MR18
UHF Sled Reader
User's Manual

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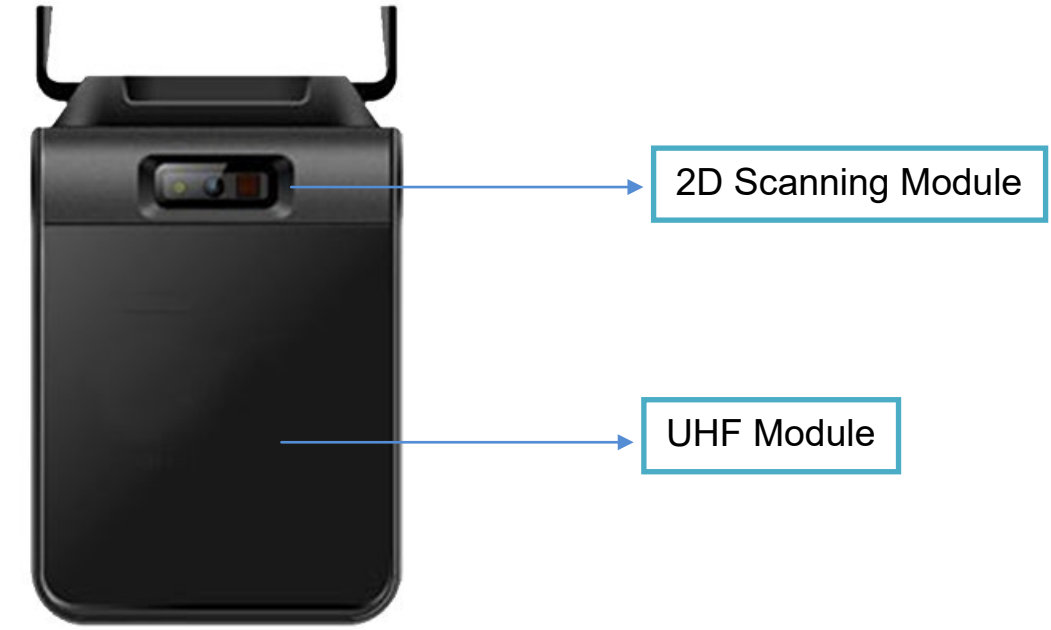
Chapter 1 Product intro

Intro

MR18 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.

Appearance

MR18 reader has 1 power button and 1 Type-C port, 1 SCAN button.



LED Indication

Indicator LEDs	Description
Power	**LED lights up constantly (battery available)** **LED flashes (low battery)**
Bluetooth	**Constant light up (Bluetooth connected)**
Work	**Flash when read UHF tags**

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).

Charger

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

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

Charging the battery

With Type C USB cable, the original adaptor should be used for charging the device. Make sure not to use other adaptors to charge the device.

Installing smartphone on MR18

1. Insert the smartphone between clamps. Position the smartphone to avoid that the buttons on the edges of smartphone match the clamp area.

