



Wireless Ring Scanner PM5 User Manual

Instruction

PM5 is a wearable Bluetooth scanner that brings the full scanning capability on your finger. By assembling the trigger on PM5, you can wear the PM5 like a ring. PM5 can be used with host device, and can also be used as a standalone scanner with batch mode. This manual provides information about basic features and using the PM5. Please read this manual carefully before using your handy Bluetooth scanner and peripherals to ensure safe and proper use.

Revision History

Revision	Date	Description
V01	09 Feb 2021	Initial release.

Related Document

Download related documents from [Point Mobile Service Portal](#).

- Ring Control User Guide – Describes how to use Ring Control application
- Ring Control Lite User Guide – Describes how to use Ring Control Lite application
- Ring Scanner Configuration PC Tool Guide – Describes how to use Ring Scanner Configuration PC Tool for making a configuration json file for Ring Scanner

PM5 SKUs

The contents of this manual can cover the following SKUs.

SKU	Part Number	Scanner	Battery
SKU1	PM500B6212N0	N6703	Standard battery capacity
SKU2	PM500B6222N0		Extended battery capacity

Table of Contents

INSTRUCTION	1
Revision History	1
Related Document	1
PM5 SKUs	1
TABLE OF CONTENTS.....	2
GETTING STARTED	6
Ring Scanner Parts.....	6
Trigger Parts	7
Product Standard Accessories.....	7
Install & Remove Battery	8
Install the battery	8
Remove the battery	8
Assemble Trigger.....	9
Charging the Scanner	10
Charge via single trigger.....	10
Charge via cradle	11
8SBC.....	11
4SC	12
Share cradle	12
Charge via sled.....	13
Wearing on the scanner.....	14
Scanner Status	15
Activity modes	15
Run mode.....	15
Low Power mode.....	15
Power Off	15
Power on	15

Reset the PM5.....	16
Warmboot.....	16
Factory reset	16
Status indication	17
APPLICATIONS FOR RING SCANNER	19
Ring Control.....	19
Ring Control Lite.....	19
Ring Control Configuration Tool.....	20
BLUETOOTH PAIRING	21
Supporting Bluetooth Modes.....	21
SPP (Serial Port Profile)	21
HID (Human Interface Device).....	21
HID LE (Human Interface Device Low Energy)	21
BLE (Bluetooth Low Energy)	21
Pairing Methods.....	22
Scan-to-Pair.....	22
Tap-to-Pair.....	23
Disconnect	24
Change Bluetooth Connect Mode.....	24
General Bluetooth Settings	25
Bluetooth name	25
Bluetooth power class.....	25
CONFIGURATION	26
Apply Configuration.....	26
Apply via Ring Control	26
Apply via JSON file	27
Auto Update	27
Manual Apply.....	28
Available Settings	29

Wedge settings..... 29

System settings 30

 Trigger Timeout 31

 Sleep Timeout 31

 Transmit Barcode ID..... 31

 Prefix & Suffix 31

 Terminator 31

 Center Window 32

 Inverse Barcode 32

 HID Inter Char Delay 32

 Batch mode 32

 Deep Sleep Mode..... 33

 Connect alert..... 33

Notification settings 34

SYMBOLOGIES 35

 Symbologies settings..... 35

FIRMWARE UPDATE 47

 Auto Update..... 47

 Manual Update 48

SCAN A BARCODE 49

ACCESSORY 50

 8SBC (8 Slot Battery Cradle) 50

 4SC (4 Slot Cradle)..... 50

 Share Cradle..... 50

 Sled..... 53

SAFETY INFORMATION..... 55

 Battery Safety Information 55

APPENDIX..... 56

Bluetooth Mode Barcodes.....56

Bluetooth Power Class.....57

Batch Mode Barcodes.....58

Factory Data Reset.....59

Getting Started

Ring Scanner Parts

Figure 1 PM5 Front view

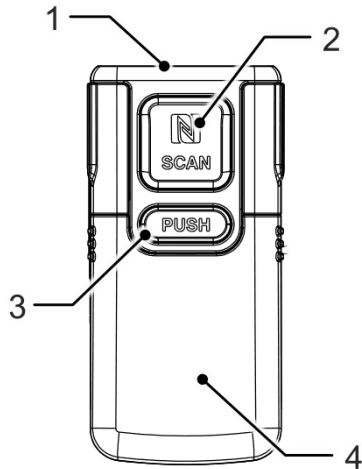
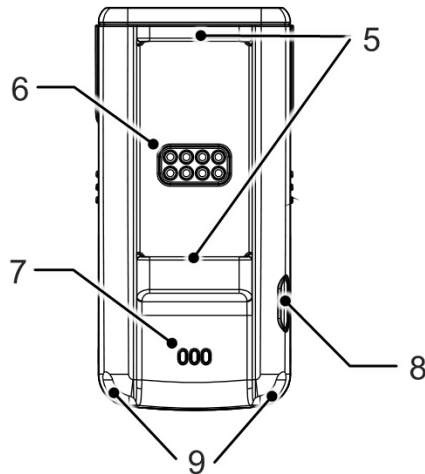


Figure 2 PM5 Back view



No	Name	Description
1	Scanner	Scan a barcode
2	Top scan button & NFC tagging area	Scan a barcode or power on PM5 & Put close to NFC antenna for Tap-to-Pair
3	Battery release button	Press to release the battery from PM5
4	Battery	Provide power
5	Trigger assembly latch	Assemble the trigger
6	Trigger connector pin	Communicate with trigger for triggering scan action
7	Speaker	Emit the beep sound
8	Reset button	Press to reboot or reset PM5
9	LED Indicators	Indicates the status of PM5 with beep sound and vibration

Getting Started

Trigger Parts

Figure 3 Trigger side view

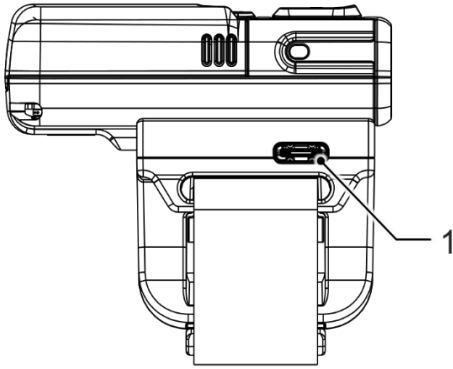
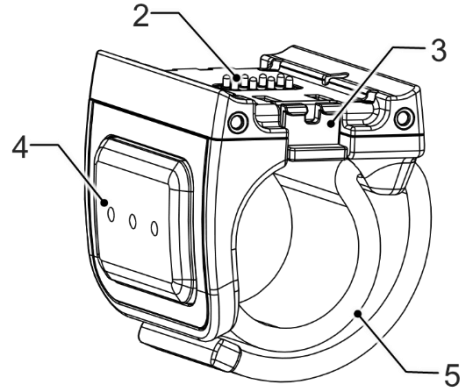


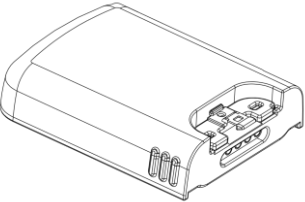
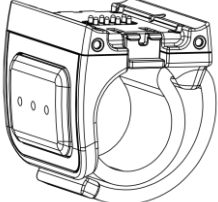
Figure 4 Trigger front + side view



No	Name	Description
1	USB type C Connector	Charge PM5 through USB type C cable
2	PM5 connector pin	Connect PM5 with trigger
3	Trigger release button	Press to release the battery from PM5
4	Trigger scan button	Scan a barcode or power on PM5
5	Finger strap	Tighten strap to fit your finger

Product Standard Accessories

The following items are in the product box.

Accessory	Name
	Battery pack
	Single Trigger

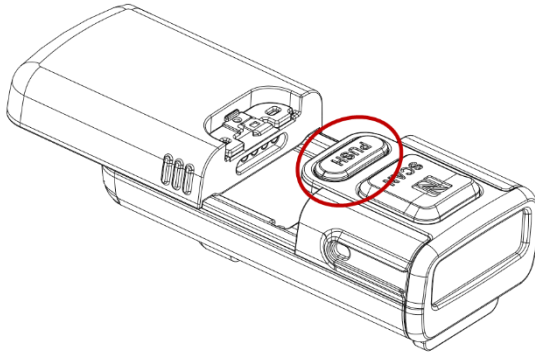
Getting Started

Install & Remove Battery

Install the battery

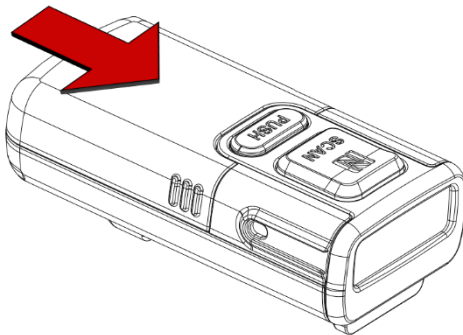
1. Align the connector on the PM5 with the connector on the battery

Figure 5 Install battery_1



2. Slide and press the battery into the battery slot so that the battery is firmly engaged

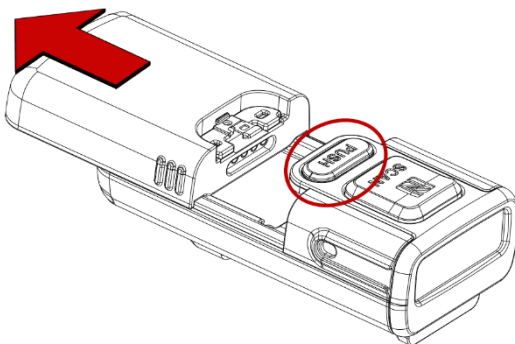
Figure 6 Install battery_2



Remove the battery

Pull the battery while pressing the battery release button.

