT?

Click "Settings"-"WLAN" in your application to open WiFi and select the network you want to connect to. In the application, tap Settings-Bluetooth to open Bluetooth, and then select the device that you want to connect to the pairing.

How do I create a shortcut to an application on the main screen?


- 1 On the main screen, click  button.
- 2 Touch selects an app icon press and hold, and then open the main screen.
- 3 Drag the icon to the main screen page you want, and then loosen your finger.

How do I change the system language of a device?


Click Settings in the Application-language and IME-language to select the system language, supported languages are English, Simplified Chinese, Traditional Chinese, Japanese, Spanish, German, French, and so on.

Call function

Call Processing/dial-up call

1 On the main screen, click  dial button.

2 Select dial interface

3 Enter the phone number for the listener, and then click the call. To remove a number, click  the Delete button.









Hang up

• Click  Hook button.

## Application List

The following illustration shows

a common application sequence

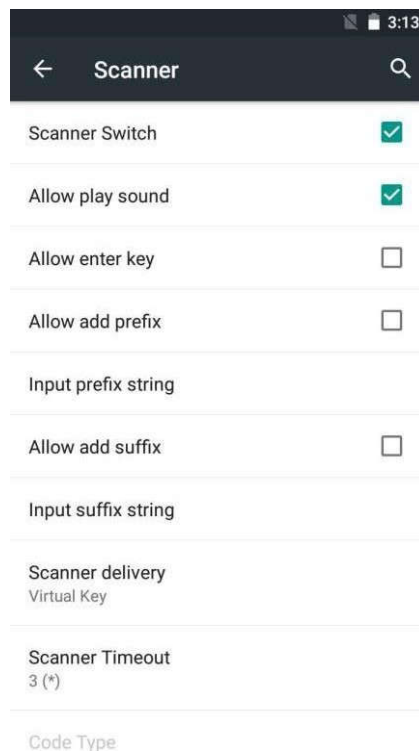
	Telephone	Call, you can directly use the T9 keyboard to dial the phone, or through the T9 keyboard to search for contacts, you can quickly dial back to call records.
	Information	Send and receive SMS, SMS content support sending text or inserting pictures, facial expressions, contact information, audio and video etc.
	Mail list	Manages the address book, supports importing contact information from UIM, SD cards, and cloud accounts. Search, add, edit, and delete contacts.
	E-mail	After you set up your mailbox, you can use PWS-472 to send messages, and when you have new messages, you will receive reminders for the first time.
	Browser	Browsers support double-clicking or two fingers to zoom the page. Quick access to common websites via web site navigation. Support Multiple volume labels, click on the volume label to switch pages. Smart full-screen, browse the region best fit.
	Camera	Camera program to shoot high-quality photographs, support for rapid adjustment of focal length, with LED light-up lamp, to support 720P high-quality video.
	Resource Manager	Through file management to understand the current use of mobile phone memory card, support through the classification of fast browsing files, supporting the management of documents by path. Mobile phone files can be remotely managed from the computer side via WLANs
	Clock	Set time and alarm clock, alarm clock support repeat reminder, custom alarm clock label.

## 3.2 Barcode scanner

1. The native system automatically turns on scanning service.
2. The native scan service is divided into two modes:
  - One is analog keyboard message, that is, open any edit area/input area to press the scan button to scan input.
  - One is the messaging mechanism, which needs to modify the associated reception mechanism in the user app to get the current scan results. Generally speaking, it is necessary to receive the Chinese information in the barcode.

Specific code and relevant instructions are detailed in the development SDK.

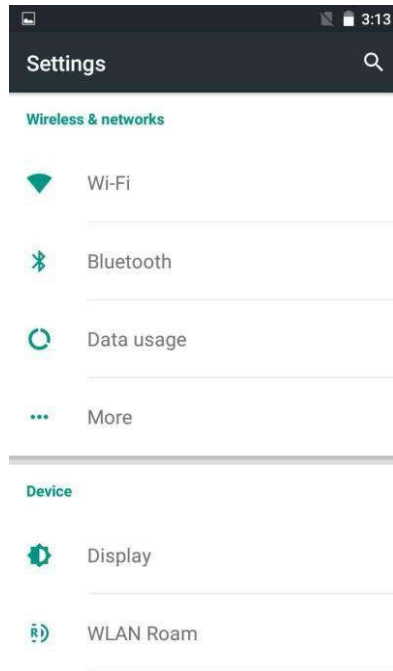
3. Commonly used scanning settings, in the "Settings"- "scanner" can be set.