2. Pull one of the clamps to the side, meanwhile push the smartphone down until it is firmly secured.

Removing the battery

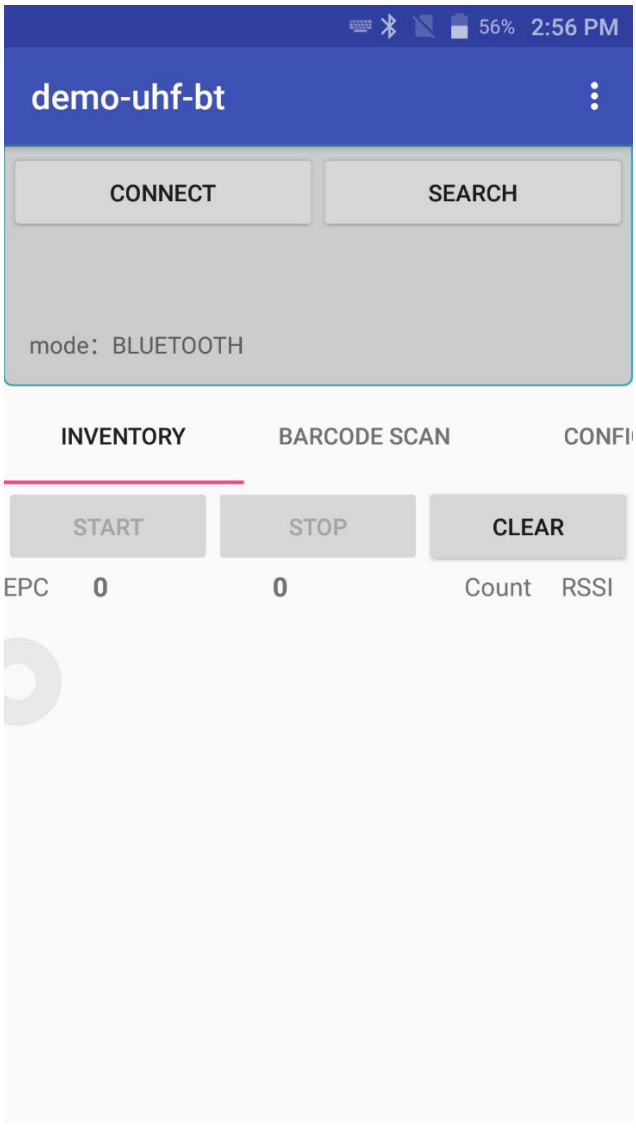
1. Rotate the switch at the bottom of handle counterclockwise.

2. Open the cap at the bottom of handle and remove the battery.

Chapter 3 Demo Test

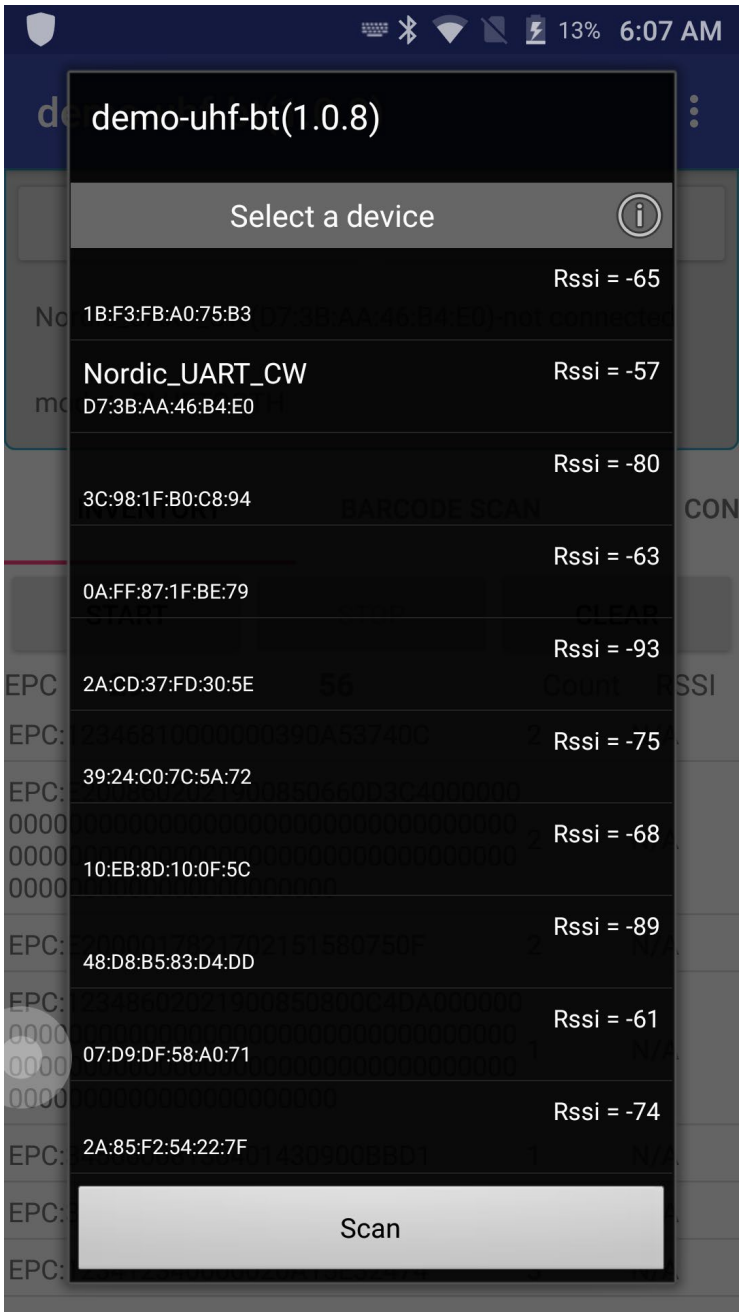
Install demo-uhf-bt (1.0.8)

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.