Figure 7 Remove battery



Getting Started

Assemble Trigger

PM5 can be worn on the index finger like a ring by assembling the single trigger. The trigger is designed for ambidextrous use, so determine the hand you want to mount and assemble the trigger with right orientation.

1. Determine the trigger orientation according to the hand you wear the PM5
 - Align the trigger so that the trigger scan button is positioned next to the thumb
2. Insert the opposite side of trigger release button to PM5's trigger assemble latch first

Figure 8 Trigger Assemble_Left hand mount

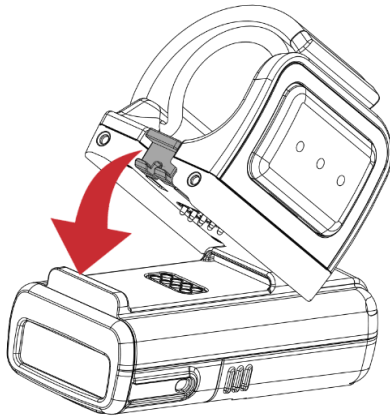
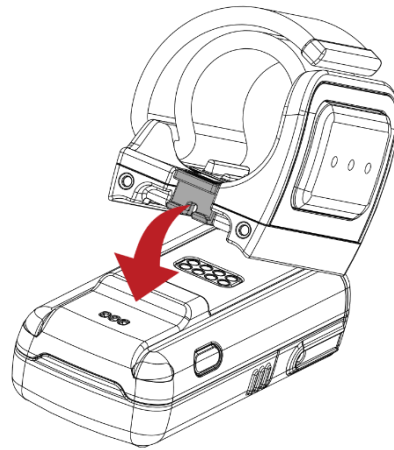
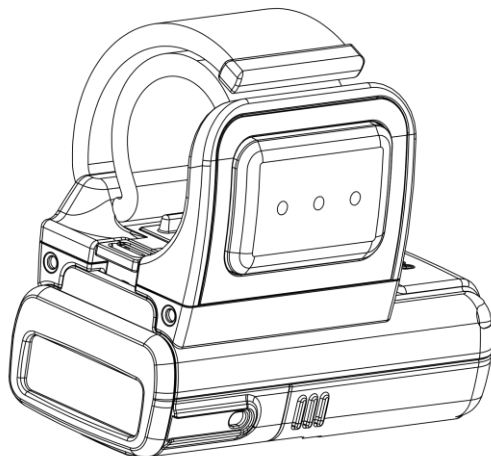


Figure 9 Trigger Assemble_Right hand mount



3. Push the other end down until it clicks
4. Make sure that the trigger is engaged firmly

Figure 10 Trigger Assembled_Left hand mount



Getting Started

Charging the Scanner

i **Note:** Before using PM5 for the first time, charge the scanner at least 1 hour for stable operation.

There are two methods to charge PM5. Use single trigger or charging cradle (optional accessory).

Charge via single trigger

Assemble the single trigger referring to [Assemble Trigger](#), and plug the USB type C cable to USB connector on the trigger.

LED indicator on the PM5 will light on red to confirm the power connection.

Figure 11 Trigger USB connector

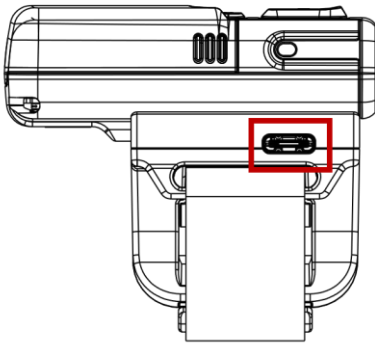
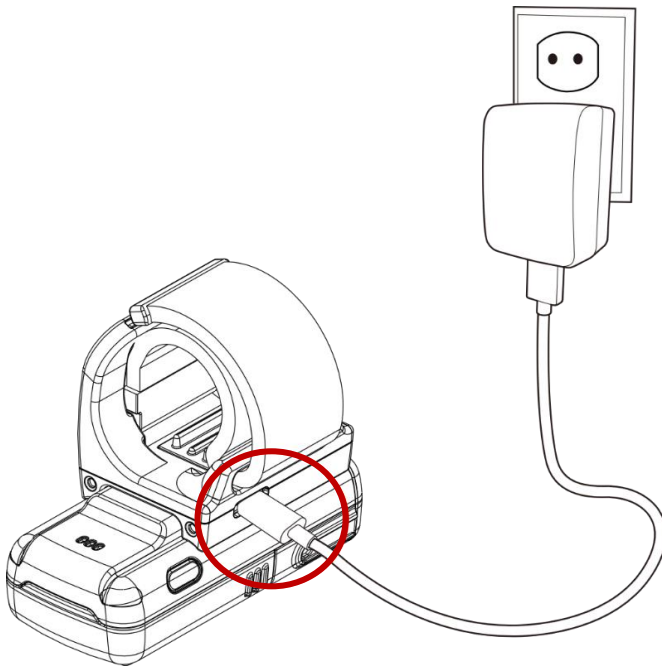


Figure 12 Charge PM5 through single trigger



Getting Started

Charge via cradle

There are 2 types of cradle (optional accessories) for charging PM5, 8SBC (8 Slot Battery Cradle) and 4SC (4 Slot Cradle). The cradles can be connected to make share cradle that can charge the PM5 and batteries with more slots.

8SBC

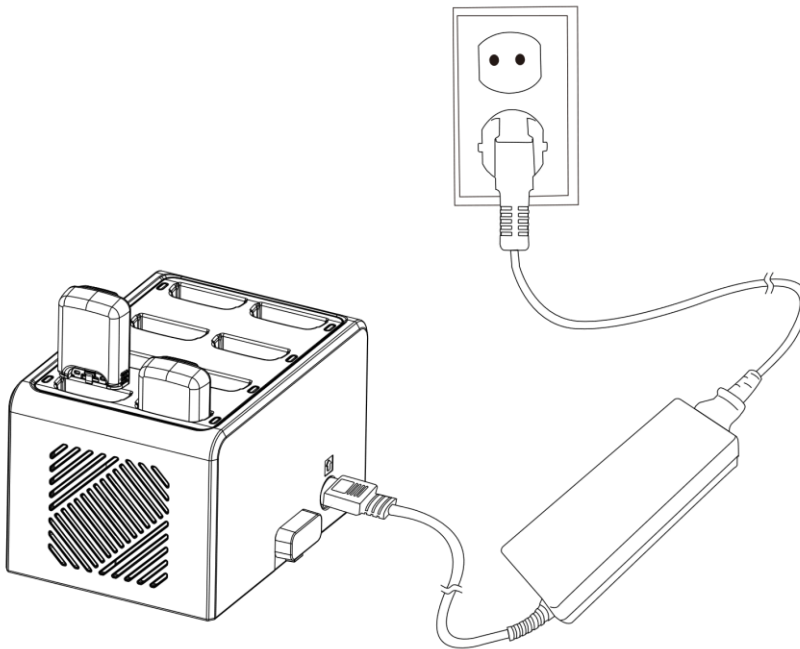
8SBC can charge up to 8 batteries of PM5 simultaneously. To charge the PM5 battery,

1. Assemble the power adapter and power cable, and then connect it to the cradle.
2. Remove the battery from PM5.
3. Align the battery as the shape of the slot, and battery connector should be facing down.
4. Insert the battery into the slot until it clicks.

When the battery is inserted properly, the LED indicator next to the slot will light on.

