FCC ID:2AC6AR6

SHENZHEN CHAINWAY INFORMATION TECHNOLOGY CO.,LTD

UHF Sled Reader

R6 User Manual

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FCC caution

This device was tested for typical body‐worn operations with the back of the handset kept 0mm from the body.

To maintain compliance with FCC RF exposure requirements, use accessories that maintain a 0mm separation distance between the user's body and the back of the handset. The use of belt clips, holsters and similar accessories should not contain metallic components in its assembly. The use of accessories that do not satisfy these requirements may not comply with FCC RF exposure requirements, and should be avoided.

FCC statements:

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: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications or changes to this equipment. Such modifications or changes could void the user’s authority to operate the equipment.

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.

RF Exposure Information(SAR)

The SAR limit of USA (FCC) is 1.6 W/kg averaged over one gram of tissue.

Device types R6 (FCC ID:2AC6AR6) has also been tested against this SAR limit.

The highest SAR value reported under this standard during product .certification for us e when properly worn on the body are 0.172W/kg(0mm) and 0.629W/kg(10mm).

Statement

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Chapter 1 Product intro

1.1 Intro

This is a new UHF back clip product, featuring the Cortex-M3 STM32 processor with excellent working performance. The device can be used with any Android and IOS device as a host. The device combines powerful UHF (Read and write) functions with 2D scanning for greater sensitivity. It equipped with a host is widely used in clothing inventory, warehouse management, vehicle management, financial management and other fields.

1.2 Precaution before using battery

- Do not leave battery unused for long time, no matter it is in device or inventory. If battery has been used for 6 months already, it should be check for charging function or it should be disposed correctly.
- The lifespan of Li-ion battery is around 2 to 3 years, it can be circularly charged for 300 to 500 times. (One full battery charge period means completely charged and completely discharged.)
- When Li-ion battery is not in used, it will continue discharge slowly. Therefore, battery charging status should be checked frequently and take reference of the related battery charging information on the manuals.
- Observe and record the information of a new unused and non-fully charged battery. On the basis of operating time of new battery and compare with a battery that has been used for long time. According to product configuration and application program, the operating time of battery would be different.
- Check battery charging status at regular intervals.
- When battery operating time drops below about 80%, charging time will be increased remarkably.
- If a battery is stored or otherwise unused for an extended period, be sure to follow the storage instructions in this document. If you do not follow the instructions, and the battery has no charge remaining when you check it, consider it to be damaged. Do not attempt to recharge it or to use it. Replace it with a new battery.
- Store the battery at temperatures between 5 °C and 20 °C (41 °F and 68 °F).

1.3 Charger

The charger type is GME10D-050200FGu, output voltage/current is 5V DC/2A. The plug considered as disconnect device of adapter.

1.4 Notes

Note:
Using the incorrect type battery has danger of explosion.
Please dispose the used battery according to instructions.

Note:
Due to the used enclosure material, the product shall only be connected to a USB Interface of version 2.0 or higher. The connection to so called power USB is prohibited.

Note:
The adapter shall be installed near the equipment and shall be easily accessible.

Note:
The suitable temperature for the product and accessories is 0-10℃ to 50℃.

Note:
CAUTION RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

Chapter 2 Installation instructions

2.1 Appearance

R6 right and front appearances are showing as follows:

Indicating Lamps instruction

Lamps		Description
Indicating Lamps	Power	Constant light up (battery available)/Flash (Low battery)
	Bluetooth	Constant light up (Bluetooth connected)
	Work	Flash when read UHF tags

2.2 Battery charge

By using USB contact, the original adaptor should be used for charging the device. Make sure not to use other adaptors to charge the device.

2.3 Buttons and function area display

R6 Sled reader has 1 power button and 3 indicating lamps.

