

ASR-P252B iOS/Android Demo User's Manual

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Revision History

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Preface

This document describes the correct operation method of the "ASR-P252B Demo App" for iOS/Android, which can be found on the Apple Store and the Google Play Store. Be sure to read this carefully before using the application.

If you have any comments or questions about this manual, please contact us:

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About the Demo App for ASR-P252B

The "ASR-P252B Demo App" (hereinafter referred to as "Demo APP", "the app" or "app") is an application that customers can use together with our company's ASR-P252B device (hereinafter referred to as "AsReader" or "the AsReader").

Demo App for iOS: Please download this application from the Apple Store, by searching for "AsReader PADDLE-Type App".

Demo App for Android: Please download this application from the Google Play Store, by searching for "ASR-P252B Demo App".

Note: This user manual focuses on the iOS version of this app, but the Android app operates in a similar way to the iOS app, so you can refer to this manual when using Android version of the app as well.

Note: The ASR-P252B Demo App is a dedicated Demo App for ASR-P252B devices.

1. Page Description

No SIM 🗢 14:56	74%	C Go to the page for Bluetooth connection
AsReader Pa	addle Search	
	Manajar 10.0 Duild 2	App version
App version Firmware Version	10.8	Firmware version of the AsReader
Hardware Version	1.0.0	Hardware version of the AsReader
Region/Country	Japan1 W	— Region/country of the device's frequency/bandwidth
S/N	HJ00000	Serial number of the AsReader
	1.2.3.0	Version of the RFID module
Inventory		Go to the Inventory page for RFID tags.
Ontion		
		— Go to the setup/options page. (((***Note: App should say "Options")))
Read Memory—		— Go to the Read the memory bank of RFID tag page.
Write Memory —		—Go to the Write the memory bank of RFID tag page.
Lock Memory		—Go to the Lock/unlock the memory bank of RFID tag page.
Humiture		——Go to the Inventory page for RFID tags with temperature/moisture sensors.
Barcode Scan		—Go to the Scan 1D and 2D barcodes page.
Update Firmware		Go to the Update the firmware version of the AsReader page.
		—Go to the Udate the firmware version of the RFID module page.
RFID Update Firm	ware	Remaining battery level of the AsReader guage.
•••••	∆sReader	

2. How to Connect

2-1 Connecting via Bluetooth on iOS (See Android version below)

- 1) Power on the AsReader.
- 2) Pair with the iOS device.

Go to your iOS device's iOS Settings --> Bluetooth page and if it isn't on already,
turn on Bluetooth. The page will then display a list of Bluetooth devices.
Tap the "PADDLE-Type" to pair. When the pairing is successful, the AsReader
beeps and the blue Status Indicator LED is steadily on.
If this is the first time connecting, or if you have tapped "Forget This Device", the
message "Bluetooth Pairing Request" will pop up on the screen. In this case, tap
"Pair" to pair. It is now paired to your phone. The next step connects it to the app.

- 3) Start the app and tap the "Search" button to enter the Bluetooth Search page.
- 4) The Demo APP's Search page displays the device name (PADDLE-Type) and Bluetooth serial number of the AsReader which is connected on the Bluetooth Settings page of the iOS device.
- 5) Tap "PADDLE-Type" on the list to connect to the AsReader. Once connected, the main page is displayed automatically, and the page becomes active.
- * The app cannot be operated without the connection to the AsReader.

If unable to connect, please refer to the user's manual of the AsReader.



2-2 Android

2-2-1 Connectinig via Bluetooth on Android (See iOS version above)

- 1) Power on the AsReader.
- 2) Turn on the Bluetooth of the Android device.
- 3) Start the Demo APP. Tap the "{" on the top-right of the main page.Tap "Search via Bluetooth" to go to the "Search for Bluetooth" page.
- 4) Tap "Start Discovery" and the page displays the device names (PADDLE-Type) and Bluetooth serial numbers of all the AsReaders within the Bluetooth connection range of the Android device.
- 5) Tap "PADDLE-Type" to connect. If it is the first time to connect, the message "Pair with PADDLE-Type" is displayed. In this case, tap "PAIR" to pair. Once connected, the AsReader will beep and the blue Status Indicator LED will be steadily on. The app goes to the main page, and the page becomes active.