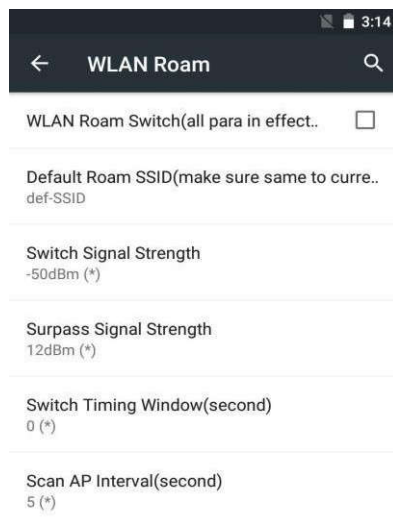
## 3.3 WiFi Roam

PWS-472 built-in WiFi chips support wireless roaming, usually what we call "roaming" means that when the device is plugged into an AP, the current signal is getting weaker and more seamlessly connected to the new AP on the same SSID automatically. WiFi roaming settings need to be focused on two parameters, one that triggers the roaming action's "signal threshold", and the other is "the signal difference", that is, the "degree" of the signal value of another "better" AP is good.

In the system settings, locate the WLAN roaming as follows:



Click enter:



WLAN roaming switch: Turn on/off roaming switches

Toggle Signal Threshold: Set the trigger signal value for roaming

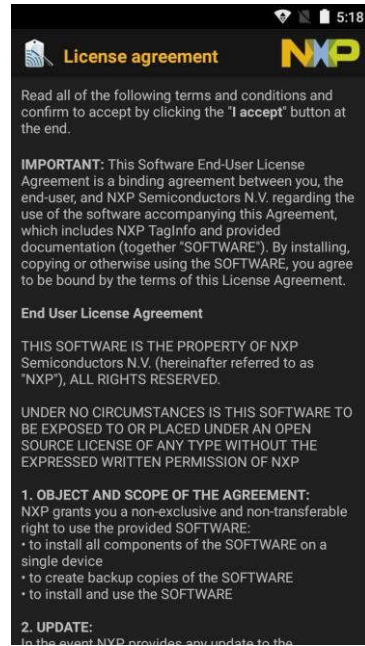
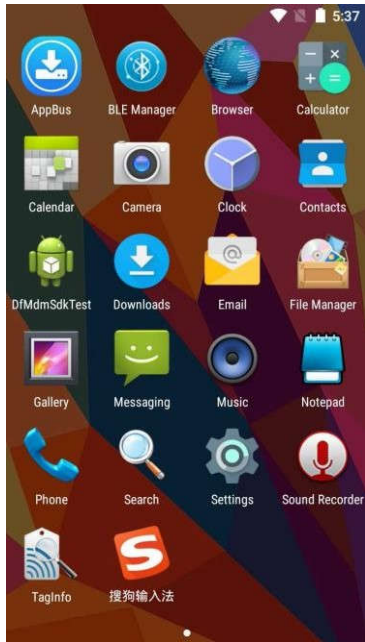
Toggle Signal Difference: Sets the difference between the current signal and the roaming AP signal.

Default roaming SSID: When fixed to a certain SSID, such as a connection to other SSID, the system deletes the configuration file for the attached SSID and reconnect the default SSID.

Note: Roaming thresholds can directly affect the efficiency and effectiveness of roaming, in general, the roaming threshold needs to be tested according to the actual environment, if necessary, please contact local technical support staff

### 3.4 RFID Sensing

1. Tap the TagInfo. 



## 四、 Product specification

Processor	CPU	Cortex-A53, 64 bit, Quad core, 1.3GHz
Internal storage	2GB	
Flash Memory	16GB	
Audio system	Loudspeaker and microphone, handset	
Display	Size / type	5 inch HD Large color touch screen
	Max Resolution	HD (1280 X 720)
	brightness (cd/m <sup>2</sup> )	450 cd/m <sup>2</sup> LED Backlight
Touch screen	Multi-Touch Capacitive touch screen	
Application program interface	Support expansion card storage, maximum 32GB waterproof USB design, data and charging function	
I/O Port	1 MicroSD (max support for 32G storage) 1 MicroUSB 2.0 clients (via Charger connector)	
communication	WLAN	Built-in 802.11 a/b/g/n, 2.4GHz/5GHz dual-band WLAN module
	Bluetooth	4.0 BLE
	GNSS	High Performance GPS/Beidou chipset
Data acquisition	Integrated 1D/2D laser scanner and 8 million autofocus camera	
Readable code system	1D/2D Standard Barcode	
Machine weight / size	16 cm (long) x 8.2 cm (wide) x 1.8 cm (high), 295 grams (incl. batteries)	
Power	Battery	Lithium polymer batteries, 3.7V@3200 mA (default)
Work environment	Operating temperature	-20 ° ~ +60° C
	Storage temperature	-30 ° ~ +70° C
	Relative humidity	5% ~ 95%, no condensation
Operation Certification	Android 5.1 Systems support	
Strong authentication	IP65 certification 1.2 meters free fall protection against falling	

## **FCC Caution.**

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.

### **§ 15.21 Information to user.**

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

### **§ 15.105 Information to the user.**

**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.

### **Body-worn Operation**

This device was tested for typical body-worn operations. To comply with RF exposure requirements, a minimum separation distance of **1.0cm** must be maintained between the user's body and the handset, including the antenna. Third-party belt-clips, holsters, and similar accessories used by this device should not contain any metallic components. Body-worn accessories that do not meet these requirements may not comply with RF exposure requirements and should be avoided. Use only the supplied or an approved antenna.