# PADDLE-Type User's Manual

ASR-P252B

# Revision History

| Version | Modified Contents | Date |
|---|---|---|
| V1.0 | Initial version | 2023/6/15 |
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| | | |
| | | |

# Contents

# 1 About PADDLE-Type

## 1.1. Introduction

Thank you for purchasing PADDLE-Type ASR-P252B.

This manual describes the considerations for using PADDLE-Type ASR-P252B (hereinafter referred to as ASR-P252B). Please read the manual carefully and keep it as long as you have the device.

ASR-P252B is a portable handheld device that integrates UHF RFID reading and barcode scanning, and can be used with an extension stick to check items on high shelves.

Supports USB and Bluetooth serial port data transmission mode (SPP).

The device can be used with iOS, Android, or Windows devices.

Replaceable battery design. Supports USB Type-C interface charging and magnetic charging.

The product has the advantages of long reading distance, high waterproof performance and portability, which can meet the needs of use in harsh environment, and can be widely used in a variety of application management systems such as warehouse management, store management, material tracking, asset management and production process control.

If you have comments or questions about this manual, please contact us through the following ways.

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★The contents of this manual are subject to change without prior notice. In addition, the images in this manual are all reference images and may be different from the actual product.

★In order not to damage your property and life safety, please read this manual carefully before using this device. We will not be responsible for any loss caused by non-compliance with this manual.

★We are not responsible for any damage caused by natural disasters, such as earthquake, lightning, wind, flood, fire outside our responsibility, third party behavior, other accidents, intentional or negligent, abuse or other improper use.

★If the damage is caused by falling or collision as determined by our company, the maintenance fee will be charged even within the warranty period.

★We will take appropriate measures to ensure that our products do not infringe other patents, but we are not responsible for any patent infringement caused by any of the following (1) to (3).

(1) Used in combination with components, products, equipment, data processing systems or software outside our company.

(2) Our products are used in unexpected ways.

(3) Modification of our products by any person or company other than our company.

(4) Used in areas other than the country of purchase

# 1.2. Safety Instructions

Please read the following instructions carefully to prevent injury, malfunction, fire, etc.

| ⚠ Warning |
|---|
| Do not attempt to disassemble, modify or repair the device yourself, otherwise it may cause malfunction, fire or electric shock. We are not responsible for any malfunction caused by modification. |
| If you notice any abnormalities such as smoke, abnormal odor, or strange noise coming from the product during use, stop using it immediately. Continued use may cause fire or electric shock. |
| Do not drop or throw the product and subject it to strong impact. It may cause damage, fire, electric shock, or malfunction. If the product is damaged by dropping and the inside of the device is exposed, do not touch the exposed part with your hands, because there is a risk of electric shock or injury on the damaged part. |
| Do not touch the ports with metal. Otherwise, excessive current may cause fever, fire or damage. |
| Do not wash the ASR-P252B. Otherwise, it may result in electric shock, short circuit, fire, or burns. Also, do not use the ASR-P252B near water such as in a shower room, kitchen, or washroom. It may cause fire or electric shock. |
| Do not use, store, or leave the product in hot places (e.g. by the fire, near a heater, in direct sunlight, in a car in hot weather). It may cause rupture, malfunction, fire or injury. |
| Do not use the ASR-P252B outside the specified power supply voltage. Otherwise, it may cause fire or damage. |
| When using the ASR-P252B to build a system that may affect life safety, such as drug management, please pay full attention to redundant design and safety design to avoid data errors affecting life safety. |
| Do not throw the ASR-P252B into fire or heat. It may burst or cause a fire. |
| The ASR-P252B is an RFID reader that output 1W of UHF band radio. Therefore, medical devices may be affected depending on their use and location. In order to reduce |

the impact, please strictly observe the following items when using.

1. The operator shall not place the ASR-P252B within 22cm (9 inches) of the installation position of the implantable medical device.

2. Personnel installing implantable medical device shall not be within 22cm (9 inches) of the ASR-P252B. When you take it overseas, you need to know the laws and regulations of each country.

Do not cover the heat sink with other items or touch the heat sink when the temperature of the heat sink is high after inventorying RF tags for a long time.

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.

⚠ Caution

For charging, please use the dedicated USB Type-C charging cable, the magnetic suction and charging adapter with an output of 5V2A. Using different chargers may result in failed charges.

ASR-P252B has been certified by Japanese Radio Law. Since each country or region has different regulations regarding radio waves, it is necessary to comply with the respective regulations. Modification of the ASR-P252B is prohibited, and violations may result in penalties according to the regulations of each country or region.

Please refer to local regulations when you recycle the ASR-P252B.

Please contact your local purchasing source immediately if any abnormal incidents occur.

Do not place the ASR-P252B in a car with closed windows or in direct sunlight where the temperature is very high, which will damage the case and components, or cause fire.

Do not place the ASR-P252B in a swaying or tilting place to avoid damage caused by falling.

It is not recommended to inventory tags while charging. Otherwise, the charging speed may be too slow.

Class 1 laser product.

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 Grantee is not responsible for any changes or modifications not expressly approved by the party responsible for compliance. such modifications could void the user's authority to operate the equipment.

This device meets the government's requirements for exposure to radio waves. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons regardless of age or health. The SAR limit of USA (FCC) is 1.6 W/kg averaged. Device types: PADDLE-Type (FCC ID: 2AJXE-ASR-P252B) has also been tested against this SAR limit. SAR information on this and other pad can be viewed on-line at http://www.fcc.gov/oet/ea/fccid/. Please use the device FCC ID number for search. This device was tested simulation typical 0mm to body. To maintain compliance with FCC RF exposure requirements, use accessories should maintain a separation distance between the user's bodies mentioned above, use 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.

**How to Care for the Device**

Please use ASR-P252B in a clean environment. Adhesive chemicals or oils may cause the resin shell to break.

· Chemicals include cosmetics, detergents, pesticides, thinners, gasoline, etc.

· Oils include tallow and other animal oils, hand creams, etc.

