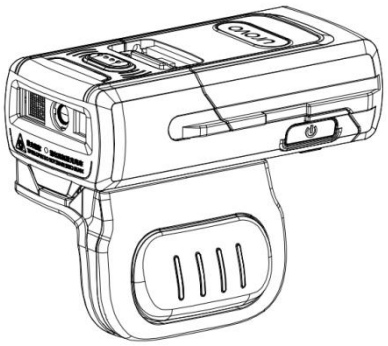
urovo

SR5600

Bluetooth Ring Scanner

[USER GUIDE]



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[F.2021.07.12].2

Revision History

Change	Date	Description	Author
-2	2021.06.15	First version	Liang Wang
-1	2021.07.12	Initial Release	Nolan Luo
0	2021.07.15	Version 1.0 Revision	Nolan Luo
1	2021.07.29	Version 1.1 Revision	Nolan Luo
2	2021.08.08	Version 1.2 Revision ✧ Add prefix/suffix setting ✧ Barcode type ✧ Bluetooth name modifying	Nolan Luo
3	2021.09.05	Version 1.2.1 ✧ Command controlling	Nolan Luo
4	2021.09.11	Version 1.2.1-WB ✧ Aim/Character ID setting ✧ Turn off/on all indicators ✧ Character ID Confirmation	Nolan Luo

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1. Getting Started

1.1 Introduction

This chapter describes the features of the SR5600 Ring Scanner and explains how to install and charge the battery, capture data and reset the SR5600.

1.2 Unpacking

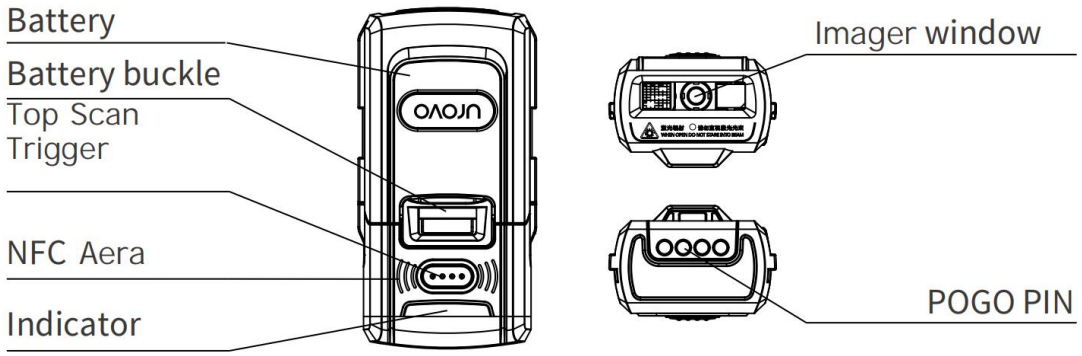
Carefully remove all protective material from around the equipment and save the shipping container for later storage and shipping.
After opening the shipping box, inspect the contents. You should have received the following:

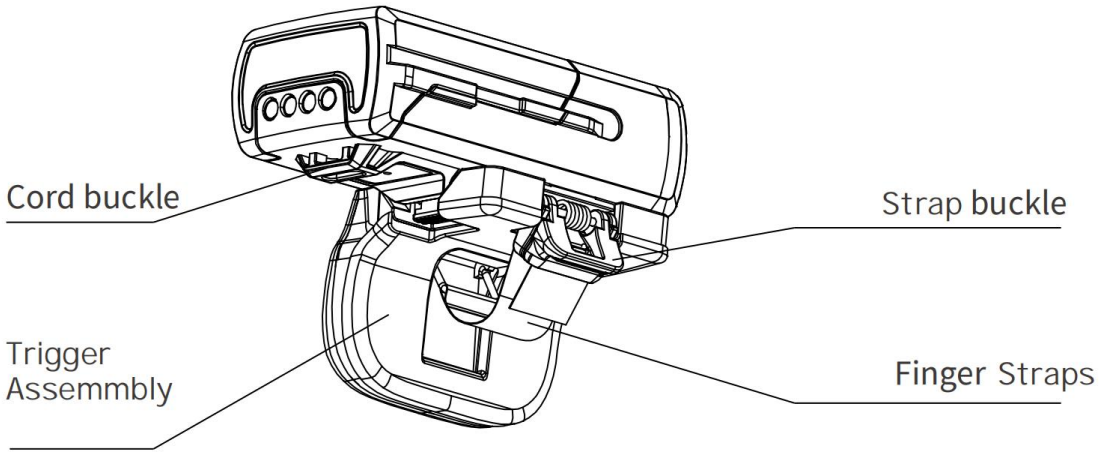
- SR5600
- Battery
- Simple Operation Guide
- USB Cable
- Power adaptor
- Direct Charger