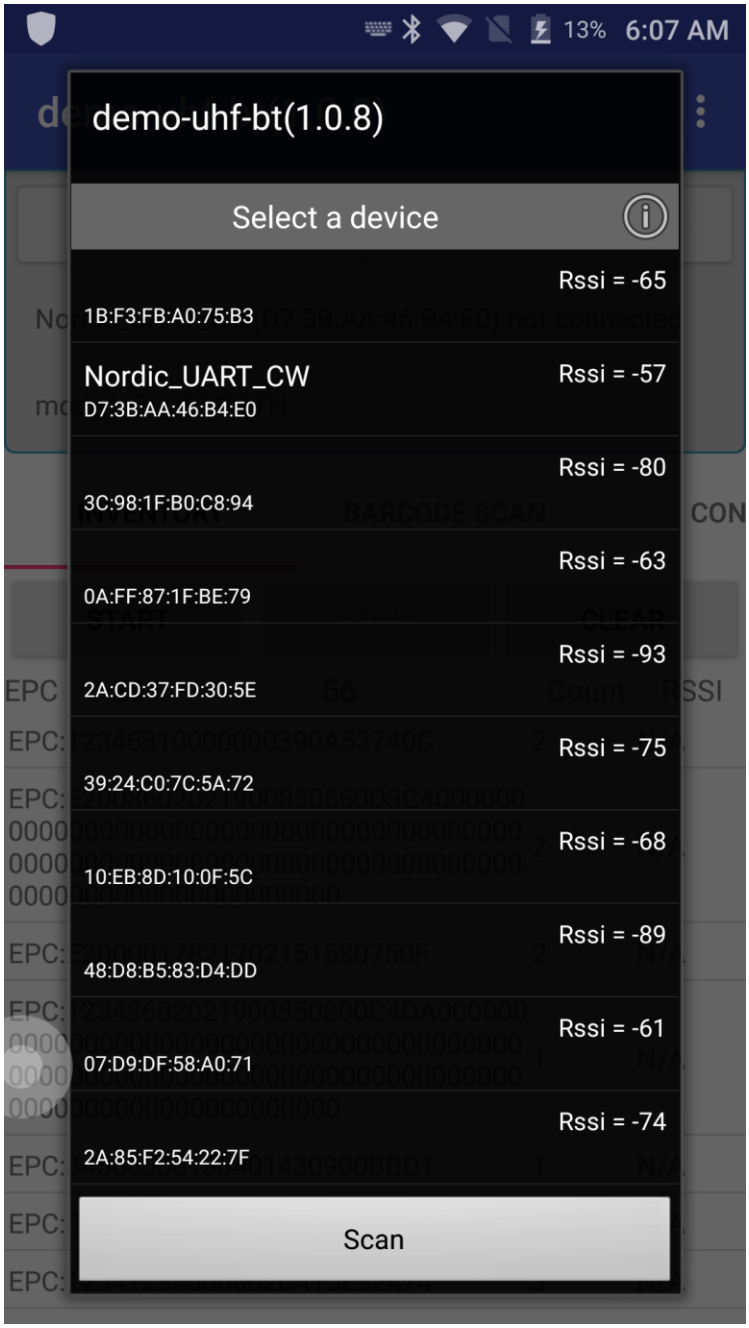
Chapter 3 Demo Test

3.1 Install demo-uhf-bt (1.0.8)

1. Copy demo-uhf-bt (1.0.8) into internal storage of smart phone or C7x device.
2. Click to install.
3. Click icon to open demo.