Please keep ASR-P252B clean. If ASR-P252B is dirty, wipe it with a soft, dry cloth.
Using strong solvents or cleaners may cause color changes and performance problems.
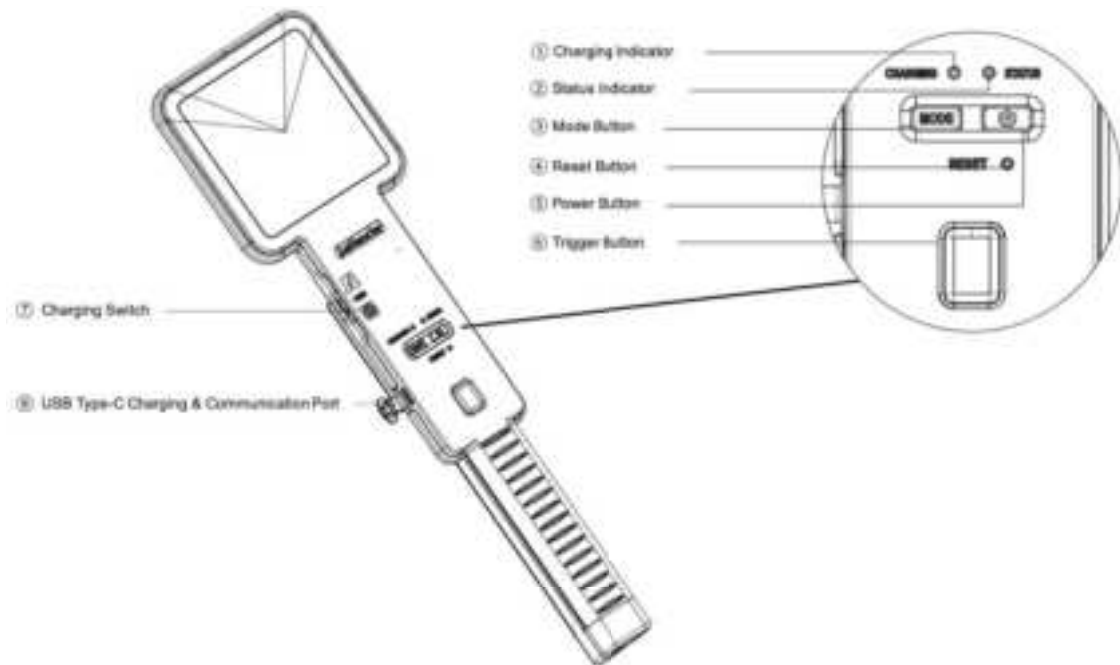
## 1.3. Name of Each Part
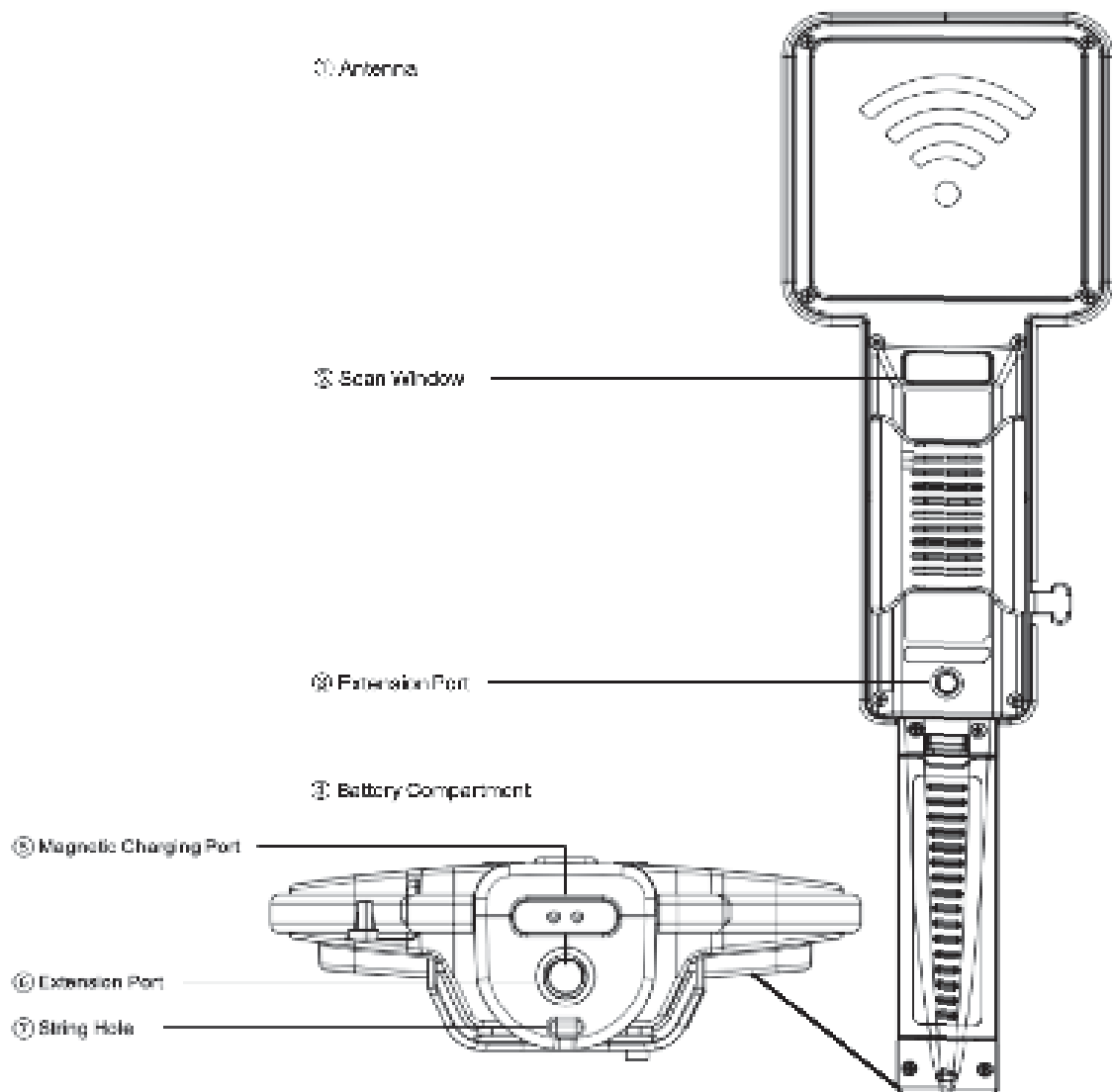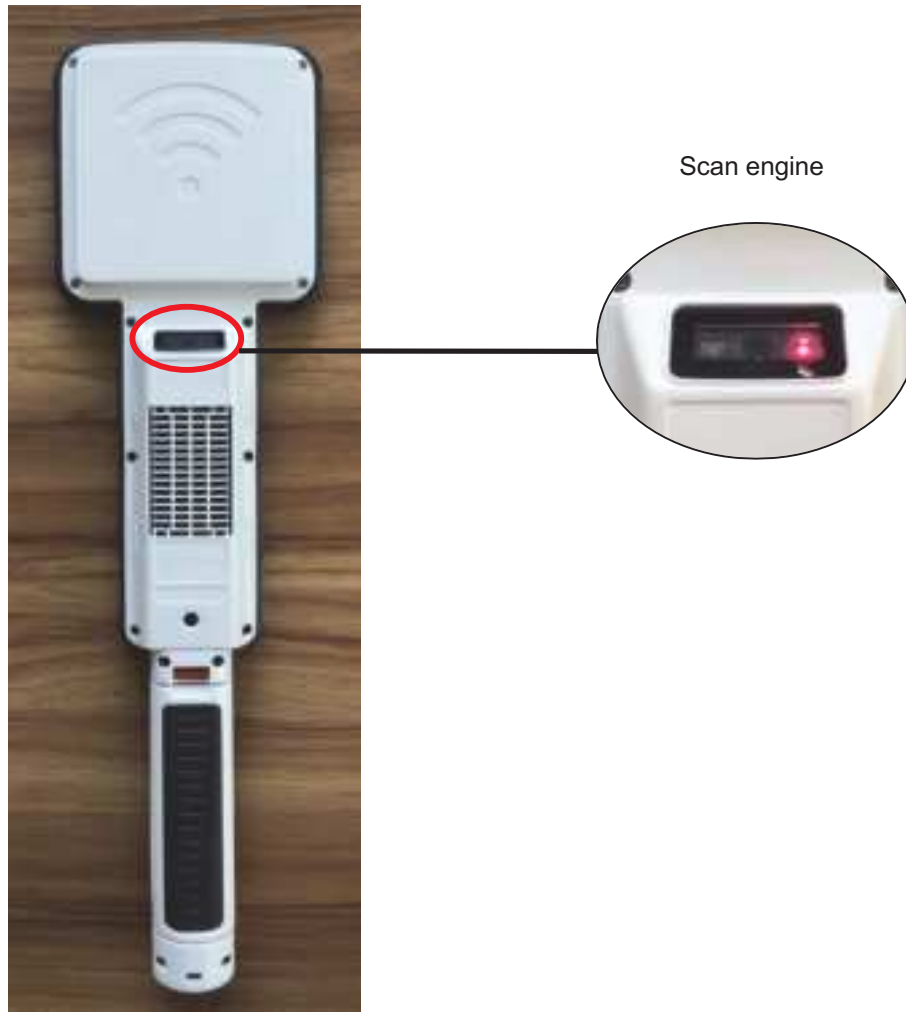