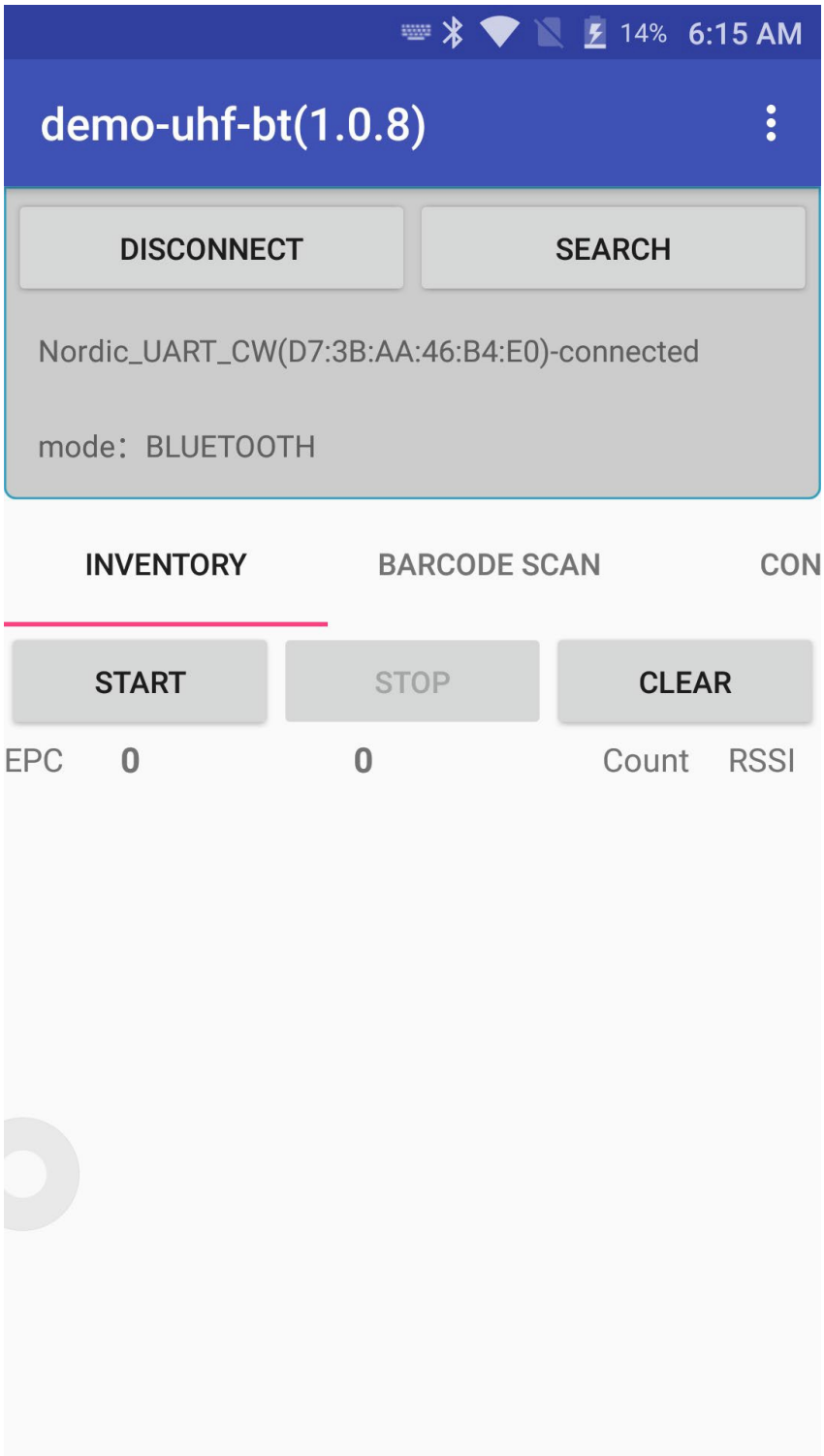
Pairing Device

1. Switch on Bluetooth function of smartphone or C7x device.
2. Power on MR18.
3. Click BLUETOOTH in the demo.
4. Click SEARCH to search for MAC of MR18.