(Red – Charging / Green – Full charged)

Figure 13 Charging battery with 8SBC



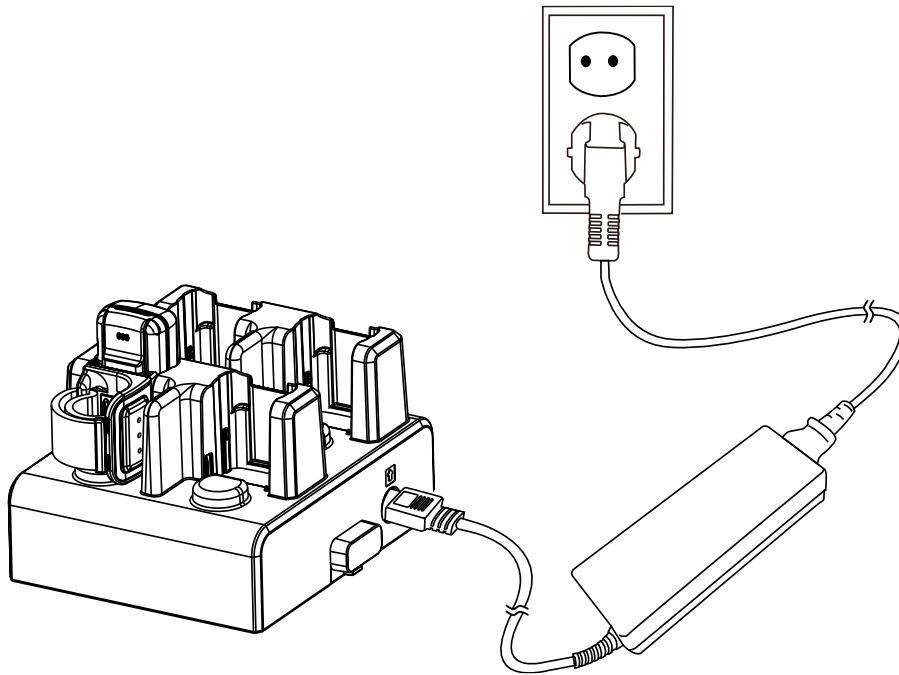
Getting Started

4SC

4SC can charge up to 4 units of PM5. Trigger must be mounted the PM5 for charging with 4SC.

1. Assemble the power adapter and power cable, and then connect it to the cradle.
2. Insert PM5 into the slot as the scanner is facing down
3. Push the device down until the LED indicator of PM5 lights on
(Red – charging / Green – Fully charged)

Figure 14 Charging with 4SC



Share cradle

8SBC and 4SC can connect up to 5 pcs of cradles in one type only or two different types (4SC + 8SBC) to make share cradle. With share cradle, you can charge more PM5 and batteries at the same time.

Find more information in [Accessory – Share Cradle](#).

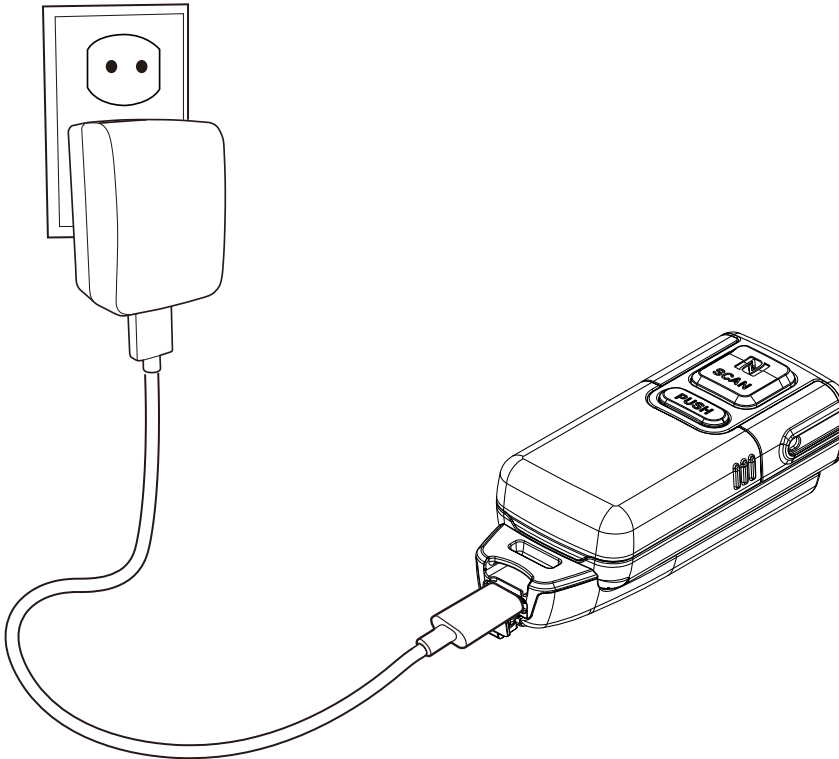
Getting Started

Charge via sled

PM5 can be charged using necklace type sled (sold separately).

1. Attach the sled to the PM5 (Refer to [Accessory – Sled](#))
2. Connect the USB Type C charger to the USB connector on the sled
3. Confirm the connection with LED indicator on the PM5
(Red – charging / Green – Fully charged)

Figure 15 Charge via sled

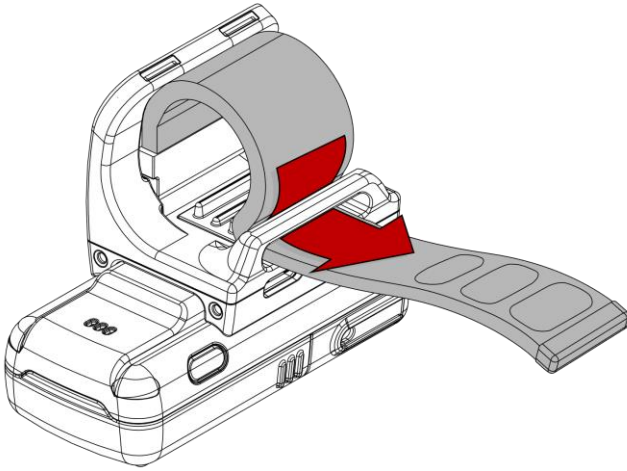


Getting Started

Wearing on the scanner

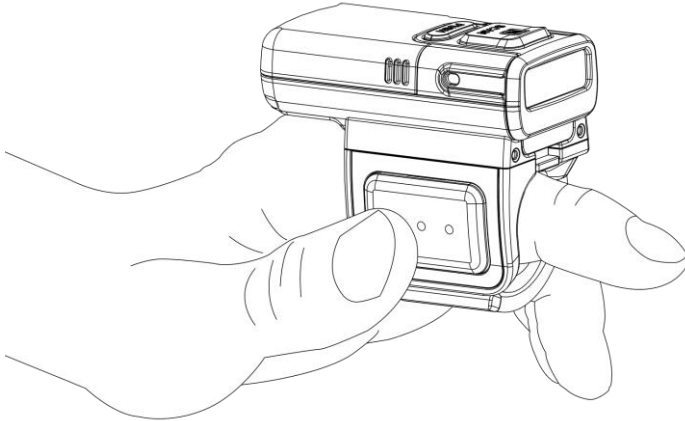
1. Insert the end of finger strap into the hole on the single trigger

Figure 16 Insert finger strap



2. Wear the PM5 with single trigger on the index finger as the trigger scan button facing the thumb
3. Tighten the finger strap and attach the end of the strap to remaining strap

Figure 17 Mount PM5 onto index finger (Left hand)



4. To loosen the finger strap, detach the end of the strap

Getting Started

Scanner Status

Activity modes

Run mode

Run mode is a mode that PM5 can operate immediately.

Low Power mode

When PM5 is idle for sleep timeout you set, PM5 enters suspend mode. User can wake up the scanner by below event. Sleep timeout can be changed by Ring Control (Lite) or Ring Control Configuration Tool (See [Sleep timeout](#) in Configuration). Default value is 60 seconds.

To wake up PM5,

- Press any button on PM5 and trigger
- Send an activity through Bluetooth connection with Ring Control (Lite)
- Connect USB cable

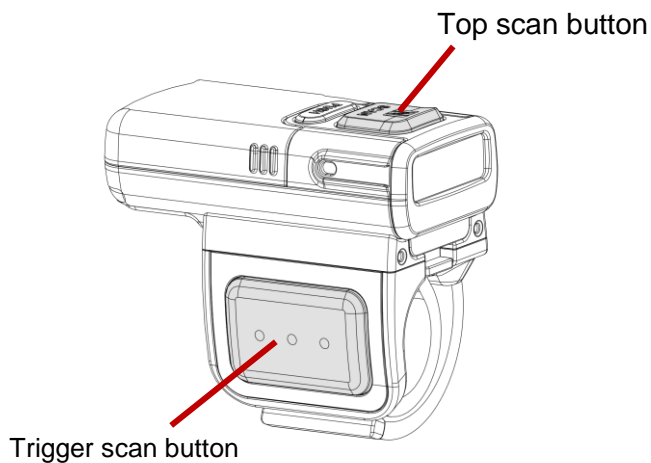
Power Off

Remove the battery from PM5

Power on

Install battery to PM5, and top scan button on the PM5 or press trigger scan button.

Figure 18 Scan buttons



Getting Started

Reset the PM5

Warmboot

Perform warmboot when you want to restart the PM5. LED indicator will light on blue during warmboot process. To perform warmboot,

- Press reset button for 3 seconds

Factory reset

To reset all setting values as default, perform factory reset. LED indicator will light on red during factory reset process.



Note: Factory reset will erase all customized configuration of PM5, device settings, symbologies settings, Bluetooth pairing information.