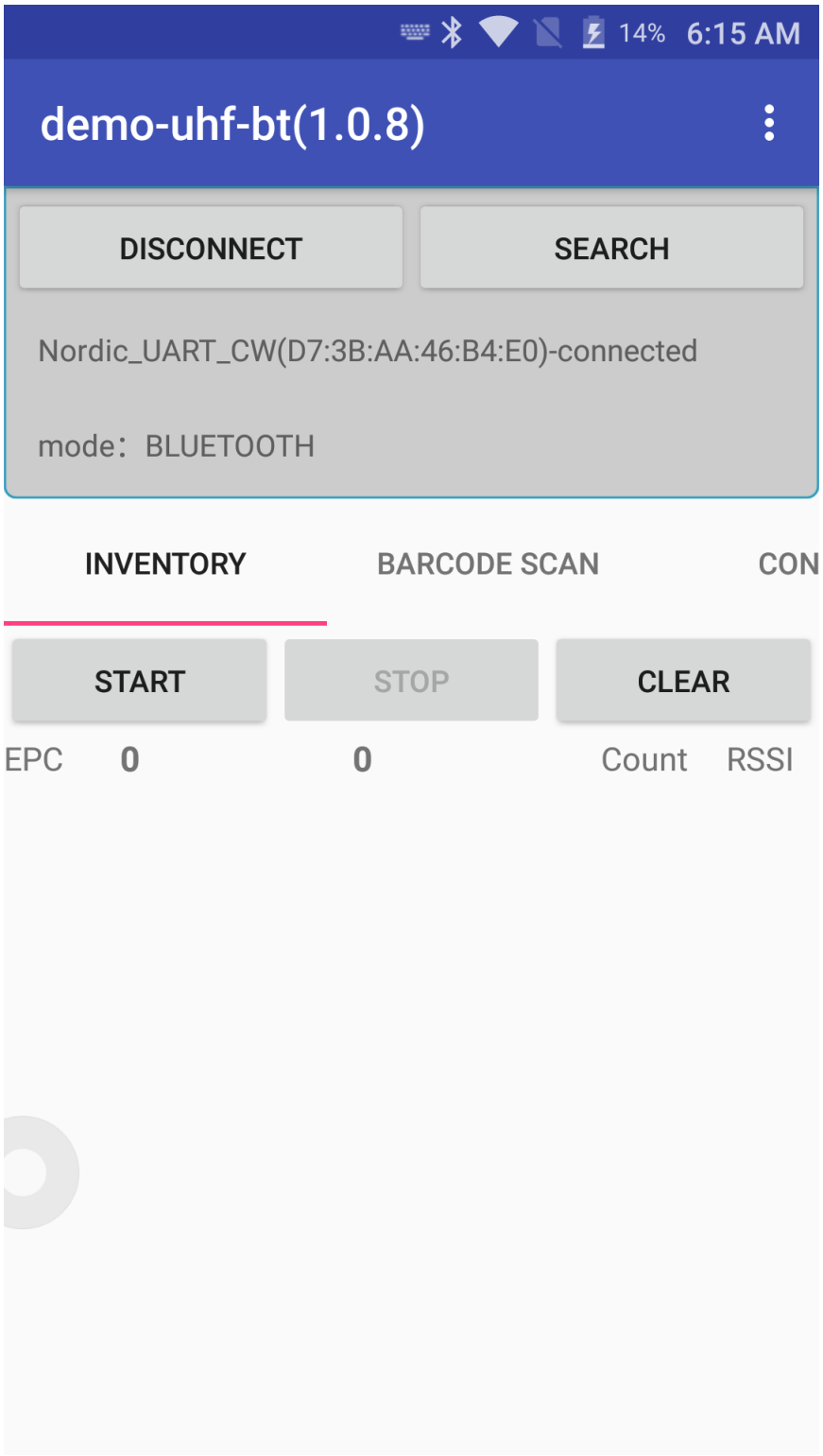
3.2 Pairing Device

1. Switch on Bluetooth function of smartphone or C7x device.
2. Power on R6.
3. Click BLUETOOTH in the demo.
4. Click SEARCH to search for Nordic_UART_CW.



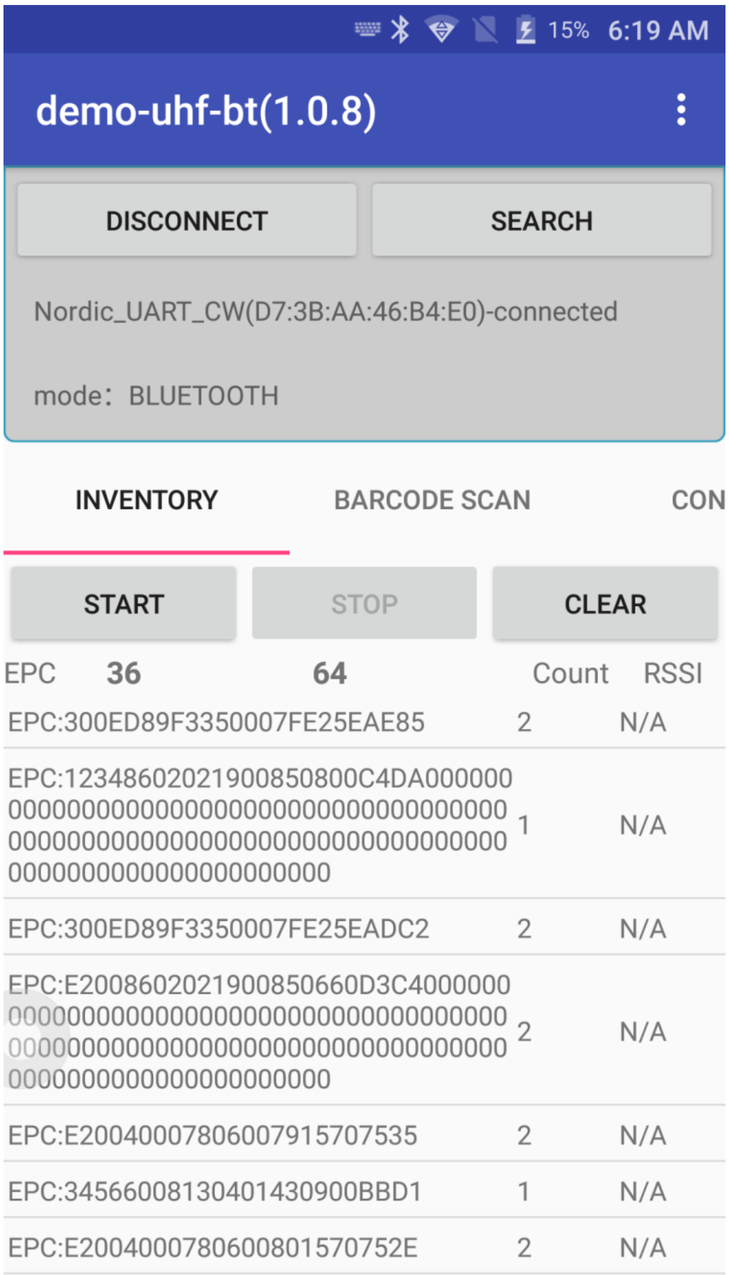
5. Click Nordic_UART_CW to connect.