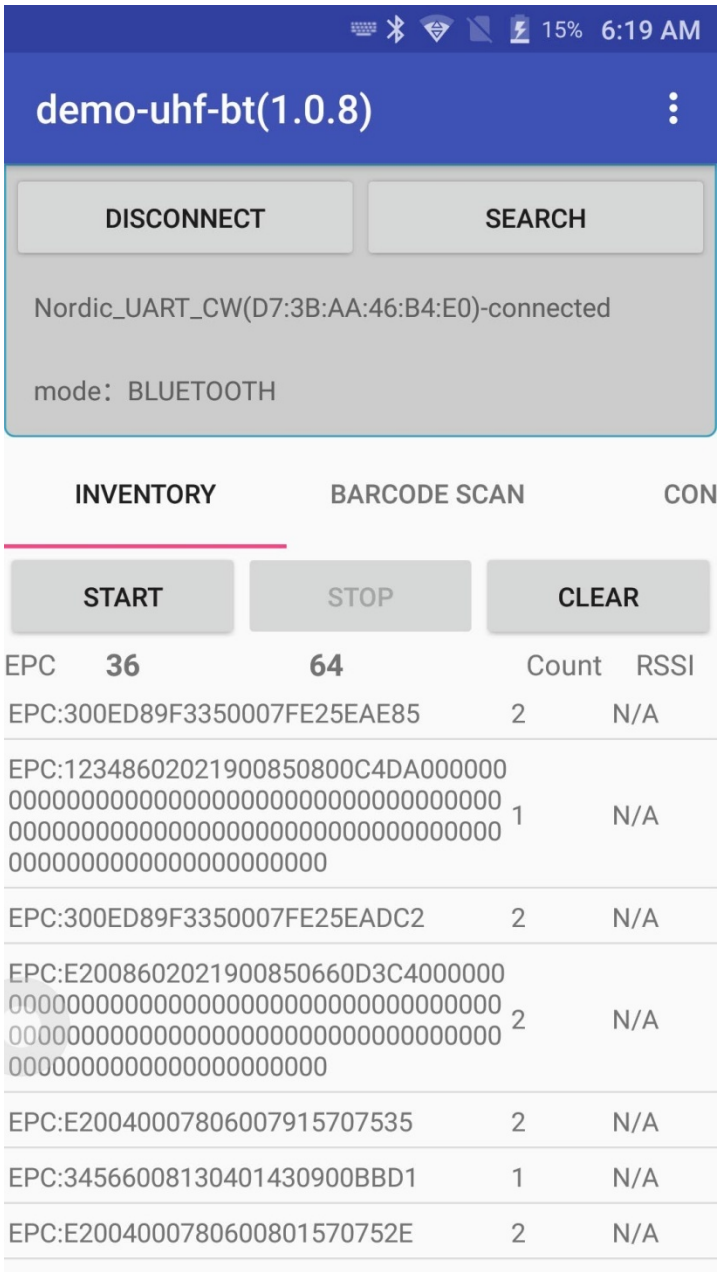
5. Click the correct MAC to connect.