2-2-2 Connecting via USB cable, rather than Bluetooth

(Android and Windows ONLY. There is no hard-wired connection for iOS)

- 1) Power on the AsReader.
- 2) Connect the AsReader to the Android device using a USB Type-C data cable, such as the AsReader ASA-110C (36" USB-C-to-USB-C cable). Please note that this is a "one way cable" with one side of the cable marked "PHONE". Please be sure that side of the cable is connected to your Android or Windows Smartphone or Tablet. Once connected with the cable, the AsReader will beep and the blue Status Indicator LED will be steadily on.
- Start the app. Tap the "I" on the top right of the Demo APP's main page.
 Tap "Connect via USB".
- 4) Once connected, the app goes to the main page, and the page becomes active, as shown in figure 2-1 above.

* The app cannot be operated without the connection to the AsReader.

If unable to connect, please refer to the user's manual of the AsReader.

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3. How to Operate

3-1 Inventory of RFID Tags

1. Tap "Inventory" and then tap the "Inventory" button to begin inventorying RFID tags.

Pressing the trigger button of the AsReader itself can also start and stop inventorying.



2. The AsReader will continue to inventory until a set "inventory stop condition" is reached or the "Stop" button is tapped. (Either release or pressing the AsReader's Trigger button again, depending on your settings, will also stop the inventory.)

* During the inventory, the "Inventory" button on the app's page changes to a "Stop" button.

3. When taking inventory of RFID tags, the data of the RFID tags being inventoried will be displayed on the list at the top of the Inventory page. In addition, the inventoried RFID tag data can be exported as CSV or Excel files.

* Please refer to "3-8 Data Export" for information about exporting data.



Empty the RFID tag list.

4. Select the specific RFID tag in the list to do operations such as read/write/lock. Please refer to "3-3 Operations to RFID Tags" for details.



See "3-3-1 Read Memory"

See "3-3-2 Write Memory"

See "3-3-3 Lock Memory"

3-2 Settings

3-2-1 Inventory

Tap "Inventory" to enter the Inventory page. On this page, you can inventory RFID tags and configure the RFID tag inventory settings.



① Power Gain

You can configure the output power of the AsReader (dBm). In general, the larger the value of power is set, the farther the reading distance will be, but the more electric power is consumed. This setting is saved to the AsReader. Range: 2 to 30dBm (which equates to *****mW to 500mW).

② Display PC

When this function is enabled, the PC (Protocol Control) values of the inventoried RFID tags are displayed. This setting is saved to the app.

③ Continuous Mode

When this function is enabled, the AsReader continuously inventories multiple RFID tags from when the "Inventory" button is tapped (or AsReader's trigger button is pressed) until the "Stop" button is tapped or the trigger button is pressed again. This setting is saved to the app.

④ Report RSSI

When this Report RSSI (Received Signal Strength Indicator) function is enabled, the received power level, the phase, and the frequency of the read RFID tags are displayed when taking inventory. This setting is saved to the app.

(5) Operation Time

Configure the inventory time. The AsReader stops the inventory as soon as the set time has passed. This setting is saved to the AsReader and the app.

* Only works if Continuous Mode is on.

(6) Inventory Session and Session Flag

Inventory Session and Session Flag can be set to configure the response time of RFID tags. (Response time varies with RFID tag specifications.) These settings are saved to the AsReader and the app.

Session Flag	SO	S1	S2/S3
Only A Only B	The RFID tags that have been inventoried will immediately become ready to be inventoried again after receiving the radio waves. RFID tags in the initial state cannot be inventoried.	The RFID tags that have been inventoried cannot be inventoried again within 0.5~5 seconds after being inventoried. The RFID tags cannot be inventoried during the first inventory. The RFID tags that have been inventoried cannot be inventoried again until the inventory starts again.	The RFID tags that have been inventoried cannot be inventoried again within 2~60 seconds after being inventoried. The RFID tags cannot be inventoried during the first inventory. The RFID tags that have been inventoried cannot be inventoried again until the inventory starts again.
A/B	The RFID tags that have been inventoried will immediately become ready to be inventoried again after receiving the radio waves.	The RFID tags that have to inventoried again within 0. counted.	been inventoried cannot be .5~5 seconds after being

3-2-2 Option

Tap the "Option" to configure the parameters of the AsReader.



① Buzzer

Set the buzzer on/off and volume.