6. After connecting successfully, user could click 3 dots on top right to check UHF version, battery percentage and UHF module temperature.



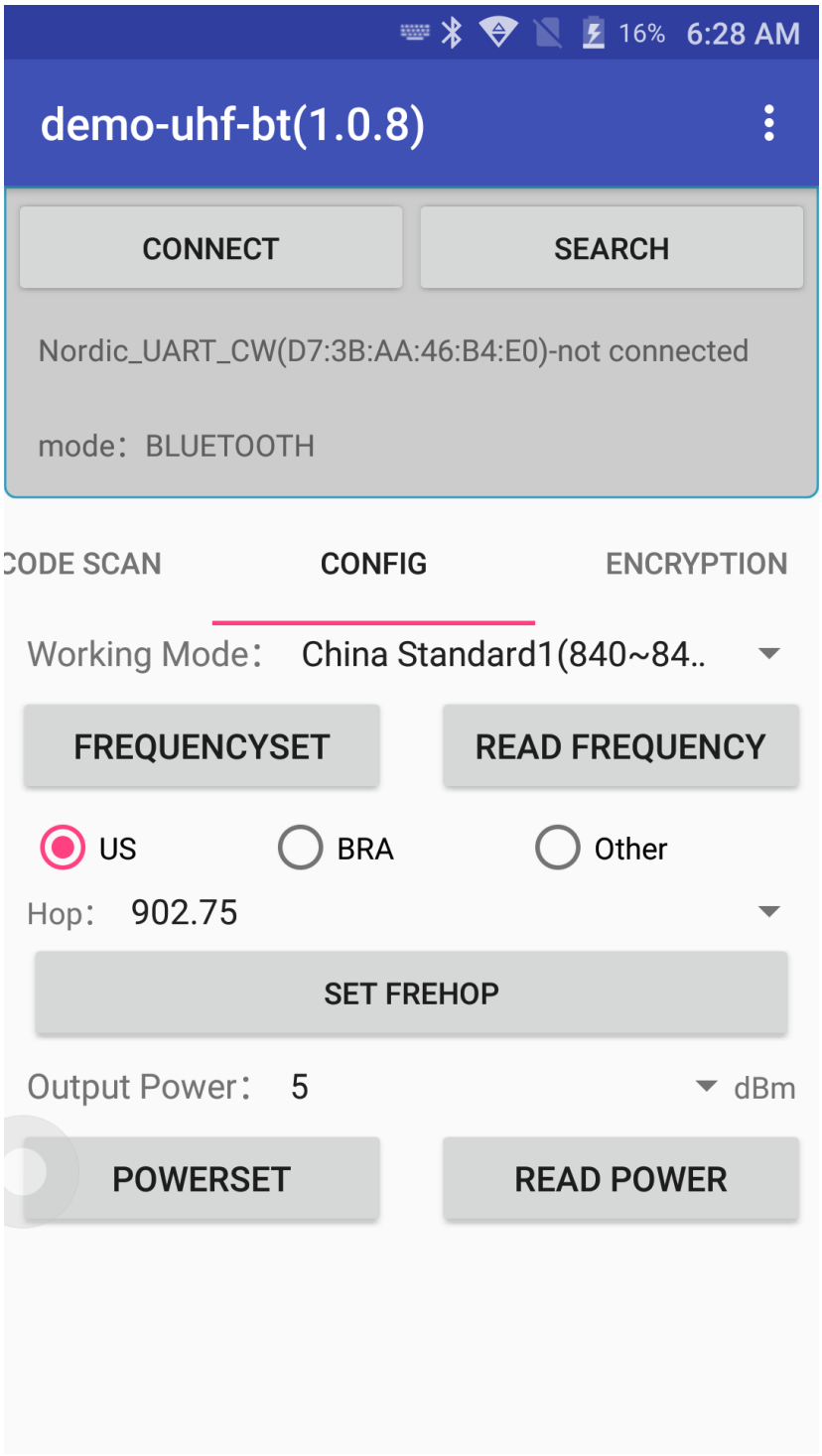
3.3 UHF Scan Function

1. Click START in demo or pull the trigger on R6, the UHF tags could be read.
2. Click STOP in demo to stop reading of UHF tags.
3. Click CLEAR to clean all EPC information.