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



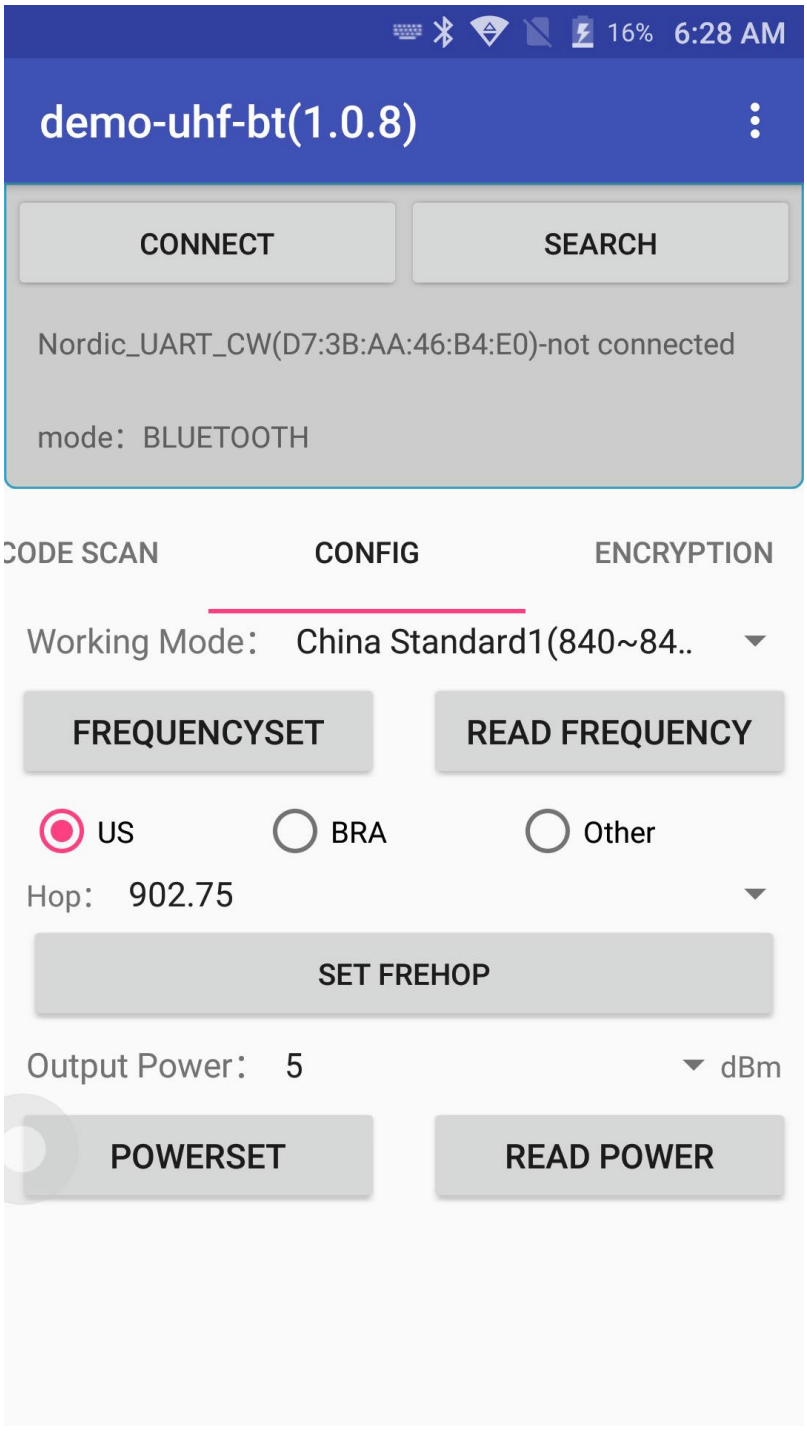
UHF Scan Function

1. Click START in demo or pull the trigger on MR18, the UHF tagscould be read.
2. Click STOP in demo to stop reading of UHF tags.
3. Click CLEAR to clean all EPC information.