FIG. 1-3-1 Name of Each Part (Front)

① Antenna

② Scan Window

④ Extension Port

③ Battery Compartment

⑤ Magnetic Charging Port

⑥ Extension Port

⑦ String Hole

FIG. 1-3-2 Name of Each Part (Back)

Scan engine

FIG. 1-3-3 Laser

# 1.4. Specifications

| Model | | ASR-P252B |
|---|---|---|
| RFID | Spec. | ISO 18000-63 (old 18000-6C) / EPC global Class 1 Gen 2 |
| | Radio frequency | Japan: 916.8MHz ~ 920.8MHz<br>North America: 902MHz ~ 928MHz<br>Europe: 865MHz ~ 868MHz |
| | RF output power | 2dBm ~ 30dBm |
| | Output power regulation | Step by 1dBm |
| | Reading distance | 0~9m (It may vary depending on the type of smart device or RFID tags used and the usage conditions.) |
| | Reading speed | ≥900 pieces/sec (It may vary depending on the type of smart device or RFID tags used and the usage conditions.) |
| | Polarization characteristics | Circularly polarized antenna |
| | Functions | Inventory/Read/Write/Lock/Kill |
| Barcode | Scan engine | 640*480 CMOS |
| | Min. X Dimension | 2D: ≥6.67mil<br>1D: ≥3mil |
| | Reading distance | Barcode resolution: Distance to the front of the device<br>EAN 13 (13mil): 105mm~680mm<br>Code 39 (5mil): 120mm~260mm<br>Code 39 (20mil): 65mm~800mm<br>Code 128 (40mil): 115mm~1,400mm<br>QR Code (15mil): 80mm~250mm |
| | Reading angle | Skew motion: ±60°, Pitch: ±60°, Roll: 360° |
| | Readable code | 1D:<br>Code 128, EAN-13, EAN-8, Code 39, UPC-A, UPC-E, Codabar, Interleaved 2 of 5, ITF-6, ITF-14, ISBN, ISSN, Code 93, UCC/EAN-128, GS1 Databar, Matrix 2 of 5, Code 11, Industrial 2 of 5, Standard 2 of 5, AIM 128, Plessey, MSI- Plessey<br>2D:<br>PDF417, QR Code, Micro QR, Data Matrix |
| | Light sources | White LED (Illumination); 650nm laser (Aiming) |
| Laser Brightness Level | | Class 1 |
| Power Source | Battery capacity | 3,400mAh Li-Ion rechargeable battery |
| | Charging | USB Type-C interface charging & Magnetic charging<br>Input: 5V/2A |
| | Charging time | About 2 hours |

| Button | | Buttons: Mode, Power, Reset and Trigger buttons<br>Switch: Charging switch (Control whether to charge ASR-P252B.<br>※Valid only for USB Type-C interface, not magnetic charging interface.) |
|---|---|---|
| Interface | Power & communication interface | USB Type-C |
| Appearance | Dimensions (W)x(D)x(H) | 347.9 x 100.8 x 33.2mm |
| | Weight | Approx. 320g |
| | Material | PC+ABS |
| | Color | White |
| | LED Indicator | Working status indicator: Blue<br>・ Waiting for connection (Blue blinks slowly)<br>・ Connected (Blue on)<br>・ Data transfer (Blue blinks rapidly)<br><br>Battery status indicators: Red & Green<br>・ In charging (Red on)<br>・ Fully charged (Green)<br>・ Poor battery (Red blinks) |
| Environment | Operation temp. | -10℃ ~ 45℃, 20 ~ 85 %RH (Above 0℃ when charging) |
| | Storage temp. | -20℃ ~ 60℃, 10 ~ 95 %RH |
| | IP rate | IP54 compliant |
| | Anti-drop | (Six-sided, 4 edges, once each) 1.5m |
| Certifications (TBD) | | Apple MFi<br>TELEC<br>FCC/ISED |
| Supported OS | | iOS (Bluetooth), Android (USB & Bluetooth), Windows (USB & Bluetooth) |
| Accessories | | Magnetic charging cable |

# 1.5. Application Development

To use this product, you need to have the relevant application installed on your smart device.

iOS Demo: Download and install the iOS Demo by searching for "AsReader PADDLE-Type App" in the App Store.

Android Demo: Contact where you purchase the product for an Android Demo.

Windows (C#) Demo: Contact where you purchase the product for a Windows (C#) Demo.

It allows you to download the SDK manual and sample code from our website for reference (iOS/Android/Windows) to develop your application.

http://asreader.cn/downloads/asr-p252b/

# 2 Functions and Operations

## 2.1. Product Front Part Introduction

① **Charging Indicator**

Indicates the status of battery and charging, green & red.

| Running status | LED status |
| --- | --- |
| Charging | Red on |
| Fully charged | Green on |
| Low battery | Red blinks |

② **Status Indicator**

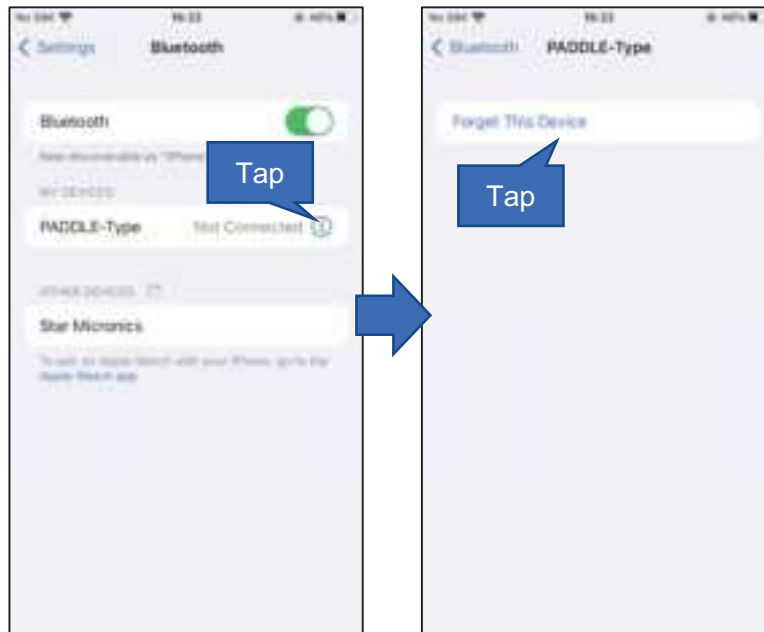Indicates the running status of the device, blue.

| Running status | LED status |
| --- | --- |
| Waiting to connect to a smart device | Blue blinks slowly |
| Smart device connected | Blue on |
| RF tag was inventoried. | Blue blinks rapidly |
| Barcode was scanned. | Blue blinks rapidly |

③ **Mode Button**

The application side can get the Mode button pressed/released event.