To perform factory reset when PM5 is in run mode or low power mode,

1. Press reset button until the blue LED blinks for 5 seconds
2. While LED blinks, press and release reset button and top scan button simultaneously

To perform factory reset when PM5 is not powered on,

- Press reset button immediately after pressing top scan button to power on PM5

Figure 19 Top scan button

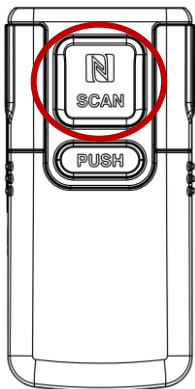
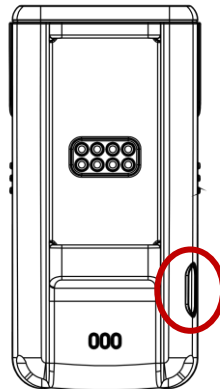


Figure 20 Reset button



You can do the factory reset using Ring Control (Lite) app or special barcode, too. See the application's user guide to find how to perform the factory reset with the app, or see [Appendix – Factory Data Reset](#) to find special barcode.

Getting Started

Status indication

Unless the beep sound is muted, user can check the PM5's status with beep sound and LED as below table.

Description	LED Sequence	Beep Sequence
Booting		
PM5 is powered on	Green (Until the beep sequence ends)	Short low – Short medium – Short high
PM5 is booting as warmboot	Blue	None
PM5 is booting after factory reset	Red	None
Low battery warning (Repeat up to 3 times)		
Battery is low (less than 20% or 10%)	Red (Until the beep sequence ends)	4x Short high
Battery level (Press Reset button to activate)		
Battery level is more than 20%	Green (For 5 seconds)	None
Battery level is between 10% and 20%	Blue (For 5 seconds)	None
Battery level is less than 10%	Red (For 5 seconds)	None
Charging		
Charging battery	Red	None
Fully charged	Green	None
Bluetooth Communication		
Bluetooth connected	Green	Short medium - Short high
Bluetooth disconnected	Red	3x Short high

Getting Started

Description	LED Sequence	Beep Sequence
Scanning		
Decoding success	Green flash	Short high
Decoding success and Bluetooth is not connected	Red	3x Short low
Decoding fail	Red flash	Short medium – High
Temperature warning		
Battery temperature is low (Under 0 degree Celsius)	Red	High – Low – High – Low
Battery temperature is critical low (Under -5 degree Celsius and voltage is under 3.8V)	None	High – Middle – Middle – Low (Then shutdown)

Applications for Ring Scanner

There are 3 applications for Point Mobile ring scanners, Ring Control, Ring Control Lite and Ring Control Configuration Tool. These applications can be downloaded from [Point Mobile Service Portal](#).

This manual only describes what features are in each application briefly. If you want more information, please refer to [each application's user guide](#).

Ring Control

Ring Control is an application installed on a host device for connecting and controlling the ring scanner. Ring Control is only compatible with Point Mobile Android devices, such as PM85.

Ring Control supports,

- Bluetooth pairing between ring scanner and host device
- Advanced Settings
 - Apply Ring Scanner settings with JSON file
 - Update Ring Scanner F/W with RFU file
 - Wedge settings
 - Ring Scanner settings
 - Rename this ring scanner
 - Factory reset
- Get ring scanner's information
- Scan demo

Ring Control Lite

Ring Control Lite is a Ring Control for Android device which is not manufactured by Point Mobile. Ring Control Lite supports most of Ring Control features, but does not support wedge settings.

Applications for Ring Scanner

Ring Control Configuration Tool

Ring Control Configuration Tool is a PC tool that can save a json file containing the configurations for ring scanner. The file will be used by the Ring Control (Lite) to apply the configuration.

Figure 21 Ring Scanner Configuration Tool

PM5 Ring Control Configuration Tool (v1.2.2)

Copyright (c) 2021 Point Mobile, All rights reserved.

Choose File No file chosen Load JSON File

Generate JSON Clear

Revision 0

Ring Control Configuration

Admin Password

Set Password

Password

Password Repeat

Ring Scanner Configuration

Configuration

RFU AutoUpdate Disable Enable

RFU AutoUpdate Filename

You can configure the below settings,

- Ring Control Configuration
 - Admin Password
- Ring Scanner Configuration
- Configuration
- System
- Notification
- Symbolologies

Bluetooth Pairing

Supporting Bluetooth Modes

PM5 supports following Bluetooth modes,

- SPP (Serial Port Profile)
- HID (Human Interface Device) – Supports classic and LE
- BLE (Bluetooth Low Energy)

SPP (Serial Port Profile)

PM5 communicate as SPP mode by default. This mode is compatible with Ring Control (Lite) application. When you need to update firmware or apply some configuration of PM5, connect PM5 to host device as this mode. Ring scanner can be paired as SPP mode through Scan-to-Pair and Tap-to-Pair both.

HID (Human Interface Device)

HID mode is used for getting the decoded data as a keyboard action. Because this mode is not compatible with Ring Control (Lite) application, Ring Control (Lite) functions are deactivated when PM5 is connected to host device as HID mode. HID mode supports Tap-to-Pair only.

HID LE (Human Interface Device Low Energy)

HID LE mode is kind of HID mode. HID LE mode makes PM5 and host device communicate through Bluetooth low energy radio. HID LE mode supports same pairing method as HID mode.

BLE (Bluetooth Low Energy)

BLE mode is only used for updating the Bluetooth firmware through Ring Control (Lite). You don't need to change to BLE mode manually because the app will change the mode to BLE automatically when you try to update the firmware.

Bluetooth Pairing

Pairing Methods

There are two ways for connection between ring scanner and host device, Scan-to-Pair and Tap-to-Pair. Choose more comfortable method.

Pairing Method	Description	Support Mode
Scan-to-Pair	Scan the barcode on the Ring Control (Lite) pairing screen.	SPP mode only
Tap-to-Pair	Bring the NFC tag of ring scanner close to host device's NFC antenna.	SPP mode HID mode

Scan-to-Pair

Ring Control (Lite) provides a barcode on the pairing screen. This barcode makes PM5 change to SPP mode and connect to the host device.

Figure 22 Scan-to-Pair



Please read this barcode for pairing with your Android device.



Or NFC Tagging with Android device.



Bluetooth Pairing

Tap-to-Pair

Find the NFC location of host device and ring scanner, and align NFC logo of ring scanner with NFC antenna of host device to pair.

In case of PM85, the NFC antenna is located on the back side of the device. Align the NFC logo of the PM5 with the NFC area as below figures.

Figure 23 Tap-to-Pair_NFC tapping area (PM85 & PM5)

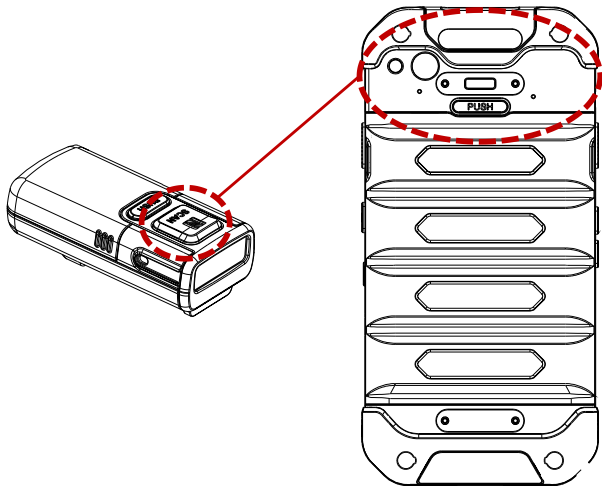
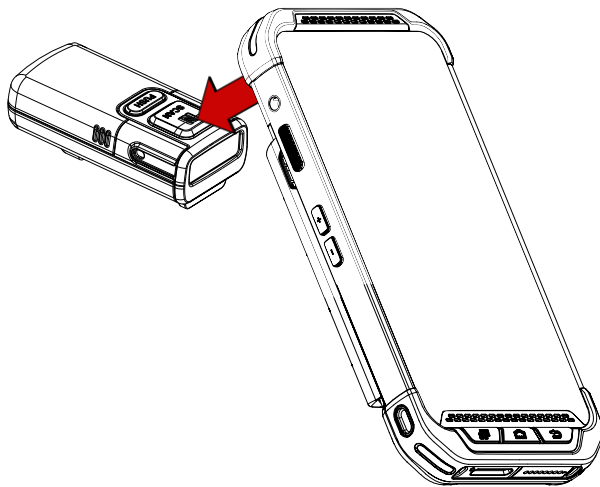


Figure 24 Tap-to-Pair_Align PM5 and PM85



Tap-to-Pair operates like toggle in HID mode. This means that if Tap-to-Pair is performed when the ring scanner is connected to host device, the connection will be closed.

i Note: NFC feature will be paused for 5 seconds after NFC reading. It is a function for preventing duplicate NFC request. So, if you want to connect or disconnect the ring scanner by Tap-to-Pair, try when more than 5 seconds passed since last NFC tagging.

Bluetooth Pairing

Disconnect

To close connection between PM5 and host device,

- Turn off Bluetooth on the host device
- Reboot ring scanner
- Tap-to-Pair (Do when the PM5 is connected. Supports only for HID mode)

If PM5 is disconnected, PM5 emits red LED and high beep sound three times.

Change Bluetooth Connect Mode

To change the connect mode, scan the mode change barcodes ([Appendix – Bluetooth Mode Barcodes](#)). If the mode is changed while PM5 is connected to host device, the connection will be closed and you have to connect the devices again. Refer to [Pairing Methods](#).