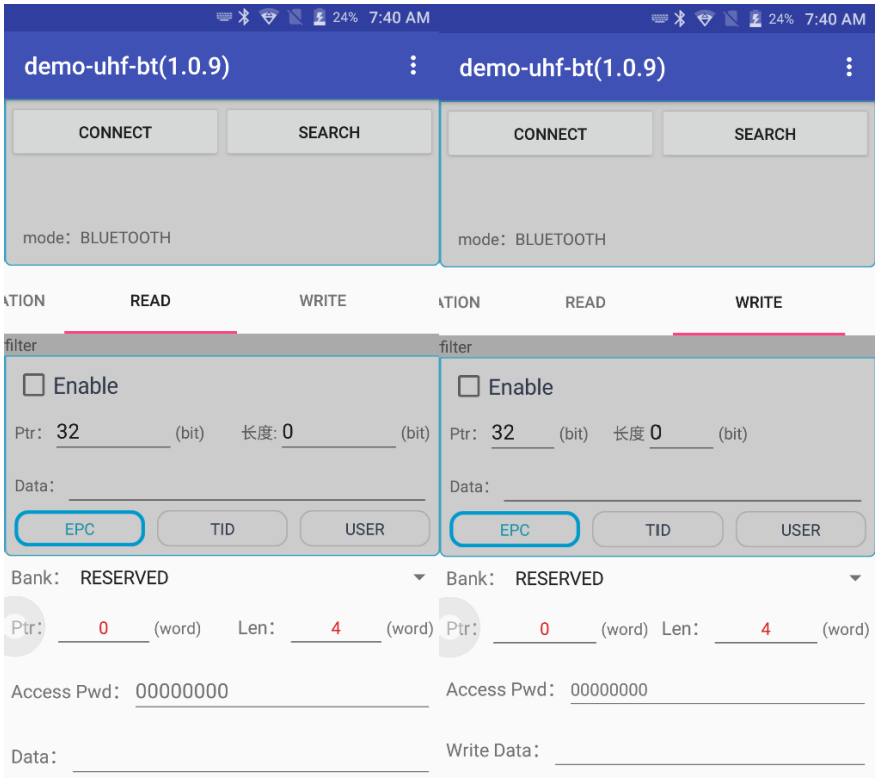
UHF Configuration

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



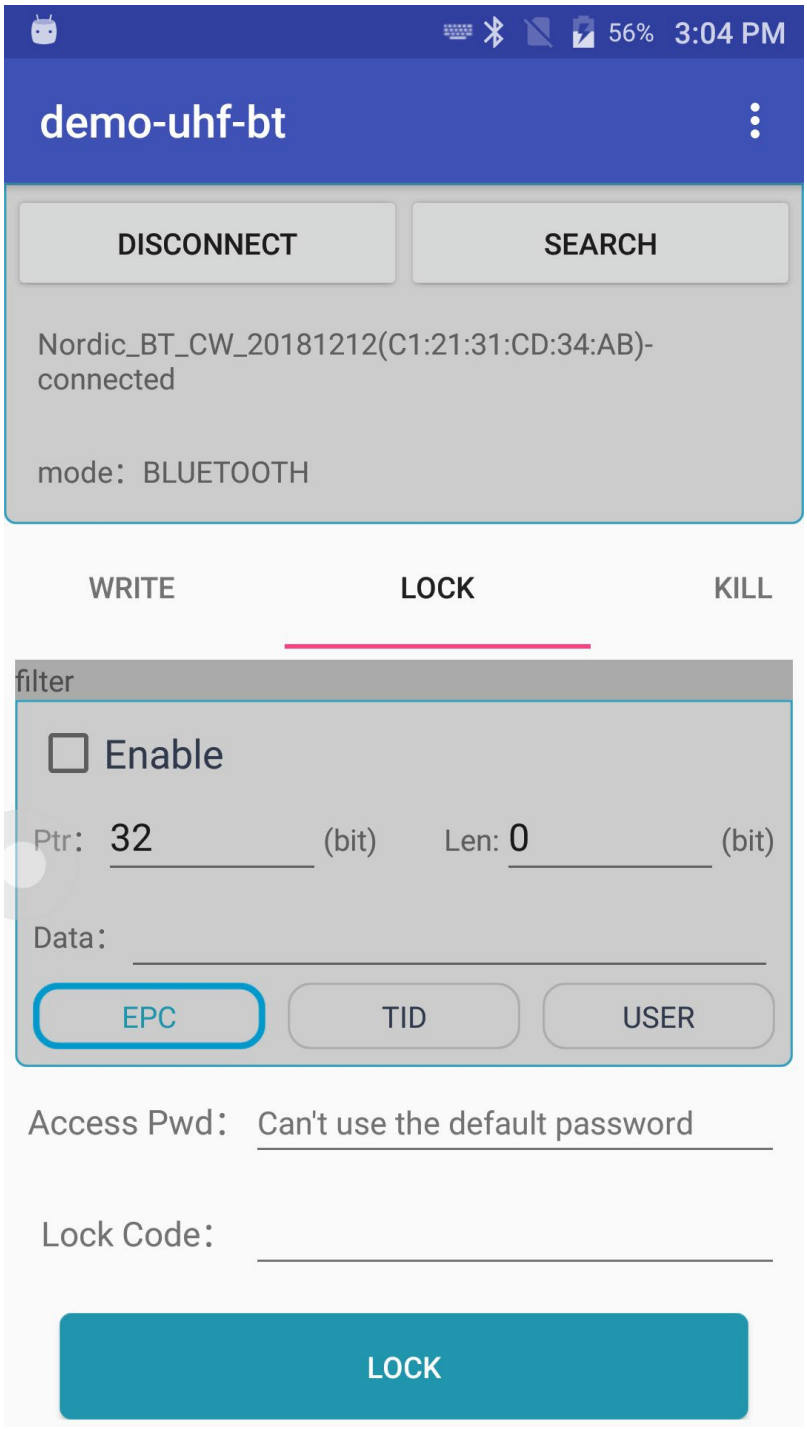
UHF Tag Reading and Writing

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.