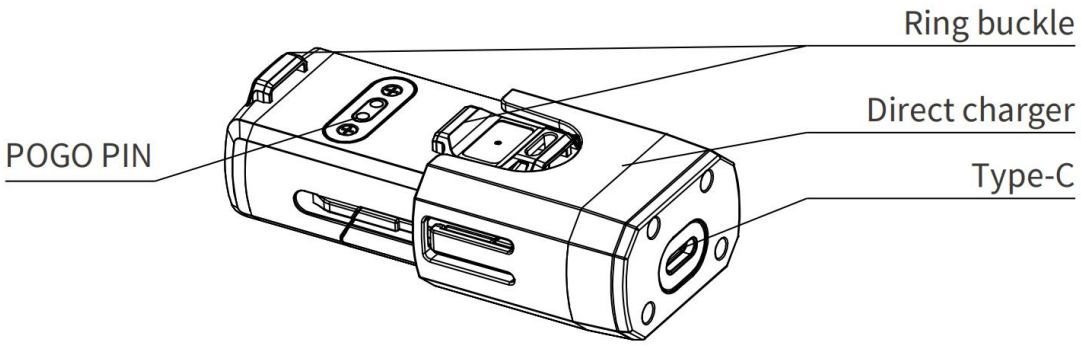
Inspect the equipment for damage. If you are missing any equipment or if you find any damaged equipment, contact Support immediately. See Website: http://en.urovo.com or local agent.

1.3 Configuration Features

Figure 1 SR5600 Trigger Configuration Features







1.4 LED Status Indications

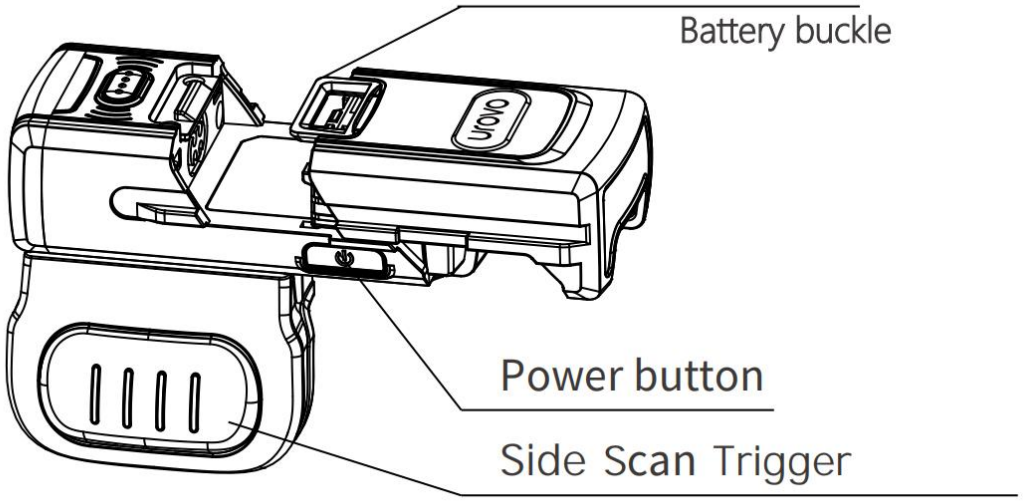
Status light	Description
Red indicator light is always on	Trigger button hold or charging
Red indicator light flashes once	Setup failure
Red indicator blinking twice	Alarming/Scanning when Bluetooth is not connected
Green indicator light flashes once	Scan bar code successfully
Green indicator light is always on	Battery fully charged
Blue indicator light keeps flashing	Bluetooth enters pairing mode
Blue indicator solid on	Successful Bluetooth connection