When it is turned on, AsReader will beep at the set volume in the following scenarios:

- a) When the AsReader is turned on or turned off,
- b) When the smartphone (or tablet or PC) and the AsReader connect or disconnect,
- c) When the AsReader inventories RFID tags or scans 1D or 2D barcodes,
- d) When an RFID tag is read, written to, locked, or killed.
- 2 Idle Time (milliseconds)

Set the duration of time during which radio waves are not emitted between readings. * Depending on the laws of various countries regarding the use of radio waves, the Idle Time should be set differently as described in the following table. (Subject to change)

Regulations	Inventory Time	Idle Time
Radio law (JP)	Not more than 4000ms	Not less than 50ms
FCC (US)	Not more than 400ms	Not less than 20ms

CE (EU) Not more than 4000ms	Not less than 100ms
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③ Sleep Time (seconds)

Set the time until the AsReader switches to sleep mode when unoperated. Range: 0 to 1800. Sleep mode is disabled when the value is set to 0.

④ Battery Interval (seconds)

Set the interval at which AsReader sends battery information to the app. Range: 0 to 1800.

5 Auto Off Time (seconds)

Set the automatic shutdown time for AsReader. Set the time until the AsReader in sleep mode shuts down automatically. Range: 0 to 1800. If the value is set to 0, the automatic shutdown function is disabled.

(6) QValue

Configure the Q value. The number of slots used by the anti-collision algorithm is equal to 2^Q.

Range: 0 to 15.

- ⑦ MaxQ
 The maximum value of O (read)
 - The maximum value of Q (read-only).
- 8 MinQ

The minimum value of Q (read-only).

9 Link Profile

Please refer to the following table for setting values.

0	The inventory speed is slow, but the inventory sensitivity is high.
1	Long inventory distance.
2	Same as "1".
3	Fast inventory.

10 Default Link Profile

Set the default value of Link Profile. When the AsReader is connected to the app, the value of the Link Profile will default to the Default Link Profile.

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Barcode Timeout (seconods)
 Set the scanning timeout period for barcode scanning by the AsReader.
 Range: 4 to 300.

12 Baud Rate

Set the baud rate of the RFID module.

- * It is NOT recommended to change this.
- ③ Frequency Automatic

Set frequency hopping or fixed frequency.

- * This parameter is displayed only when the Region/Country is Japan.
- LBT Channel

Select the LBT (Listen Before Talk) channel in inventory.

- * This parameter is displayed only when Frequency Automatic is off.
- 15 Save

Tap the "Save" button to save your settings.

*IMPORTANT: After making changes to settings, please be sure to tap this

"Save" button to save your changes or they will be lost.

* The settings of $(1 \sim 3)$, $(5 \sim 9)$, (11), (12) are saved to the AsReader and the app.

The settings of (4) and (10) are saved to the app.

The settings of (13) and (14) are saved to the AsReader.

16 Default

Tap this button to restore all settings to factory defaults.

3-2-3 Mask

"Mask" is a function to filter RFID tags. It can be set separately in the "Mask" on the "Inventory", "Read Memory", "Write Memory", and "Lock Memory" pages.

Setting steps (using the Inventory page, as an example):

1. Tap the "Mask" button on the Inventory page and select the starting position bit number of the mask in the "Offset" field on the next page.

2. Fill in the mask value in the "Mask" text box.

3. Select the length bit number of the mask in "Length".

4. Tap the "Save" button (or you can clear the Mask information by tapping the "Clear" button).

5. Return to the Inventory page to begin an inventory and now only RFID tags that meet the Mask setting conditions will be inventoried. This setting is saved to the app.

* The Offset is initially set to 16bit for CRC. When it is set to 0bit, it will automatically deefault to 16bit.

* If the Offset is set to 16bit, the tag is filtered according to the value of its PC part.



3-3 Operations to RFID Tags

3-3-1 Read Memory

Tap "Read Memory" to read the memory of a RFID tag.



① Result

The reading result of the RFID tag is displayed in the "Result" area.

② Read Memory Value

The data of each WORD of the RFID tag read will be displayed in the "Read Memory Value" area.

The reading of the RFID tag is executed according to the items in "Read Memory Parameters" (Refer to $(3\sim 9)$).