Hold down the Mode button for 6s to clear the pairing information of the ASR-P252B and the smart device.

* After clearing the pairing information with the iOS device, it needs to click "Ignore this device" in the "Settings - Bluetooth - My Device" of the iOS device, search for ASR-P252B again and connect, otherwise the connection cannot be successful.



④ **Reset Button**

Press the reset button to force the product to shut down.

✧ Pressing the Reset button only cuts off the power supply and does not change any Settings of the ASR-P252B.

⑤ **Power**

Power on / off

Press and hold the Power Button for more than 2 seconds, the buzzer will beep two times, and the Charging Indicator blinks. The ASR-P252B is successfully powered on.

✧ Buzzer is on by default and can be set to off through the app.

When ASR-P252B is on, press and hold the power button for more than 2 seconds, ASR-P252B will beep and shut down.

If it cannot be turned off, press the Reset Button to reset.

**Sleep Mode**

After ASR-P252B is powered on, if it is not connected to applications or smart devices, the blue Status indicator blinks. And if ASR-P252B is placed without any operation, it will enter Sleep mode after a period of time. When ASR-P252B sleeps, the Status indicator will be off. But the Bluetooth module will not sleep.

At this time, the device can be searched by the application (if it is a PC or iOS device, it can be searched in Settings - Bluetooth).

To wake up the device, connect the device in an application, or press the Power /Mode /Trigger button on the device.

The duration of the device entering the sleep mode is controllable. 0 indicates that the device will never automatically sleep.
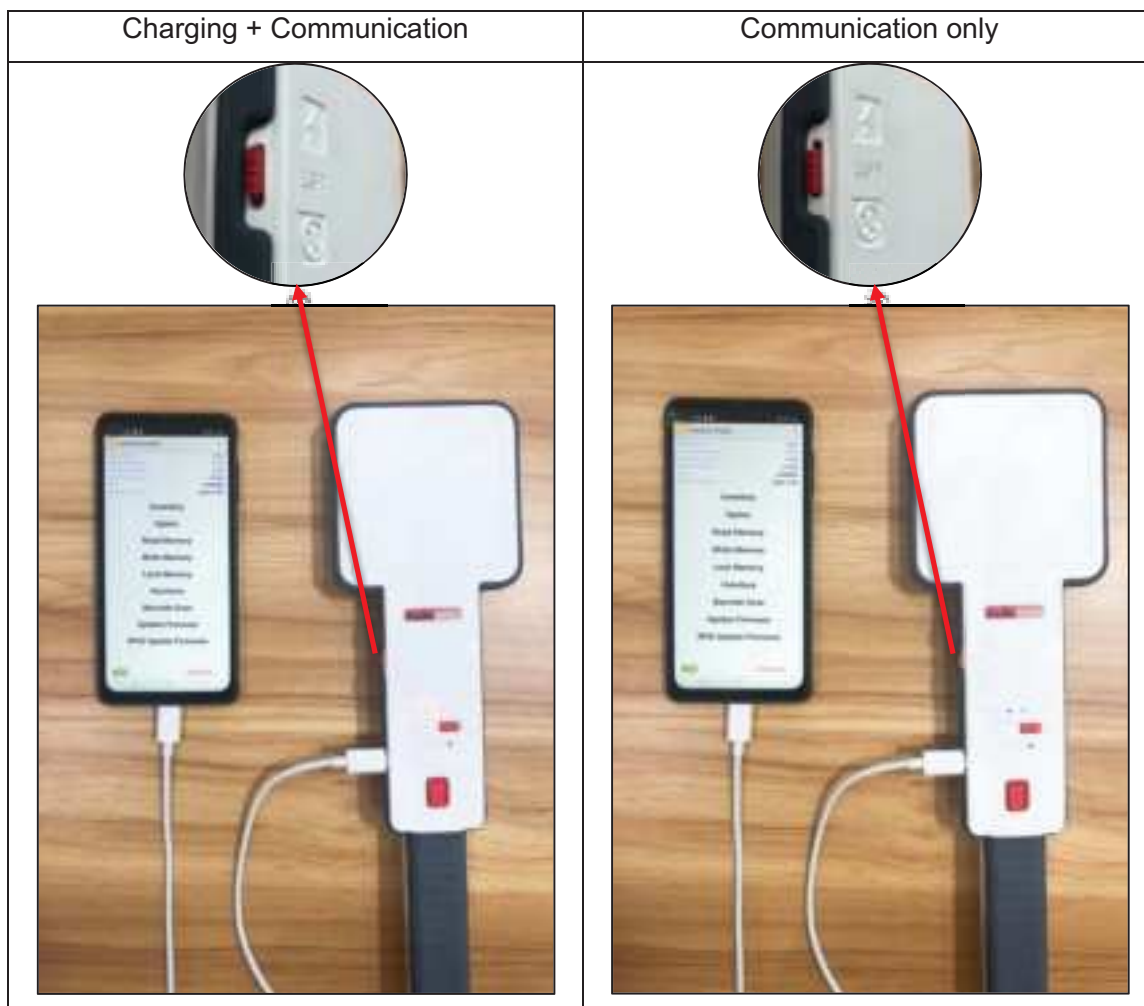
**Automatic Shutdown**

When the ASR-P252B enters the Sleep mode, if no operation is conducted for a period of Time, the device will automatically shut down (if Sleep Time is set to 0, the device will never automatically sleep or shut down). The duration of the device from sleep mode to automatic shutdown is controllable, with 0 representing never automatic shutdown.

⑥ **Trigger Button**

When the app is connected, press the Trigger button to scan 1D/2D barcode or count RF tags.

⑦ **Charging Switch**

Control whether to charge the ASR-P252B. This is valid only for the USB Type-C port, but not for the magnetic port.

| Charging + Communication | Communication only |
|---|---|
|  |  |

⑧ **USB Type-C Charging & Communication Port**

ASR-P252B supports USB Type-C to USB Type-C data cables and USB Type-A to USB Type-C data cables. It allows you to control whether to charge ASR-P252B by controlling the "⑦ Charging Switch". When a data cable is used to connect an Android device to the ASR-P252B (that is, when the Android device and the ASR-P252B are connected and communicated through a USB serial port), the Android device will charge the ASR-P252B. In this case, it is recommended to turn off the "⑦ Charging Switch".

1) Connect the power adapter and ASR-P252B with the data cable to charge.

2) Connect the Windows PC to ASR-P252B with a data cable to charge and communicate.

3) Connect Android devices to ASR-P252B with a data cable to charge and communicate.

## 2.2. Product Back Part Introduction

① **Antenna**

With the application connected, point the antenna at that specific RF tag for inventory/read/write/lock/destroy. The inventory/read/write/lock/kill process will beep and can be set through the app. It is on by default.