Bluetooth Pairing

General Bluetooth Settings

Bluetooth name

Change PM5's Bluetooth name and find out your PM5 more easily. You can rename the PM5 through Ring Control (Lite) app. Go to **Advanced settings** > **Rename this Ring Scanner** on the app and input a new name.

There are some rules for new Bluetooth name of PM5. See the [applications user guides](#) for more detail.

Bluetooth power class

Change the Bluetooth power between Class 1 and Class 2, using special barcode. Find desired barcode in [Appendix – Bluetooth Power Class](#).

Configuration

PM5 configuration consists of wedge, system, notification, symbology settings. Unless you do factory reset, the configuration maintains after reboot.

This chapter describes how to apply the configuration, and each configuration.



Note: To change all setting values as default, execute factory reset on PM5. Find how to do factory reset in [Reset the PM5](#).

Apply Configuration

To adjust configuration of PM5, use Ring Control (Lite) app or JSON file made by Ring Control Configuration Tool.

Apply via Ring Control

This method is that you change the configuration one by one using Ring Control interface.


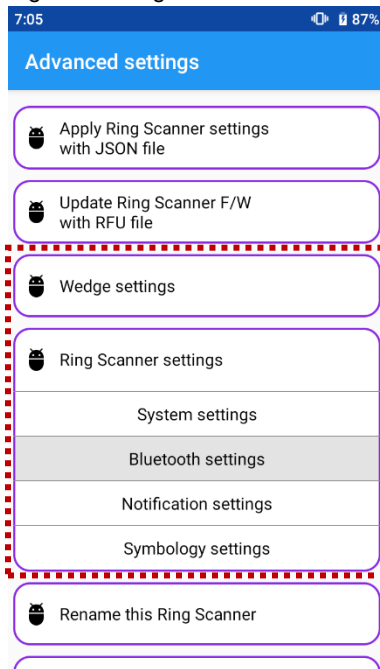
1. Execute Ring Control (Lite) and connect PM5 with host device
2. Tap  on the top of the main screen to access **Advanced settings**
3. Input the admin password (Default password is 1010)
4. Select the settings that you want to change

Figure 25 Ring Control - Advanced settings



Configuration

Apply via JSON file

To apply the configuration via JSON file, Ring Control (Lite) app and Ring Control Configuration Tool is required. Generate a **RingControl.json** file containing the configuration and copy it to **RingControl** folder in the internal storage of host device.

 **Note:** Must follow the file name and path. Otherwise, update cannot be performed.

Below table describes two types for applying ring scanner settings with JSON file.

Methods	Description
Auto Update	<ul style="list-style-type: none"> Set configuration auto update in JSON file Apply configuration every time the ring scanner is connected
Manual Update	<ul style="list-style-type: none"> Apply configuration immediately

Auto Update

Configuration auto update is performed when...

- Ring scanner is connected
- Configuration auto update is set in **RingControl.json** file
- Revision number of the JSON file is different from previously applied one

Set up the auto update in the **RingControl.json** file and copy the file to **RingControl** folder. Every time the ring scanner is connected as SPP mode, the app updates configuration automatically.

For more detail, refer to [application's user guides](#).

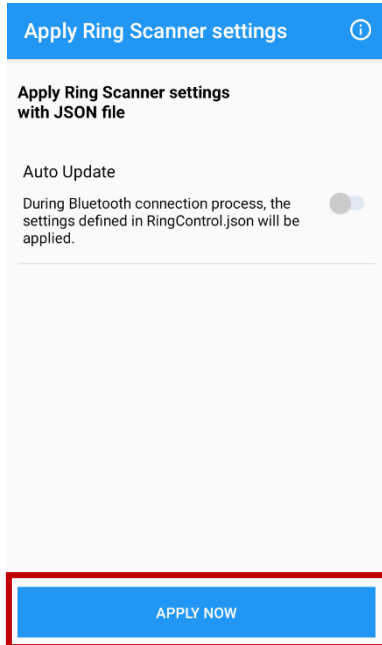
Configuration

Manual Apply

Manual update can be performed regardless the auto update is enabled or disabled. To apply new configuration with a JSON file immediately,

1. Launch Ring Control (Lite) and connect PM5 with host device
2. Go to **Advanced settings > Apply Ring Scanner settings** (Password is required)
3. Tap **APPLY NOW** and wait until the process is done

Figure 26 Ring Control - Manual Apply Configuration



Configuration

Available Settings

Wedge settings

Wedge settings can be set through Ring Control and Ring Control Configuration Tool both, but not supported on Ring Control Lite. Check the default values in the below table.

Setting	Values	Default
Wedge mode		
Result type	User Message Keyboard Event Clipboard (KEYCODE_PASTE) Clipboard (Ctrl + V) Custom Intent	Clipboard
Custom intent		
Intent action		device.scanner.EVENT
Intent category		android.intent.category.DEFAULT
Extra decode string value (String)		EXTRA_EVENT_DECODE_VALUE
Extra decode bytes value (ByteArray)		EXTRA_EVENT_BYTES_VALUE
Character set		
Result Charset	UTF-8 UTF-16 UTF-16BE UTF-16LE US-ASCII ISO-8859-1 EUC-KR Shift-JIS windows-1250 windows-1251 windows-1252 windows-1253 windows-1254 windows-1257	UTF-8

Configuration

System settings

System settings can be set through Ring Control (Lite) and Ring Control Configuration Tool.

Setting	Values / Range	Default
Trigger Timeout (sec)	1~10 sec	10 sec
Sleep Timeout (sec)	1~60000 sec	60 sec
Transmit Barcode ID	Disable Enable	Disable
Prefix	Up to 10 characters	
Suffix	Up to 10 characters	
Terminator	None CR LF CR+LF Tab Space	None
Center Window	Disable Enable	Disable
Inverse Barcode	Disable Enable	Disable
HID Inter Char Delays	0~250 ms	0 ms
Batch Mode	Normal Standard mode Auto mode USB storage mode	Normal
Deep Sleep Mode	Disable Enable	Disable
Connect alert	Disable Enable	Enable

Configuration

Trigger Timeout

Trigger timeout is amount of time the scanner beam stays on in the Triggering Mode until another action occurs. Unit is second.

- Range: 1~10 sec
- Default: 10 sec

Sleep Timeout

Sleep timeout is length of time the ring scanner will remain in an active state. Unit is second.

- Range: 1~60000 sec
- Default: 60 sec

Transmit Barcode ID

Enable or Disable the Transmit Barcode ID feature. If you enable this setting, the ID of barcode symbology is appended to decoding data as a prefix. Default value is Disable.

Prefix & Suffix

Set the prefix and suffix, which are sent with barcode data. Nothing is inserted by default.

Terminator

Set the terminator text when transmitting the barcode.

- Values
 - None (Default)
 - CR
 - LF
 - CR + LF
 - Tab
 - Space

Configuration

Center Window

If you enable this mode, decoding will only succeed if the barcode is located near the center of the captured rectangle section. Default is Disable.

Inverse Barcode

Enable or Disable the Inverse barcode feature. If inverse barcode is enabled, ring scanner can read the inverse barcode (White on Black). Default is Disable.

HID Inter Char Delay

This setting is the time interval in milliseconds between individual characters transmitted from the scanner to the host. This feature is supported on Bluetooth HID mode only.

- Range: 0 ~ 250 (ms)
- Default: 0 (ms)

Batch mode

Batch mode is a function that collects decoding data in the ring scanner's internal memory and sends it to the host device at once. Batch mode has four modes, Normal, Standard, Auto, USB storage. Each mode has different triggering method to start and stop the batch mode.

To change the batch mode, scan a desired batch mode barcode using ring scanner.

- **Normal:** Do not use batch mode. Get decoding data instantly (Default)
- **Standard mode:** Data collection and transmission will be triggered by START / SEND command (ex. Special barcode)
- **Auto mode:** Data collection and transmission will be triggered by Bluetooth connection



Note: Auto mode only supports Tap-to-Pair for reconnection.

- **USB storage mode:** Data will be saved to ring scanner's storage and get batched data as a file. (Rebooting the ring scanner is required)

Find each batch mode barcode in [Appendix – Batch Mode Barcodes](#)

Configuration

Deep Sleep Mode

Deep Sleep Mode is a function to reduce battery consumption by turning off the power of scanner and Bluetooth while the ring scanner is not in use. But this function will make a delay to wake up the PM5 to activity mode, and it may be not acceptable depending on your working environment.

Deep Sleep Mode is disable by default. Refer to below table to find a summary of the differences between enable / disable this mode.

	Disable Deep Sleep Mode (Default)	Enable Deep Sleep Mode
Power of Scanner & Bluetooth	Scanner – ON Bluetooth – ON	Scanner – OFF Bluetooth - (Connected) ON - (Not Connected) OFF
Wake Up Delay	No delay	About 1 second
Battery Consumption (While not in use)	Normal	Battery save

Connect alert

Connect alert helps you to recognize that the ring scanner is disconnected with host device. If this setting is enabled, a status indication which is different from normal indication emits.

- Normal Decoding success: (LED) Green flash + (Beep) Short Low
- Connect alert: (LED) Red + (Beep) 3x Short low

This function is enabled by default. If enable it, Connect alert is activated in below condition.