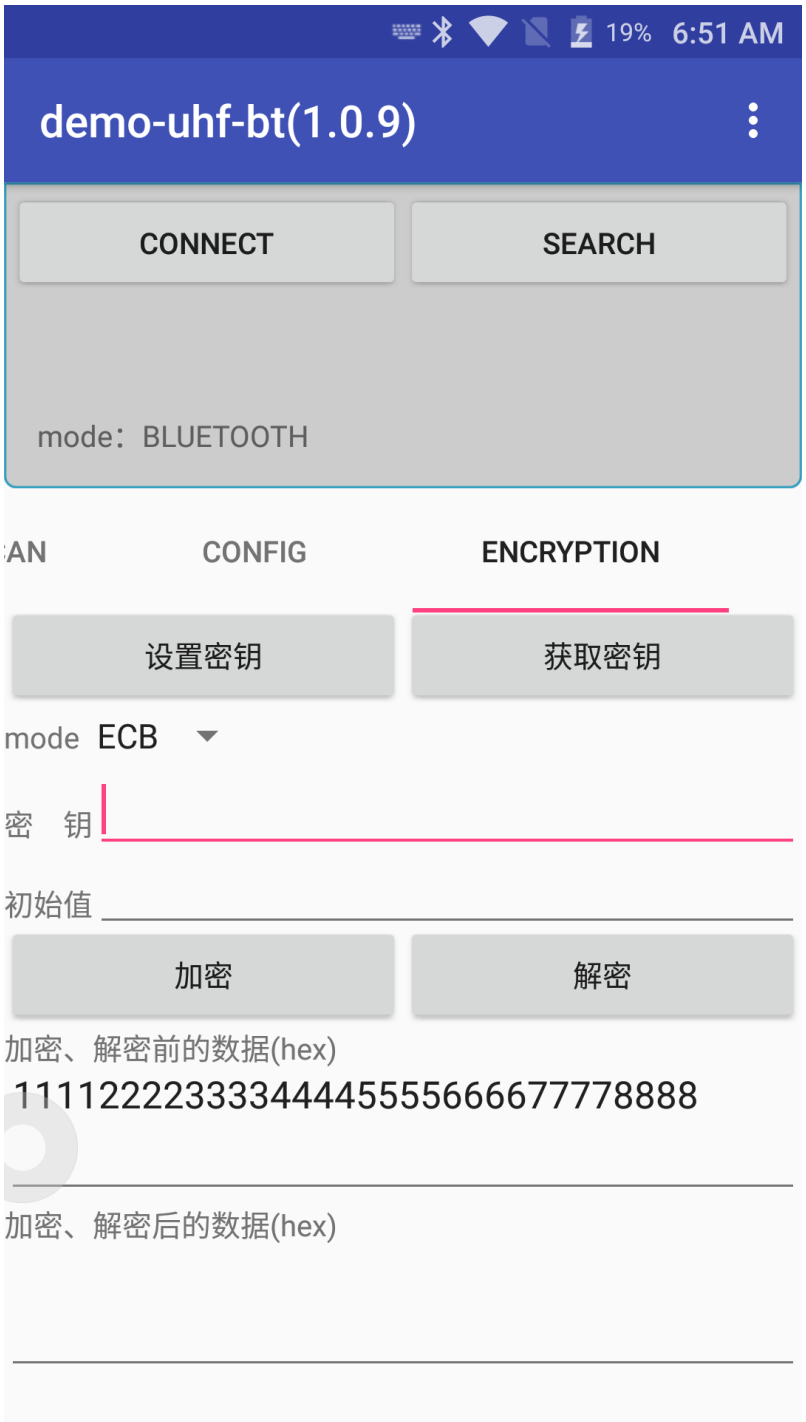
3.4 UHF Configuration

1. Click CONFIG in demo to adjust working mode and output power.



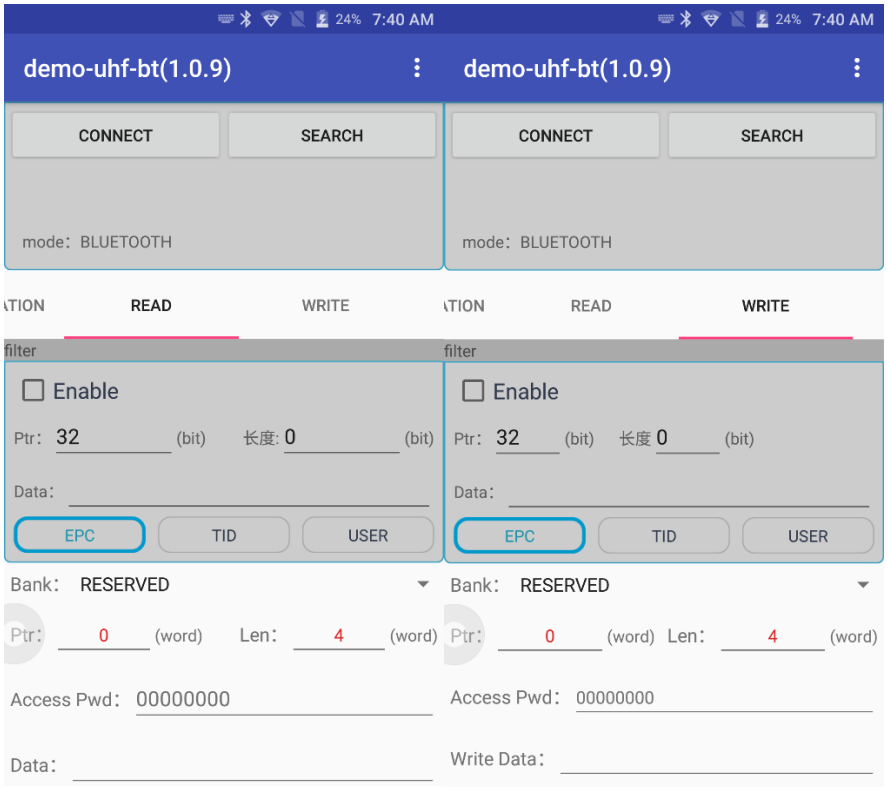
3.5 UHF Encryption

1. Click ENCRYPTION to decrypt and encrypt the special zones of UHF tags such as USER, EPC, etc.