② **Scan Window**

When connected to the app, it will allow you to scan by pointing the scanning window at 1D or 2D barcode. A beep will sound during the scan, which can be set through the app. It is on by default.

③ **Extension Port**

This product has 2 extension ports, which can be connected to extension rod and other extension device. Port model: 1/4-inch screw.

④ **Battery Compartment**

The battery can be removed by opening the battery compartment by pressing down on the latch.

⑤ **Magnetic Charging Port**

It allows you to use the attached magnetic charging cable to charge the ASR-P252B through the magnetic charging port.

⑥ **Extension Port**

Same to ③.

⑦ **String Hole**

This product has one string hole, which can be used with the lanyard to prevent ASR-P252B from falling.

# 3 How to Connect

To connect via Bluetooth, the ASR-P252B needs to be placed within the Bluetooth connection range of a smart device.
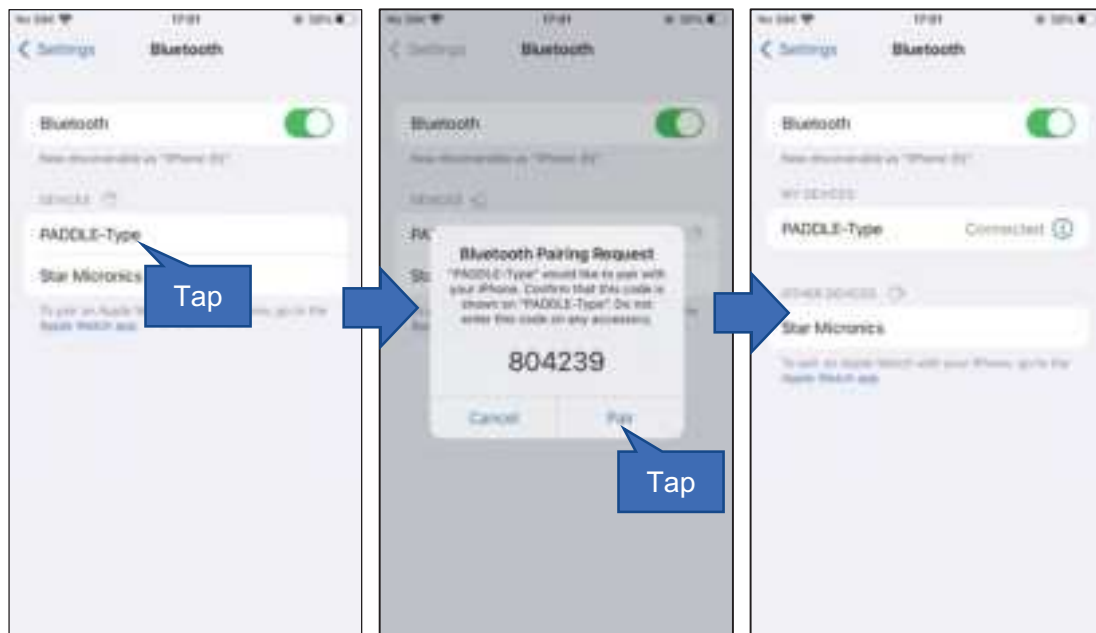
## 3.1. How to Connect to iOS

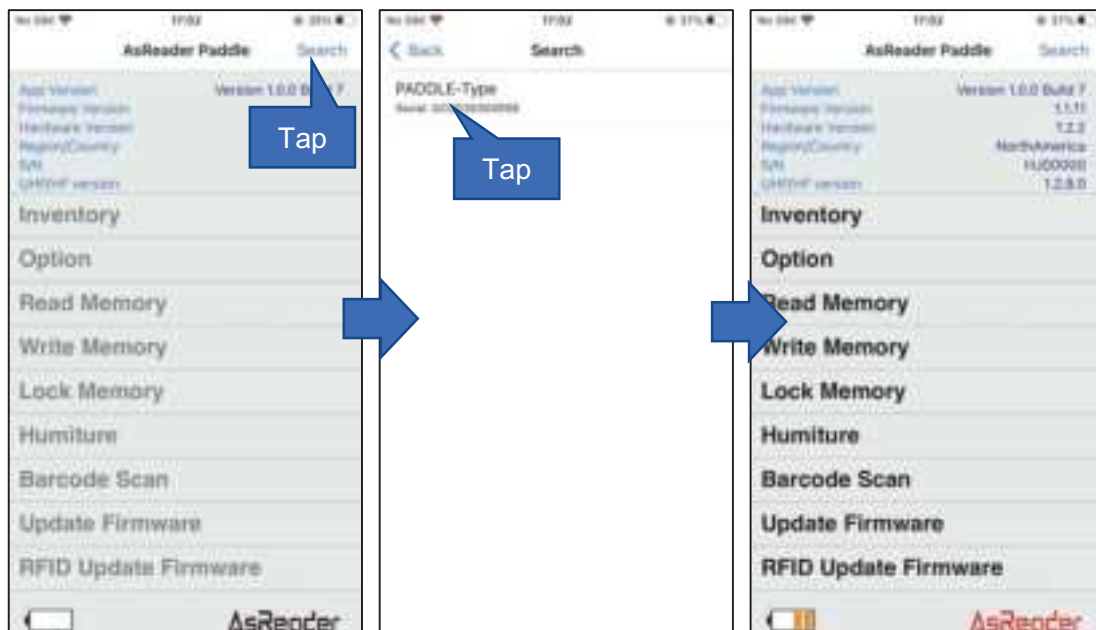The ASR-P252B supports Bluetooth communication with iOS devices.

● **Connection steps:**

1) Power on ASR-P252B.

2) Connect the ASR-P252B in the Bluetooth connection of the iOS device.
   Go to Settings - Bluetooth screen and enable Bluetooth on the iOS device. The screen will display the list of the Bluetooth names (PADDLE-Type).
   Click on one of them to Bluetooth connect with iOS system. If successful, the ASR-P252B will beep with the tone "Do Re Mi" and the blue Status indicator will be on.
   If it is the first time to connect, or if you have clicked "Ignore this device", the message "Bluetooth Pairing Request" will pop up. In this case, tap "Pair".

3) Start the application and click the "Search" button in the top-right to enter the Search screen.

4) The Search screen displays the device name (PADDLE-Type) and serial number of the ASR-P252B, which has been connected in the Settings - Bluetooth screen of iOS.