- Bluetooth - Disconnected
- Batch mode - Normal
- Decoding - Success

Configuration

Notification settings

Set PM5 notification through Ring Control (Lite) or Ring Control Configuration Tool. Vibration setting is supported only for special trigger.

Setting	Description	Default
Beep		
Beeper Enable	Enable or Disable the ring scanner's beep sound	Enable
Beeper Volume	Adjust the volume of beep sound <ul style="list-style-type: none"> - Mute - Low Volume - Medium Volume - High Volume 	High Volume
Power Up Beeps	Enable or Disable the beep sequence on power up	Enable
LED		
Enable LED	Enable or Disable the LED indicator of ring scanner	Enable
Vibration (Only supported for special trigger)		
Vibration Time After Decode Success	Adjust the length of vibration time after decode success <ul style="list-style-type: none"> - Disable - Short (100ms) - Middle (150ms) - Long (250ms) 	Short (100 ms)
Vibration Time After Decode Fail	Adjust the length of vibration time after decode fail <ul style="list-style-type: none"> - Disable - Short (250ms) - Middle (400ms) - Long (700ms) 	Long (700 ms)

Symbologies

Symbologies settings

Symbologies can be set through Ring Control (Lite), Ring Control Configuration PC Tool.

Configuration	Values / Range	Default
Code 39		
Enable	Disable Enable	Enable
ID		E
Min		0
Max		48
Check Character	No Check Check and don't transmit Check and transmit	No Check
Send Start / Stop Characters	Disable Enable	Disable
Full ASCII	Disable Enable	Disable
Append	Disable Enable	Disable
Code 32 Pharmaceutical	Disable Enable (Couldn't use with Trioptic)	Disable
EAN8		
Enable	Disable Enable	Enable
ID		I
Send Check Character	Disable Enable	Enable
Addenda Required	Disable Enable	Disable
Send Addenda Separator	Disable Enable	Enable
2-Digit Addenda	Disable Enable	Disable
5-Digit Addenda	Disable Enable	Disable

Symbologies

Configuration	Values	Default
EAN13		
Enable	Disable Enable	Enable
ID		J
Send Check Character	Disable Enable	Enable
Addenda Required	Disable Enable	Disable
Send Addenda Separator	Disable Enable	Enable
2-Digit Addenda	Disable Enable	Disable
5-Digit Addenda	Disable Enable	Disable
ISBN Translate	Disable Enable	Disable
GS1 128		
Enable	Disable Enable	Enable
ID]
Min		1
Max		80
GS1 DataBar OmniDir		
Enable	Disable Enable	Enable
ID		P
GS1 DataBar Limited		
Enable	Disable Enable	Enable
ID		Q

Symbologies

Configuration	Values	Default
GS1 DataBar Expanded		
Enable	Disable Enable	Enable
ID		R
Min		4
Max		74
Interleaved 2 Of 5		
Enable	Disable Enable	Enable
ID		K
Min		4
Max		80
Check Character	No Check Check and don't transmit Check and transmit	No Check
UPC A		
Enable	Disable Enable	Enable
ID		S
Send Check Character	Disable Enable	Enable
Send System Character	Disable Enable	Enable
Addenda Required	Disable Enable	Disable
Send Addenda Separator	Disable Enable	Enable
2-Digit Addenda	Disable Enable	Disable
5-Digit Addenda	Disable Enable	Disable
Convert to EAN13	Disable Enable	Disable

Symbologies

Configuration	Values	Default
UPC E		
Enable	Disable Enable	Enable
ID		T
Send Check Character	Disable Enable	Enable
Expand	Disable Enable	Disable
Leading Zero	Disable Enable	Enable
Addenda Required	Disable Enable	Disable
Send Addenda Separator	Disable Enable	Enable
2-Digit Addenda	Disable Enable	Disable
5-Digit Addenda	Disable Enable	Disable
UPC E1 Enable	Disable Enable	Disable
Code93		
Enable	Disable Enable	Enable
ID		F
Min		0
Max		80
Append	Disable Enable	Disable

Symbologies

Configuration	Values	Default
Aztec		
Enable	Disable Enable	Enable
ID		A
Min		1
Max		3832
Append	Disable Enable	Enable
DataMatrix		
Enable	Disable Enable	Enable
ID		H
Min		1
Max		3166
Append	Disable Enable	Enable
Codabar		
Enable	Disable Enable	Enable
ID		B
Min		4
Max		60
Check Character	No Check Check and don't transmit Check and transmit	No Check
Concatenation	Disable Enable Require	Disable
Start / Stop Characters	Disable Enable	Disable

Symbologies

Configuration	Values	Default
QR Code		
Enable	Disable Enable	Enable
ID		0
Min		1
Max		7089
Append	Disable Enable	Enable
Code 11		
Enable	Disable Enable	Disable
ID		C
Min		4
Max		80
Check Character Required	One Check Char Two Check Char	Two Check Char
Code 128		
Enable	Disable Enable	Enable
ID		D
Min		0
Max		80
Append	Disable Enable	Enable
Composite		
Enable	Disable Enable	Disable
ID		G
Min		1
Max		2435

Symbologies

Configuration	Values	Default
UPC EAN	Disable Enable	Disable
Maxicode		
Enable	Disable Enable	Enable
ID		L
Min		1
Max		150
Micro PDF 417		
Enable	Disable Enable	Enable
ID		M
Min		1
Max		366
PDF417		
Enable	Disable Enable	Enable
ID		N
Min		1
Max		2750
Straight 2 Of 5 IATA		
Enable	Disable Enable	Disable
ID		U
Min		4
Max		48
CodaBlock A		
Enable	Disable Enable	Disable

Symbologies

Configuration	Values	Default
ID		V
Min		1
Max		600
Coda Block F		
Enable	Disable Enable	Disable
ID		W
Min		1
Max		2048
MSI		
Enable	Disable Enable	Disable
ID		X
Min		4
Max		48
Check Character	Validate Type 10, Don't transmit Validate Type 10, Transmit Validate 2 Type 10 Chars, Don't transmit Validate 2 Type 10 Chars, Transmit Validate Type 10 then Type 11 Char, Don't Transmit Validate Type 10 then Type 11 Char, Transmit No Check Characters	Validate Type 10, Don't transmit
TLC39		
Enable	Disable Enable	Disable
ID		Y
Trioptic		
Enable	Disable Enable (Couldn't use with Code32)	Disable
ID		Z

Symbologies

Configuration	Values	Default
Matrix 2 Of 5		
Enable	Disable Enable	Disable
ID		[
Min		4
Max		80
Telepen		
Enable	Disable Enable	Disable
ID		\
Min		1
Max		60
Output	AIM Original	AIM
ISBT		
Enable	Disable Enable	Disable
ID		^
Straight 2 Of 5 Industrial		
Enable	Disable Enable	Disable
ID		-
Min		4
Max		48
HanXin		
Enable	Disable Enable	Disable
ID		a
Min		1
Max		7833

Symbologies

Configuration	Values	Default
DotCode		
Enable	Disable Enable	Disable
ID		b
Min		1
Max		2400
Digimarc		
Enable	Disable Enable	Disable
ID		c
China Post		
Enable	Disable Enable	Disable
ID		d
Min		4
Max		80
Korea Post		
Enable	Disable Enable	Disable
ID		e
Min		4
Max		48
2D Postal		
Enable	Disable Enable	Disable
ID		f

Symbologies


Configuration	Values	Default
2D Postal Code	Australian Post InfoMail Japanese Post KIX Post Planet Code Postnet British Post InfoMail and British Post Postal-4i Intelligent Mail Postnet with B and B' Fields Planet Code and Postnet Planet Code and Postal-4i Postnet and Postal-4i Planet Code and Intelligent Mail Postnet and Intelligent Mail Postal-4i and Intelligent Mail Planet Code and Postnet with B and B' Fields Postal-4i and Postnet with B and B Fields Intelligent Mail and Postnet with B and B' Fields Planet Code, Postnet, and Postal-4i Planet Code, Postnet, and Intelligent Mail Planet Code, Postal-4i, and Intelligent Mail Postnet, Postal-4i, and Intelligent Mail Planet Code, Postal-4i, and Postnet with B and B' Fields Planet Code, Intelligent Mail, and Postnet with B and B' Fields Postal-4i, Intelligent Mail, and Postnet with B and B' Fields Planet Code, Postal-4i, Intelligent Mail, and Postnet Planet Code, Postal-4i, Intelligent Mail, and Postnet with B and B' Fields Canadian Post	Australian Post

Symbologies

Configuration	Values	Default
Australian Post Interpretation	Bar Output Numeric N Table Alphanumeric C Table Combination N and C Tables	Bar Output
Send Planet Code Check Character	Disable Enable	Disable
Send Postnet Code Check Character	Disable Enable	Disable

Firmware Update

Update Bluetooth firmware and PM5 MCU firmware to up-to-date version using one RFU file. Download the RFU file from [Point Mobile Service Portal](#) and copy it to the **RingControl** folder in internal storage of host device.

 **Note:** Must follow the file path. Otherwise, update cannot be performed.

After update, PM5 will be restarted automatically.
Below table describes two types for firmware update.