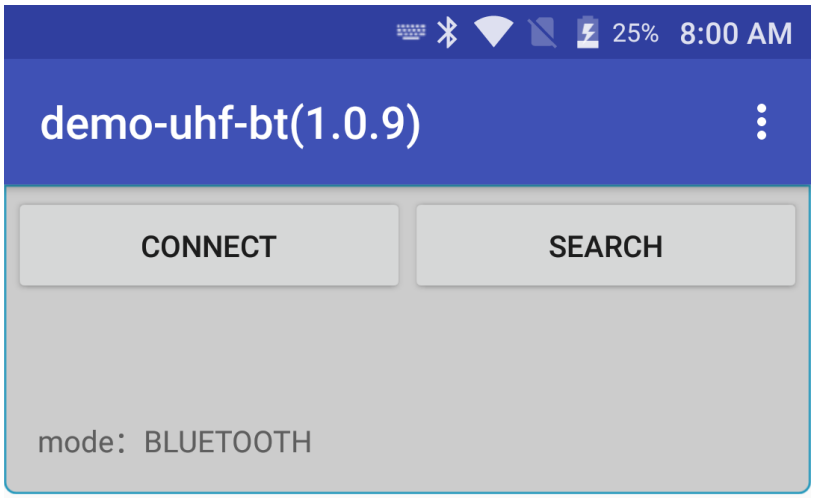
3.6 UHF Tag Reading and Writing

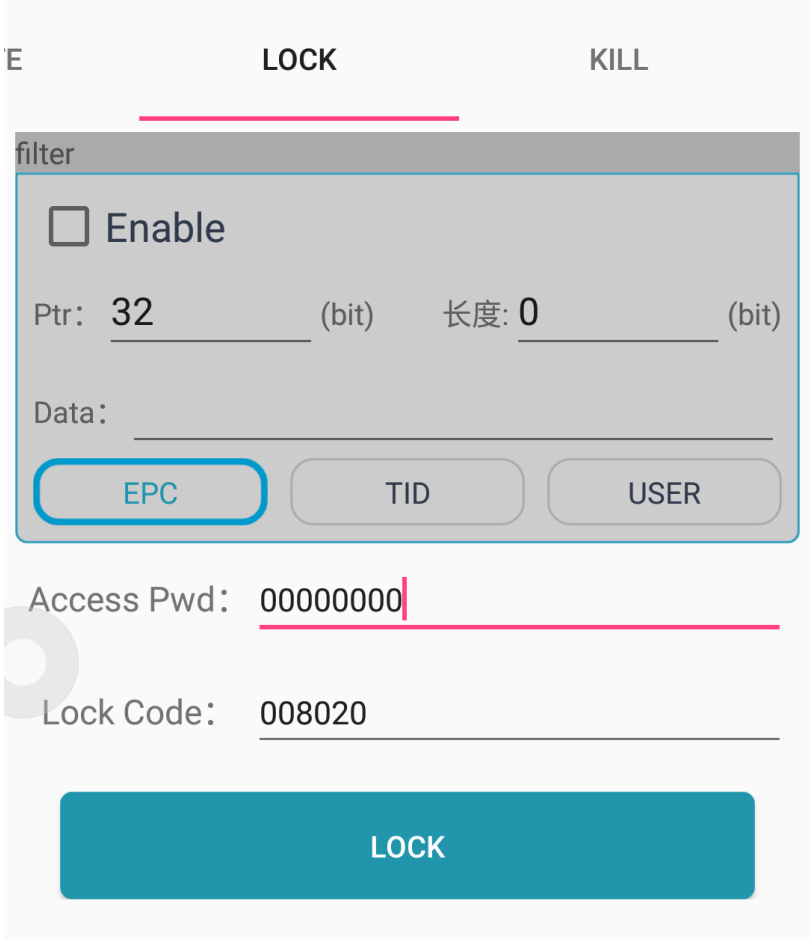
1. The storage of one tag has 4 zones: RESERVED, EPC, TID and USER. Normally, the default password is 00000000. And TID zone can only be read, other zones can be read and written.