5) Tap "PADDLE-Type" in the list to connect. Once connected, the app goes to the main screen, and the screen becomes active.
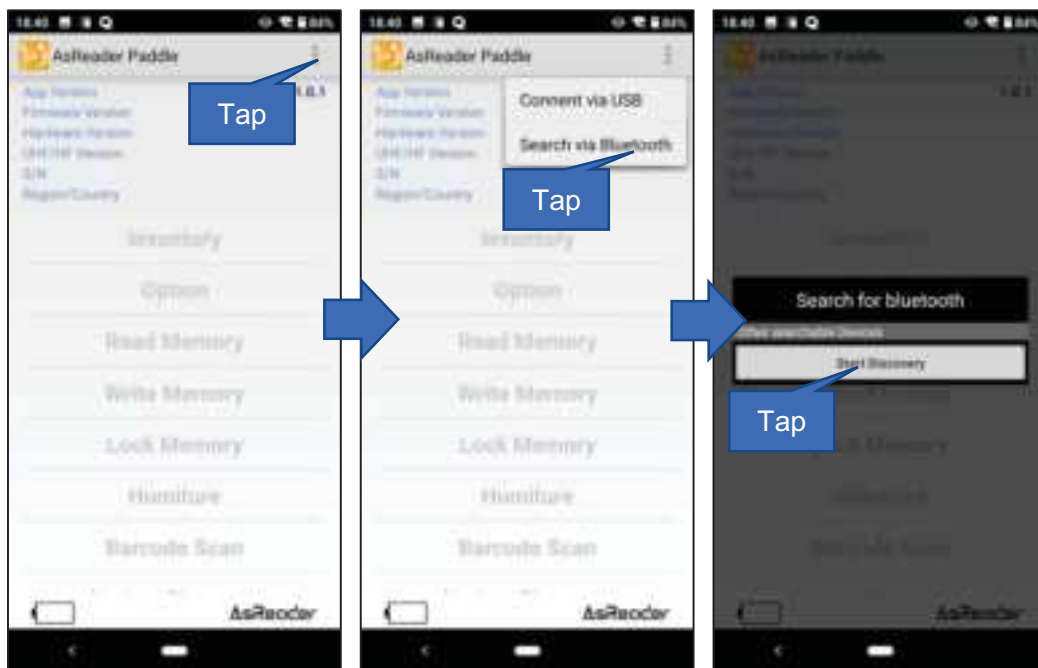
**Settings-Bluetooth:**
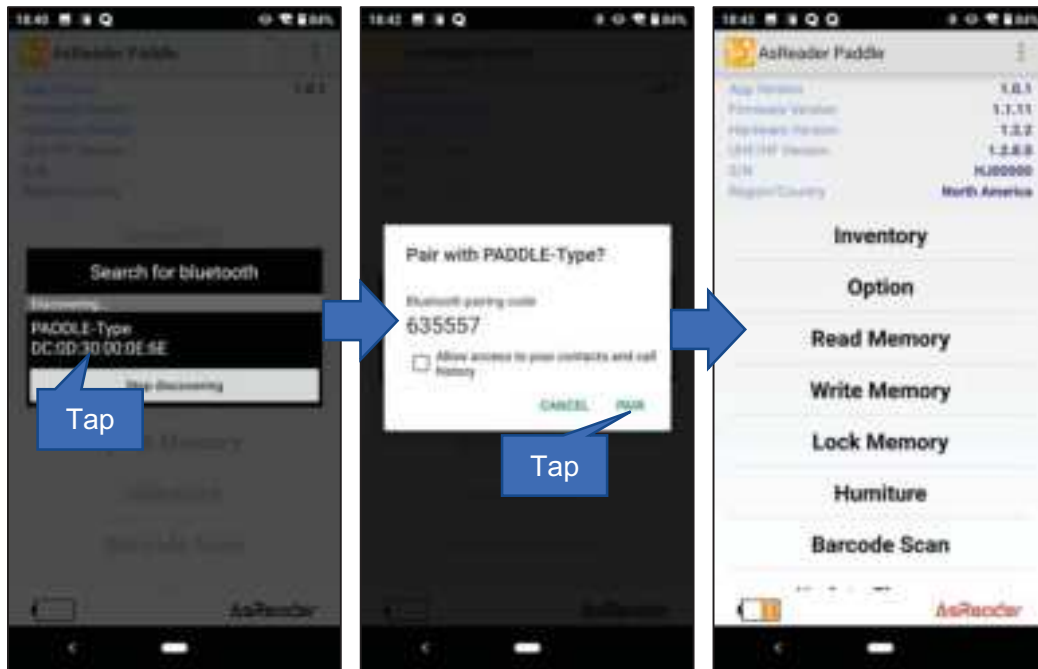


**Demo app:**

## 3.2. How to Connect to Android

The ASR-P252B supports Bluetooth and USB serial communication with Android devices.

● **Bluetooth connection steps:**

1) Power on ASR-P252B.

2) Turn on the Bluetooth of the Android device.

3) Start the app. --> Tap the "┊" on the top-right of the main screen. —> Tap "Search via Bluetooth" to go to the "Search for Bluetooth" screen.
   Click "Start Discovery", and the screen will display the Bluetooth names (PADDLE-Type) and serial numbers of all ASR-P252B devices in the Bluetooth connection range.

4) Tap "PADDLE-Type" in the list to connect. Once connected, the app goes to the main screen, and the screen becomes active.
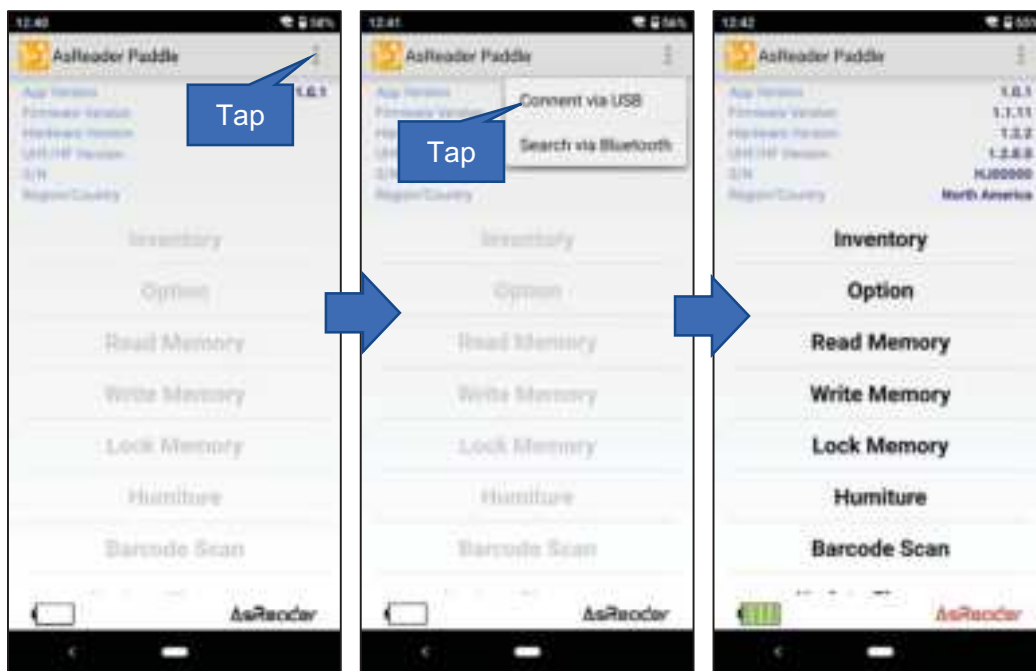
**Demo app:**