③ Bank

You can select the memory bank to read. After the RFID tag is read, the data of each WORD is displayed in the "Read Memory Value".

·Reserved Bank: kill password and access password.

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·EPC Bank: individual identification number.

·TID Bank: inherent information that indicates the type of the RFID tag.

·User Bank: User-defined data.

④ Offset

Configure the location in the memory bank to start reading. Range: 0~15 WORD. The read RFID tag data is displayed from the set location in the "Read Memory Value" area.

⑤ Length

Configure the length of the data to display. Range: 0~15 WORD. Once the RFID tag is read, the selected length of RFID tag data will be displayed in the "Read Memory Value" area.

(6) Password

Enter the access password. The access password is required for reading the locked Reserved bank. No password is needed to read the other banks.

⑦ Power Gain

Configure the power gain of AsReader. This setting is saved to the AsReader.

(8) Operation Time

Configure the duration of the "Read" processing. This setting is saved to the AsReader.

(9) Report RSSI

When this "Received Signal Strength Indicator" feature is enabled, the radio wave intensity from the read RFID tag is displayed. This setting is saved to the app.

1 Read button

Tap to begin reading the RFID tag. If the read processing is successful, the message "Success" is displayed below "Result".

① Clear button

Tap to clear all the data displayed in the "Result" area and "Read Memory Value" area.

12 Mask button

Configure the mask setting. See "3-2-3 Mask" for the configuration method. This setting is saved to the app.

3-3-2 Write Memory

Tap "Write Memory" to write to the RFID tag.



1 Result

The writing results of an RFID tag will be displayed in the "Result" area.

② Bank

Select a memory bank to write to from the following four banks.

·Reserved Bank: kill password and access password

·EPC Bank: individual identification number

·TID Bank: inherent information that represents the type of RFID tag (unable to write

to)

·User Bank: User-defined data.

③ Offset

Configure the location in the memory bank to start writing to. Range: 0~15 WORD.

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④ Write Data

Enter the data to write to. The number of bits must be a multiple of 4, such as 4 bits, 8 bits, 12 bits, etc.

(5) Password

Enter the access password. If the RFID tag memory bank is locked, an access password must be entered to write to it.

⑥ Power Gain

Configure the radio output value of AsReader. This setting is saved to the AsReader.

1 Operation Time

Configure the execution time of the "Write" processing. This setting is saved to the AsReader.

(8) Report RSSI

When this feature is enabled, the radio wave intensity of the RFID tag is displayed when writing to it. This setting is saved to the app.

9 Write button

Tap to begin writing to an RFID tag. If the writing is successful, "Success" appears below "Result".

① Clear button

Tap to clear the data displayed in the "Result" area.

1 Mask button

Configure the mask setting. See "3-2-3 Mask" for the configuration method. This setting is saved to the app.

3-3-3 Lock Memory

Tap "Lock Memory" to perform the Lock or Kill operation on the RFID tag.



① Result

The Lock or Kill results of an RFID tag are displayed in this area.

② Kill Password

To "Lock", "Unlock", or "Permalock" the Kill password, this item must be enabled. * If you want to set a Kill password, tap "Set Kill Pwd" to display the Kill password input box.

③ Access Password

To "Lock", "Unlock", or "Permalock" the Access password, this item must be enabled.

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* if you want to set an Access password, tap "Set Access Pwd" to display the Access password input box.

4 EPC

When enabled, this area is subject to Lock, Unlock, or Permalock.

⑤ TID

When enabled, this area is subject to Lock, Unlock, or Permalock.

* This Memory Bank is usually locked permanently as soon as the RFID tag leaves the factory.

6 User

When enabled, this is subject to Lock, Unlock, or Permalock.

⑦ Password

To Lock, Unlock, or Permalock an RFID tag, you must enter an access password here.

(8) Power Gain

Configure the radio output value of AsReader. This setting is saved to the AsReader.

(9) Operation Time

Configure the execution time for the processing of the "Lock" series such as "Lock" and "Unlock". This setting is saved to the AsReader.

1 Report RSSI

When enabled, the radio wave strength of the RFID tag is displayed when the "Lock" and "Unlock" are performed. This setting is saved to the app.

3-4 Inventory RFID Tags with Temperature/Moisture Sensors

1. Tap "Humiture" and then tap the "Inventory" button to inventory the RFID tags with temperature/moisture sensors. (Or pull AsReader's trigger while on this screne.)