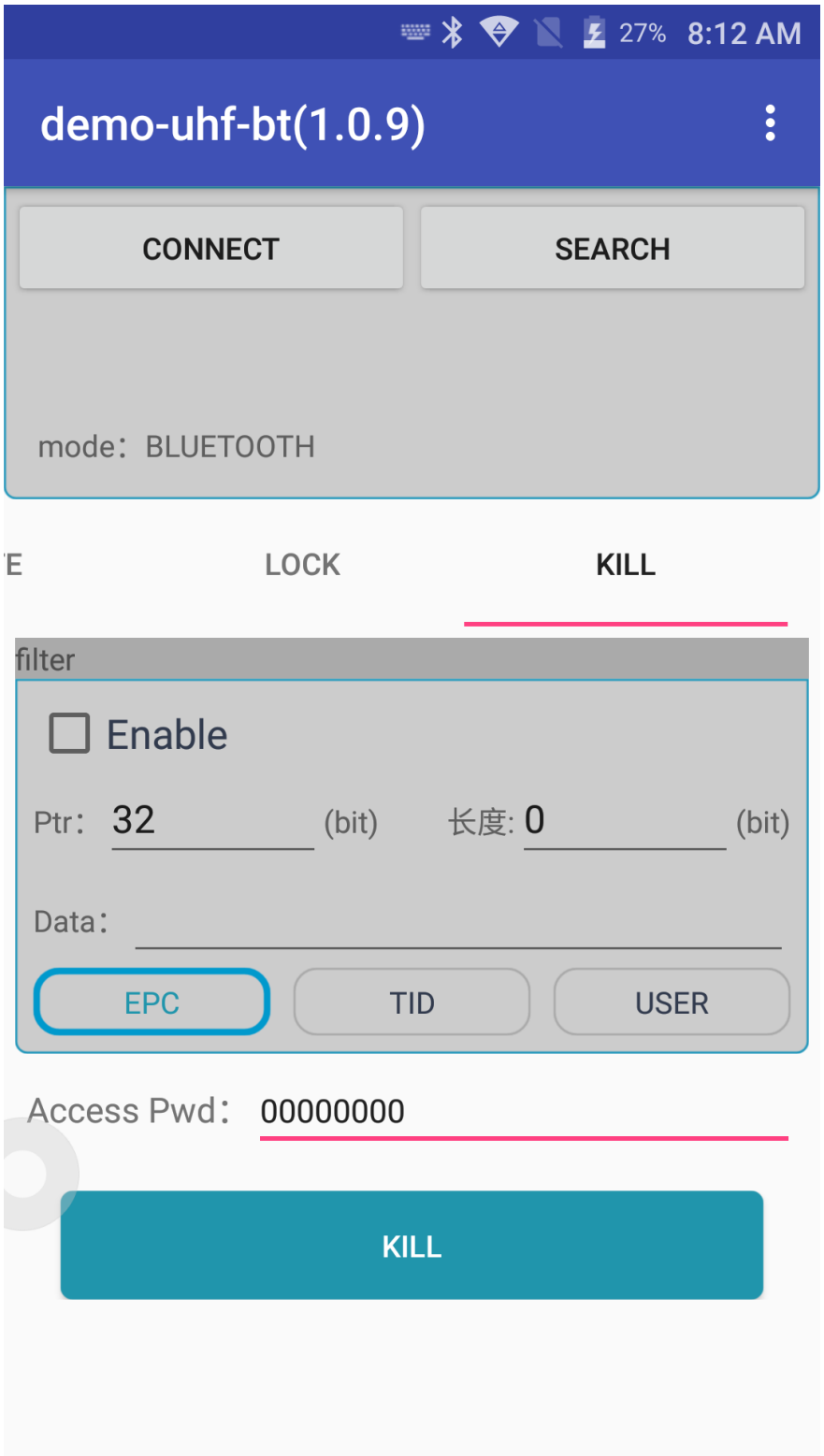
3.7 UHF Tag Lock and Kill

1. Lock Function:
   For example. User could try to lock down EPC zone.





2. Kill Function:
   Kill function can be used to kill the tag permanently. Input the correct access password and click kill.