- **USB connection steps:**
    1) Power on ASR-P252B.
    2) Connect the ASR-P252B to the Android device using a USB Type-C to USB Type-C data cable. Then, the ASR-P252B beeps with the tone "Do Re Mi" and the blue Status indicator is on.
    3) Start the app. --> Tap the "⋮" on the top-right of the main screen. —> Tap "Connect via USB".
    4) Once connected, the app goes to the main screen, and the screen becomes active.
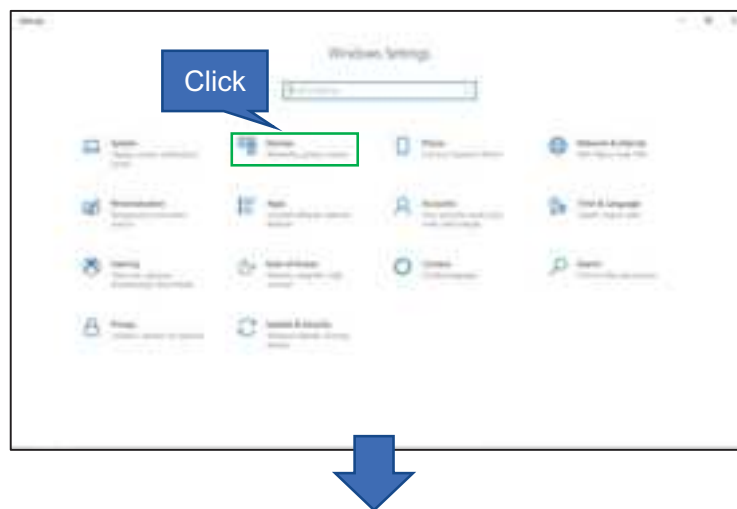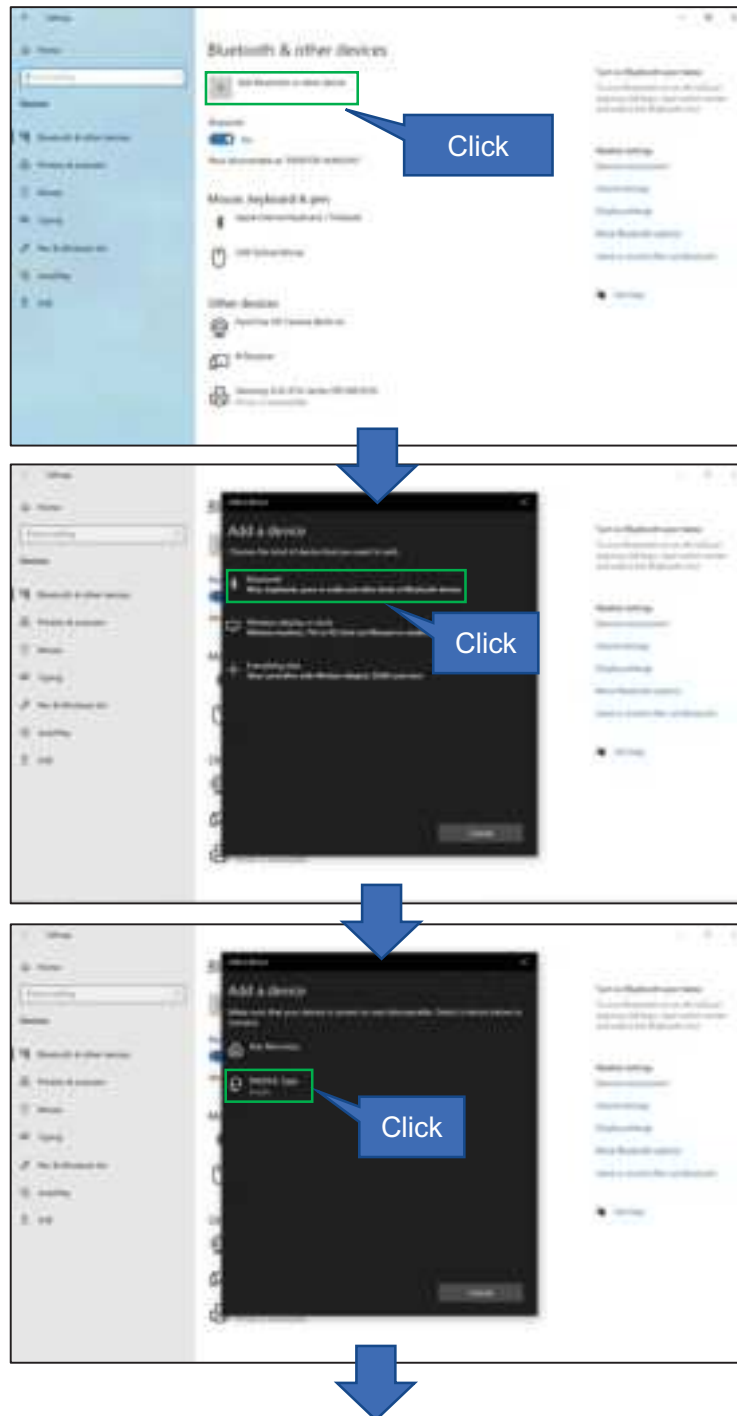
**Demo app:**



# 3.3. How to Connect to Windows

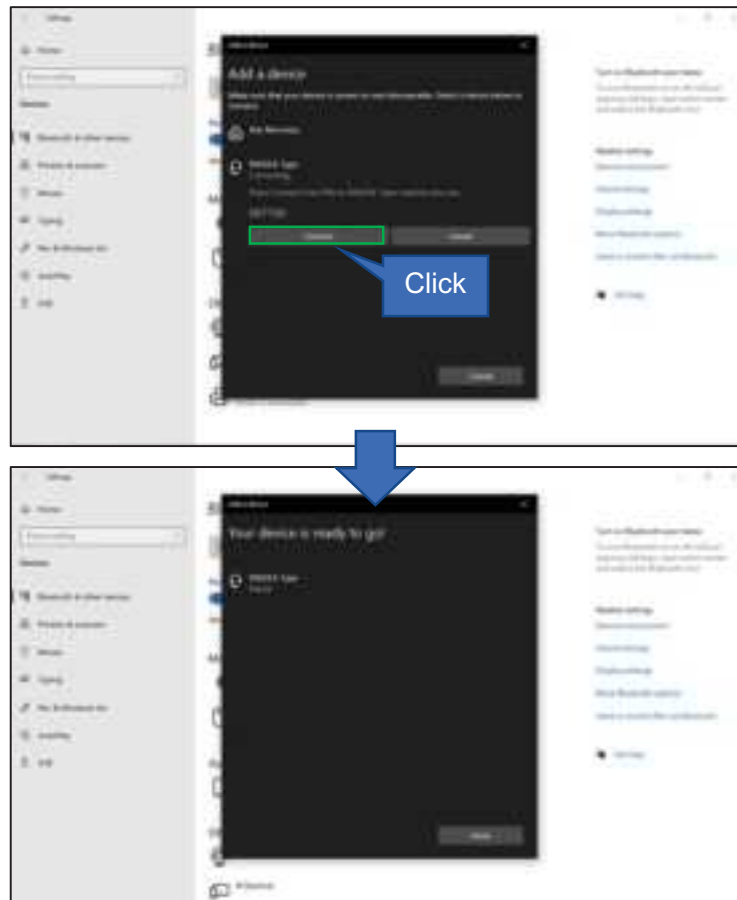The ASR-P252B supports Bluetooth and USB serial communication with Windows PCs.

- **Bluetooth connection steps:**
- **Bluetooth connection steps:**

  1) Power on ASR-P252B.