Methods	Description
Auto Update	<ul style="list-style-type: none"> Set F/W auto update in JSON file Update F/W every time the ring scanner is connected
Manual Update	<ul style="list-style-type: none"> Update F/W immediately

Auto Update

Firmware auto update is performed when...

- Ring scanner is connected
- Firmware auto update is set in **RingControl.json** file
- Firmware version of the RFU file is different from current ring scanner firmware version

Set up the firmware auto update in the RingControl.json file and copy the file to RingControl folder. Every time the PM5 is connected as SPP mode, Ring Control (Lite) updates configuration automatically.

For more detail, refer to [application's user guides](#).

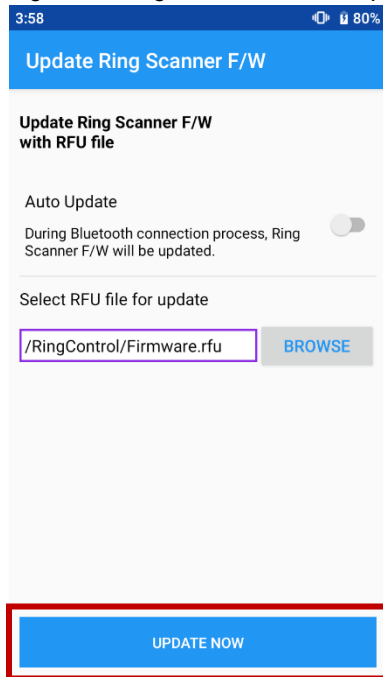
Firmware Update

Manual Update

Manual update can be performed regardless the auto update is enabled or disabled. To update firmware with RFU file manually,

1. Launch Ring Control (Lite) app and connect PM5 with host device
2. Go to **Advanced settings > Update Ring Scanner F/W with RFU file** (Password is required)
3. Tap **BROWSE** and select RFU file you copied
4. Tap **UPDATE NOW** and wait until the process is done

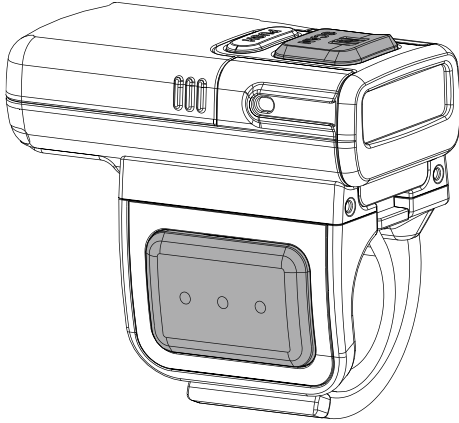
Figure 27 Ring Control - Manual update



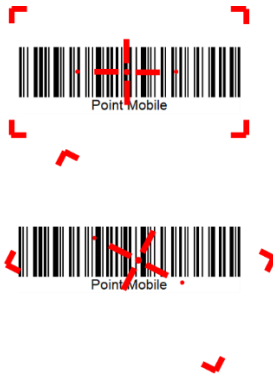
Scan a Barcode

To scan a barcode, aim the barcode while pressing the scan button on the PM5 or the trigger. Aim as the center cross is placed on the center of the barcode.

Figure 28 Scan buttons



Ideal Scanning



Aim the middle of barcode.

Even you aim the barcode slightly upper or down area, or angle is slightly tilted, you can read the barcode.

Bad Scanning



If you aim the barcode wrong direction or aim point is too tilted to scan only the part of the barcode, you can't read the barcode.

Accessory

PM5 supports below optional accessories.

Category	Accessory Name	Usage
Charging cradle	8SBC (8 Slot Battery Cradle)	Charge up to 8 PM5 batteries
	4SC (4 Slot Cradle)	Charge up to 4 PM5
	Share cradle	Charge PM5 and its batteries with more slots
Sled	Sled	USB Type C charging and communication Hang PM5 using strap

8SBC (8 Slot Battery Cradle)

8SBC is a charging cradle for PM5 battery. Up to 8 batteries can be charged simultaneously. For more detail, find [Charge the Scanner – Charging via cradle](#) chapter or 8SBC Quick start guide.

4SC (4 Slot Cradle)

4SC is a charging cradle for PM5. Up to 4 units of PM5 can be charged simultaneously. For more detail, find [Charge the Scanner – Charging via cradle](#) chapter or 4SC Quick start guide.

Share Cradle

8SBC and 4SC can connect up to 5 pcs of cradles in one type only or two different types (4SC + 8SBC) to make share cradle. With share cradle, you can charge more PM5 and batteries at the same time.

There is a separate SKU for making a share cradle. Buy as many SKUs for share cradle as you want to connect and assemble the cradles using enclosed screws and brackets.

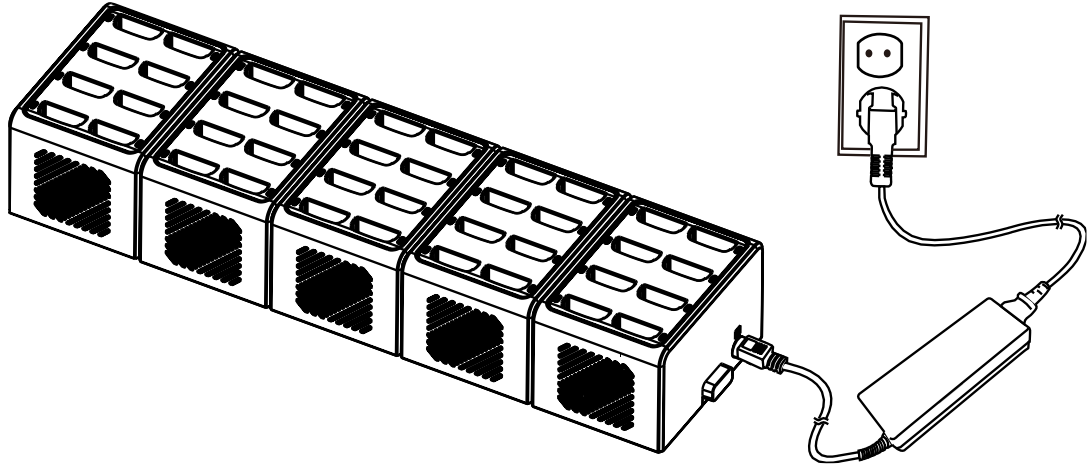
Power will be provided to all connected cradles when an adapter is connected to the last cradle.

Accessory

- **40 slot battery cradle**

- Make 40SBC connecting 5 pcs of 8SBC.

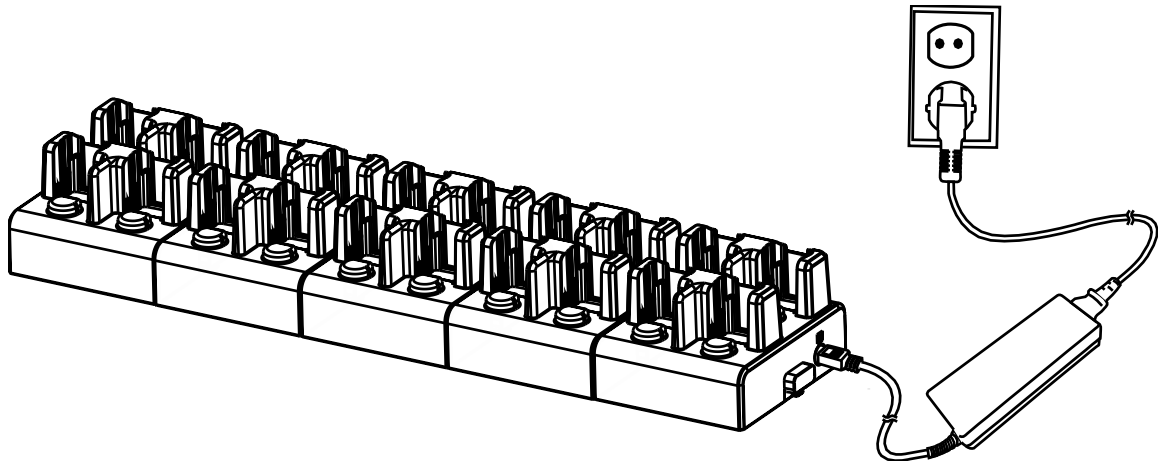
Figure 29 40SBC



- **20 slot ring cradle**

- Make 20 slot ring cradle connecting 5 pcs of 4SC.