1.5 Buzzer, vibration status

Buzzer, vibration status	Description
Start-up sound + no vibration	Startup
One long buzz + vibration	Shutdown
One short buzz + vibration	Successful decoding
Two short buzz + no vibration	The battery is set successfully, the Bluetooth is connected successfully, and the Bluetooth is disconnected
One long buzz + no vibration	Setup failure
Four short beeps + vibration	Alarming/Scanning when Bluetooth is not connected

1.6 Battery installation instructions

Align the battery with the top of the SR5600 and insert it into the battery compartment. Slide the battery all the way into the SR5600 locking slot to ensure that the battery matches with SR5600.



1.7 Trigger Assembly

1.7.1 Installation instructions

Align one end of the SR5600 lock catch and push the other end down until it clicks into place.

The trigger assembly can be installed as required. The following figure 1 is for the right finger, and figure 2 is for the left finger. Press the sliding buckle to remove the ring.

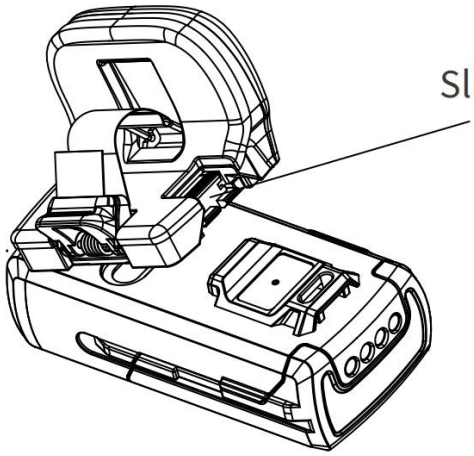


Figure1

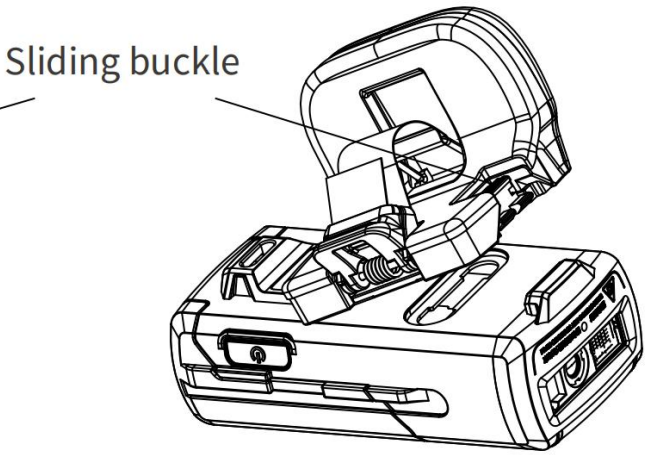
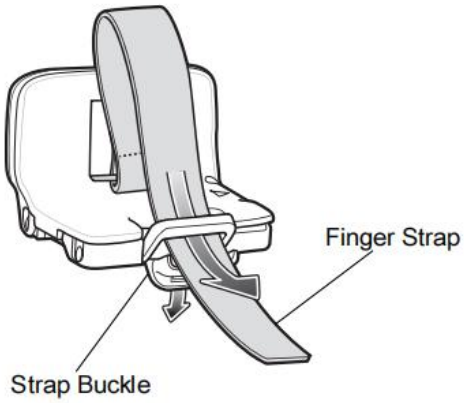