  2) Take Windows 10 Pro as an example: Go to Settings - Devices - Bluetooth and Other Devices on your Windows PC and turn Bluetooth on.
  Click Add Bluetooth or Other Devices. The Add Device screen is displayed.
  Set the device type to Bluetooth.
  Device names (PADDLE-Type) of ASR-P252B in Bluetooth connection range are shown in the list.
  Click "PADDLE-Type". A message is displayed.
  Click "Connect". If the Bluetooth connection to the system is successful, "Paired" is displayed.

  3) Start the application and click the Search button in the top-left to enter the Device Search screen.

  4) The Device Search screen displays the device name (PADDLE-Type) and serial number of the ASR-P252B connected to the Windows system.

  5) Select "PADDLE-Type" from the list, then click the Select button, and the Device Name in the application displays "PADDLE-Type." Click the Connect button.
  After successful connection, the screen will be active. At the same time, the ASR-P252B beeps with the tone of "Do Re Mi" and the blue Status indicator is on.
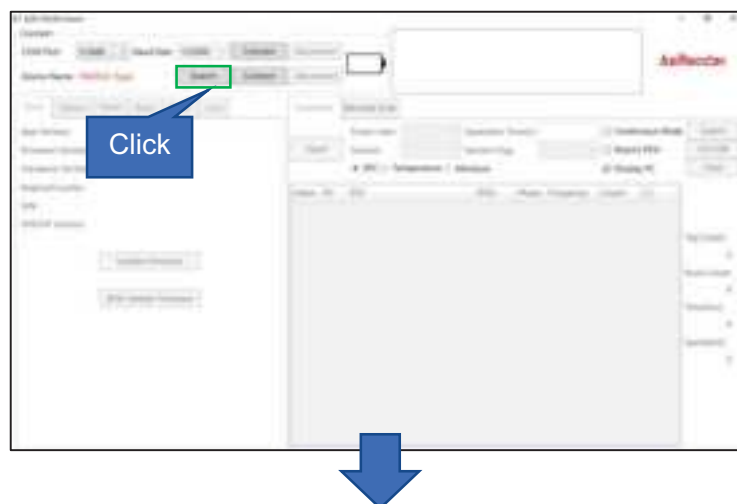
**Windows Settings—Devices:**
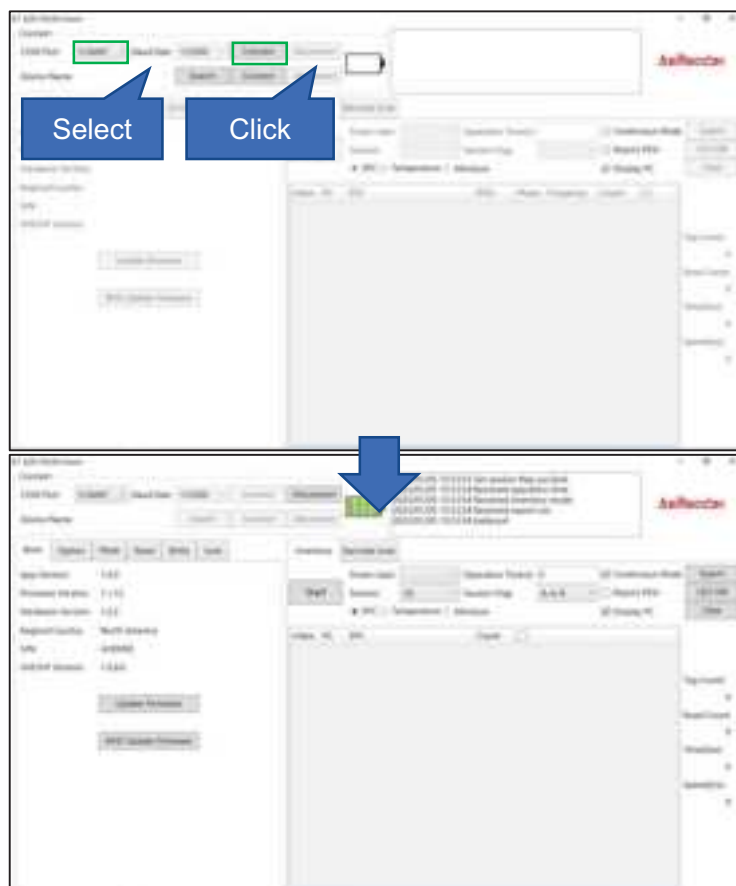
Click



Click



Click

Click



**Demo app:**



Click

- **USB connection steps:**
  1) Power on ASR-P252B.
  2) Connect the ASR-P252B to the Android device using a USB Type-C to USB Type-C (or USB Type-A to USB Type-C) data cable. Then, the ASR-P252B beeps with the tone "Do Re Mi" and the blue Status indicator is on.

3) Start the application, select the port number, and click "Connect".

4) After successful connection, the screen will be active.



**Demo app:**

# 4 How to Charge

The following describes how to charge the ASR-P252B. A 5V2A power adapter is recommended.

- **Charging with the USB Type-C port**

  Connect the USB-C charging cable to the USB Type-C charging port (see ⑧USB Type-C Charging Port) on the ASR-P252B, and connect the other end of the charging cable to the power adapter.

- **Charging with the magnetic port**

  Attach the magnetic head of the attached magnetic charging cable to the magnetic charging port (see ⑤Magnetic Charging Port ) on the ASR-P252B. Connect the other end of the charging cable to the power adapter.

When charging, the Charging indicator is red. After the charging is complete, the Charging indicator turns green.

\* If the Charging indicator is abnormal (for example, blinking), the battery may be loose. In this case, reinstall the battery and try charging it again.
\* It takes about 3 hours for the battery to be fully charged.
\* When using for the first time or storing for a long time, please charge before use.

| ⚠ Warning |
|---|
| Do not use a power adapter other than 5V to charge; otherwise, failure may occur. Failure in this case is outside the scope of warranty. |

# 5 Troubleshooting

If you determine that there is a fault, check the following before calling where you purchased the ASR-P252B.

★ The ASR-P252B could not be searched through Bluetooth

Please check the following:

- Check whether the ASR-P252B is powered on. If yes, restart it.
- Check whether the Bluetooth of the smart device is enabled. If yes, restart it.
- Restart the application.
- Hold down the Mode button for 6 seconds to clear the pairing information between the ASR-P252B and the smart device, and then search again.

★ Unable to be used

- If the ASR-P252B cannot be used, press the Reset button to reset it.

★ Unable to inventory RF tags or scan 1D/2D barcodes

Please check the following:

- Check whether the battery of the ASR-P252B is fully charged.
- If the application does not respond, restart the application.
- If ASR-P252B continuously inventory RF tags for a long time, it may cause the RFID module to overheat and cannot continue inventory. Please place the ASR-P252B to cool down and try the inventory again.

★ Magnetic charging too slow

- There may be foreign bodies or dust at the charging connector. It is recommended to wipe it before continuing to charge.

- In addition, the magnetic charging efficiency may be reduced if the temperature of ASR-P252B is too high due to operations/actions such as long inventory. Therefore, it is recommended that ASR-P252B be left to cool down before charging.

**AsReader PADDLE-Type**

**(ASR-P252B)**

# User Manual

**Jun. 2023 1ˢᵗ Edition**

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