Figure 30 20 slot ring cradle

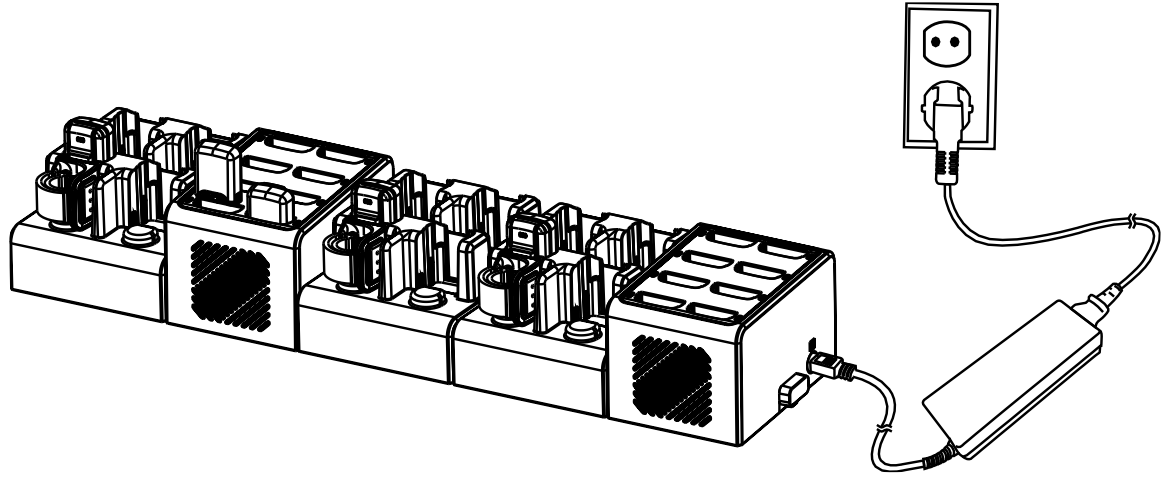


Accessory

- **Multi type slot share cradle**

- Connect 4SC and 8SBC to make multi type slot share cradle.

Figure 31 Multi type slot share cradle

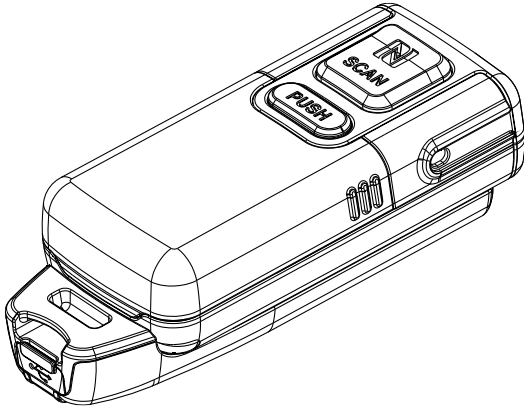


Accessory

Sled

Necklace type sled can charge PM5 and allow communication between PM5 and host PC using USB type C connector. You can hang the PM5 like a necklace using strap included to the sled accessory package.

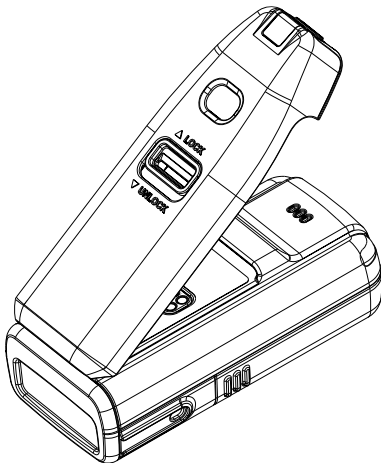
Figure 32 PM5 sled



To attach the sled to PM5,

1. Insert the sled to the PM5's trigger assemble latch on the scanner side

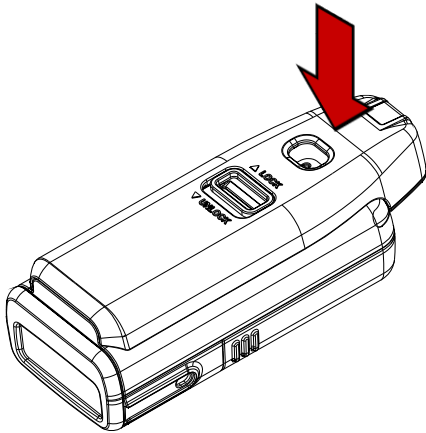
Figure 33 Attaching sled



Accessory

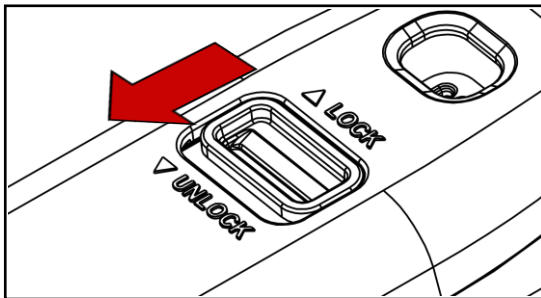
2. Push the other end down until it clicks

Figure 34 Sled attached



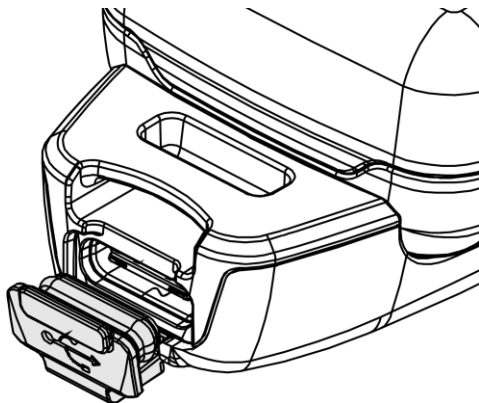
3. Make sure that the trigger is engaged firmly
4. To remove the sled, pull the sled release latch to **UNLOCK** side and lift the sled up.

Figure 35 Release sled



To connect USB Type C cable, open the cap of the connector and plug the cable. PM5 can communicate with PC and be charged.

Figure 36 Open USB connector cap



Safety Information

Battery Safety Information

Follow battery safety guidelines in this manual for safe usage and disposal of Li-ion batteries. Improper battery usage may result in an explosion, fire, or other critical hazards.

Battery Usage & Disposal Guidelines

1. Use only Point Mobile approved batteries and charging accessories. Other batteries and charger may damage the device.
2. Do not disassemble or modify the battery. Do not bend, shred, deform the battery.
3. Do not expose the battery to excessive heat or cold. Do not place the battery into a microwave oven or dryer.
4. Do not short-circuit the battery or allow a foreign object to battery contacts.
5. Do not burn, expose to water, or other liquids the battery.
6. If battery leakage is observed, avoid any contact with the skin or eyes. If contact has been made, wash the affected area with water for 15 minutes, and seek medical attention.
7. Follow the local regulations for the disposal of used batteries.
8. Do not store or charge the battery in direct sunlight or in areas prone to get hot such as in a parked vehicle, near a heat duct, or close to other heat sources.

Battery Charging Guidelines

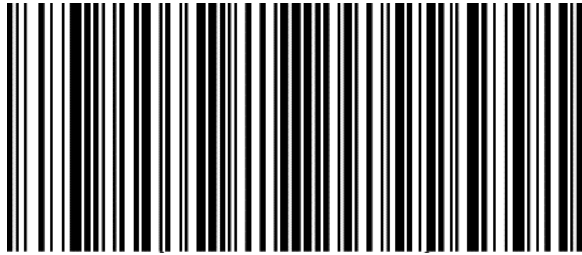
1. Do not charge the battery in or near areas with materials that could obstruct charging or cause a short-circuit.
2. Do not charge the battery in the excessive hot or cold area.
3. Separate the charger from the battery as soon as possible when the battery is fully charged.
4. Charge it at least once every six months to prevent full discharge and keep the performance, when you are not using the battery for a long period.



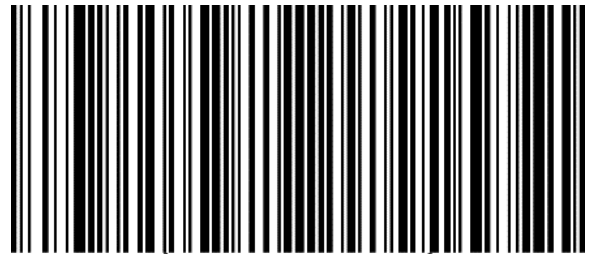
Notice: *The battery is consumable goods. Point Mobile provides warranty for battery in 6 months after purchase. If you suspect the battery swelling, change the battery and contact Point Mobile to use safely.*

Appendix

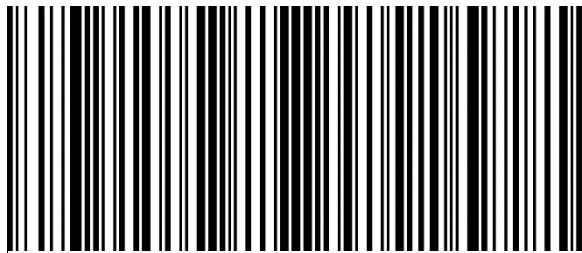
Bluetooth Mode Barcodes



SPP Mode



HID Mode



HID LE Mode

Appendix

Bluetooth Power Class



Class 1



Class 2

Appendix

Batch Mode Barcodes



Normal



Auto mode



Standard mode



USB storage mode



Start
(Standard mode)



Send
(Standard mode)

Appendix

Factory Data Reset





Point Mobile. Co., Ltd.

Offline

Tel: +82-2-3397-7870~1

ARS: +82-1800-3010

Fax: +82-2-3397-7872

Address: 9F Kabul Great Valley, 32, Digital-ro 9-gil,
Geumcheon-gu, Seoul, Korea 08512

Online

Website: <https://www.pointmobile.com>

E-mail: pm_support@pointmobile.com