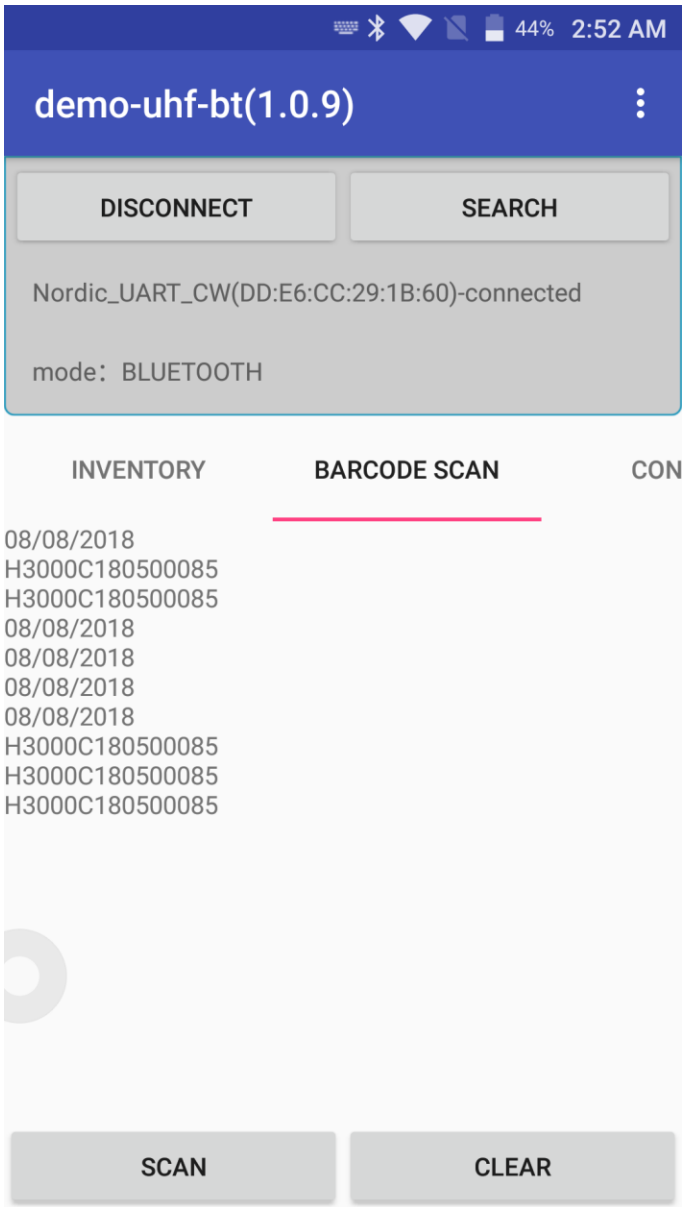


3.8 Firmware Upgrade

1. Copy the firmware bin. file into internal storage.
2. Click Select file to search for bin.
3. Click Upgrade to upgrade firmware.

3.9 Barcode Scan Test

Select BARCODE SCAN in the demo and click SCAN button on the screen to scan barcodes.



Chapter 4 Device characteristic

Physical characteristics

Size	153.96x76x129.08mm
Weight	445g
Color	Black
Appearance material	Plastic
Product material	Plastic
Battery specification	2600mAh/5200mAh
Indicator LED	Power, Work, Bluetooth
Buzzer	Support
Interfaces	Micro-USB

Performance

MCU	Cortex-M3/72 MHz
RAM+ROM	64M+4G

User environment

Operating temp.	-20℃ to 50℃
Storage Temp.	-40℃ to 70℃
Humidity	5%RH - 95%RH non condensing

Data collection

2D Imager Scanner	SE2707
1D Symbologies	UPC/EAN, Code128, Code39, Code93, Code11, Interleaved 2 of 5, Discrete 2 of 5, Chinese 2 of 5, Codabar, MSI, RSS, etc.
2D Symbologies	PDF417, MicroPDF417, Composite, RSS, TLC-39, Datamatrix, QR code, Micro QR code, Aztec, MaxiCode; Postal Codes: US PostNet, US Planet, UK Postal, Australian Postal, Japan Postal, Dutch Postal (KIX), etc.

UHF

Antenna	Circular Polarized antenna (4dBi)
Frequency	920-925MHz/902-928MHz/865-868MHz
Protocol	EPC C1 GEN2 / ISO18000-6C
Module power	1W (30dBm, support +5~+30dBm adjustable)
R/W range	>28m(indoors);>12m(open outdoors)
Reading rate	>200tags/s * Ranges and rates depend on tags and environment