2. The inventory continues until the "Stop" button is tapped or the trigger button is pressed again.

* During the inventory, the "Inventory" button on the app's page changes to the "Stop" button.

3. When inventorying RFID tags with temperature/moisture sensors, the data of the inventoried RFID tags is displayed on the list at the top of the page.



1 Continuous Mode

Enable or disable the continuous reading mode.

Once enabled, the AsReader continues to inventory multiple RFID tags with temperature/moisture sensors from when the "Inventory" button is tapped until the "Stop" button is tapped.

This setting is saved to the app.

2 Report RSSI

When this function is enabled, the strength, the phase, and the frequency of the signal received from the RFID tags are displayed when taking inventory. This setting is saved to the app.

③ Mode

Select to inventory temperature sensor tags or moisture sensor tags. When Temperature is selected, the RF tags with temperature sensors are inventoried. When Moisture is selected, the RF tags with moisture sensors are inventoried.

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3-5 1D & 2D Barcode Scan

1. Tap "Barcode Scan" and then tap "Start Scan" to scan 1D and 2D Barcodes. Pressing the trigger button of the AsReader can also start and stop scanning.



2. Press the trigger button of the AsReader or tap the "Start Scan" button on the app. When no barcode is scanned within the timeout time period, the AsReader stops trying to scan. Also, the AsReader stops scanning once it scans a barcode successfully. In the continuous scan mode, AsReader performs continuous scanning once the trigger button is pressed (or tapping the "Start Scan" button) and it keeps scanning until releasing the trigger button (or tapping the "Stop Scan" button).

* During scanning, the "Start Scan" button on the app's page changes to the "Stop Scan" button.

3. After scanning, the scanned 1D and 2D barcodes are displayed on the list at the top of the Barcode Scan page. In addition, the scanned data can be exported.

* Please refer to "3-8 Data Export" for information about exporting data.



$\textcircled{1} \quad \text{Encoding}$

There are three choices for encoding formats: ASCII, UTF8, and Shift JIS.

$\textcircled{2} \quad \text{Rescan Time} \quad$

This sets the time interval between two consecutive scans in Continuous Scan Mode. When "Not Used" is selected, the continuous scan function is turned off. This setting is saved to the app.

3-6 Firmware Update

Tap "Firmware Update" to update the firmware of the AsReader. This function requires a WAN connection to the Internet.



Operating steps:

- 1. The "Update Firmware" page first displays a list of currently downloaded firmwares.
- 2. Tap "Sync" to download the newest firmware files. The message "Firmware download succeeded" is displayed when new firmware files are successfully downloaded.
- 3. Select the firmware version from the list that you wish to install.
- 4. Tap the "Update Firmware" button (this button is displayed after selecting firmware).
- 5. The firmware update process begins and the progress is displayed on the screen.
- 6. When the update is complete, the message "Update Firmware success" is displayed, and the AsReader is automatically turned off.
- 7. To continue operating the AsReader, please turn back on the AsReader. The App and AsReader will automatically reconnect.

* It is recommended to tap "Sync" to synchronize the latest firmware before each firmware update.



3-7 Firmware Update (RFID)

Tap "RFID Update Firmware" to update the firmware of the RFID module of the AsReader. This function requires a WAN connection to the Internet.

* Please refer to "3-6 Firmware Update" for details on how to complete this similar process.



3-8 Data Export

The barcode and RFID tag data can be exported as a CSV file, or, with an iOS device an Excel file is also possible. You can then transfer those files to your PC via iTunes.

The following example is the process of exporting the data of the scanned RF tags and the same procedure applies to exporting the data of scanned barcodes.

* **For Android devices:** only the "Save as CSV" option is available, which saves a CSV file to the Android device. The Excel format option is only available for iOS.



Operating steps for iOS:

1. Tap "Export" at the top right corner of the "Inventory" page.

2. Select the format of the file to export. For example, tap "CSV export" when exporting the data as a CSV file and select "Excel Export" when exporting the data as an Excel file. Once exported, the file is saved to the app. You can tap the "Excel List" to view all the saved Excel files.

3. Connect your iOS device to a PC and transfer the files that were saved in the app to your PC via iTunes.

ASR-P252B iOS/Android Demo

User's Manual

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