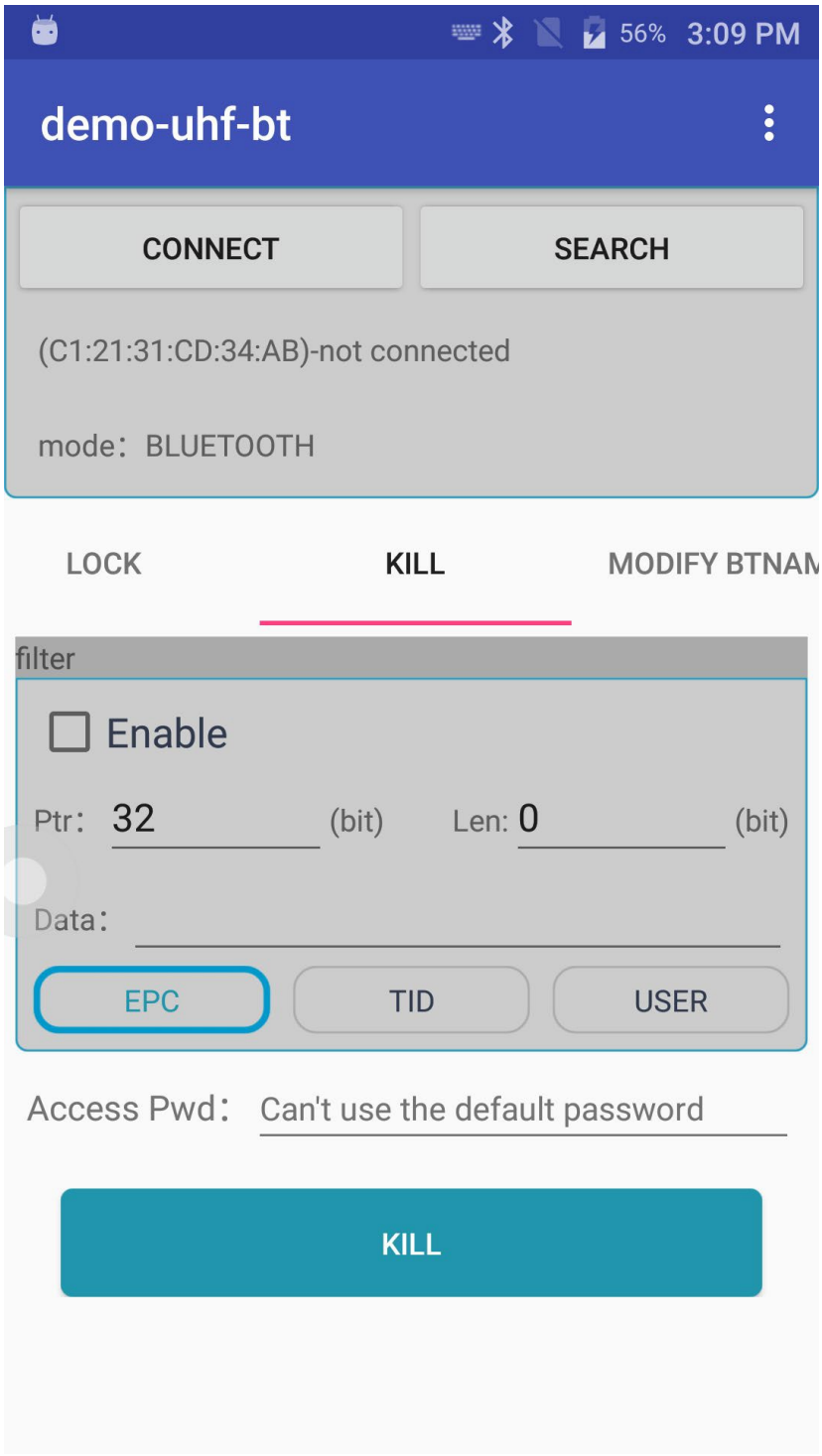


UHF Tag Lock and Kill

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

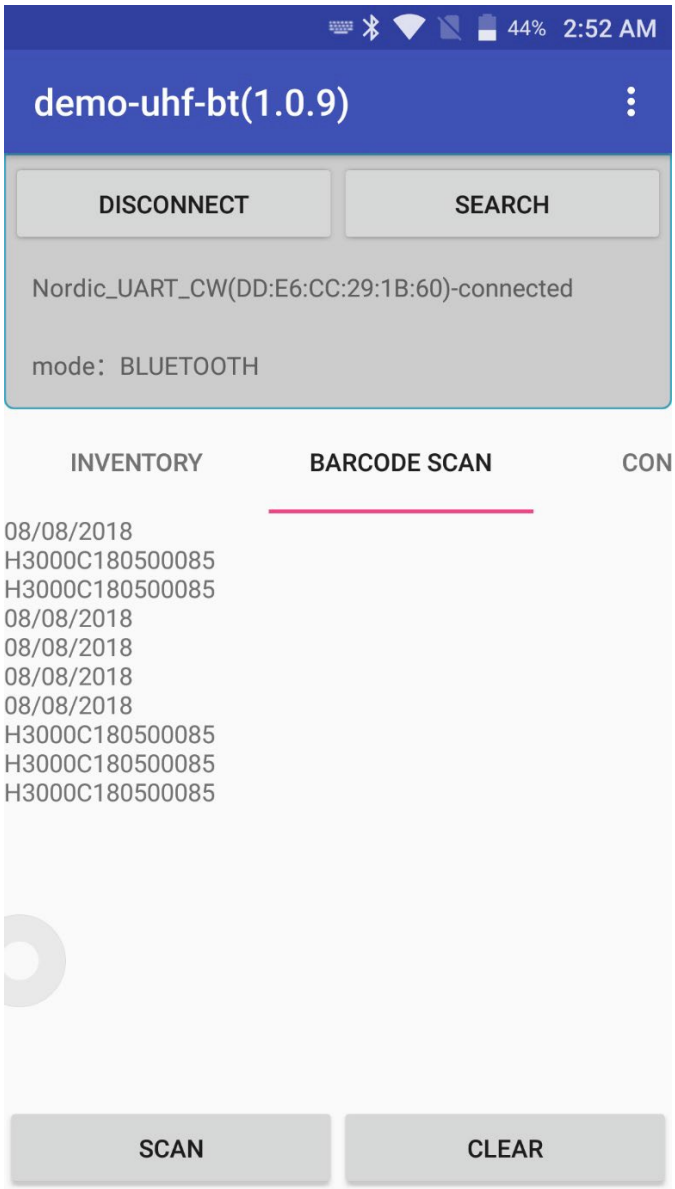


2. Kill Function:
   Kill function can be used to kill the tag permanently. Input the correct access password and click kill.



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

Barcode scanning

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 (3dBic)
Frequency	920-925MHz/902-928MHz/865-868MHz
Protocol	EPC C1 GEN2 / ISO18000-6C
Module power	1W (30dBm, support +5~+30dBm adjustable) 2W Optional (33dBm, for Lati America, etc.)
R/W range	>28m(indoors); >12m(open outdoors)
Reading rate	>200 tags/s * Ranges and rates depend on tags and environment

Declaration

The simplified EU declaration of conformity referred to in Article 10(9) shall be provided as follows: Hereby, Marson Technology Co., Ltd. declares that the radio equipment type UHF Sled Reader is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following.