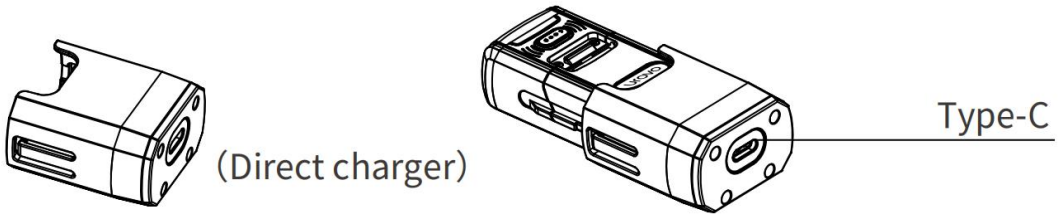
Figure2

1.7.2 Adjust finger strap



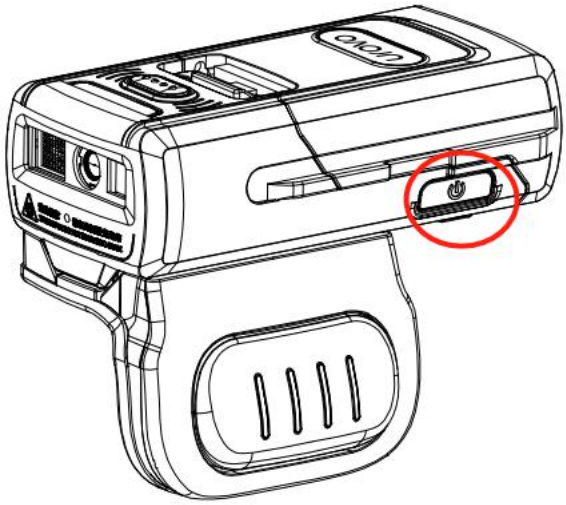
1.8 Direct Charger installation instructions

Insert the bottom of the SR5600 into the charger until it clips into place. Connect the Type-C interface at the end of the charger with the USB cable and Power adaptor. Normal charging starts when the indicator light indicates that the red light is always on.



1.8.1 Powering ON/OFF

Long-press the power button for 2 second to boot, for 3 second to turn off.



1.9 Bluetooth Communications

1.9.1 Introduction

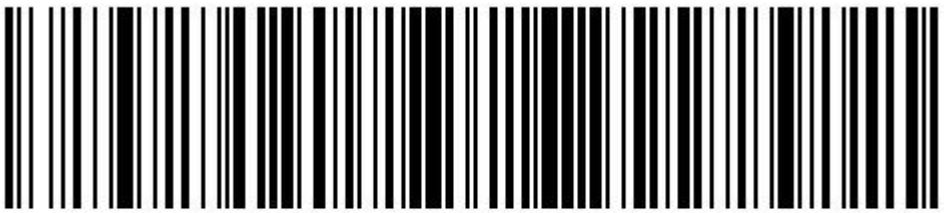
This chapter provides information about the modes of operation and features available or Bluetooth communication between Ring Scanner and hosts. The chapter also includes the parameters necessary to configure the SR5600.

Scan a factory barcode to return all features to default values. See page10.
Scan a version barcode to check the version number of the scanner. See page10.

1.9.2 Bluetooth Connection Modes

The SR5600 Ring Scanner can connect to a host computer using the following Bluetooth modes, scan to switch the connection mode you need:

Human Interface Device(*HID MODE)



Serial Port Profile(SPP MODE)

Low Energy(BLE MODE)

1.9.3 Pairing Mode

Scan the following barcode to enter the pairing mode or release the connection.

1.9.4 Bluetooth Name Modifying

Generate the barcode to change the Bluetooth name, value = $BT#SETSSID=M
M: Bluetooth name of Ring Scanner SR5600.

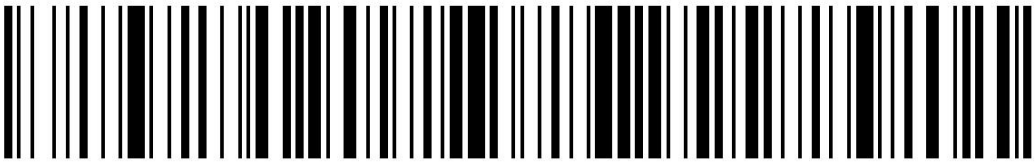
1.10 Command Controlling in SPP Mode

This setting enable can make scanner being control by HEX code.

Function	Item	Parameter	Description
%4006M%	SPP Control	00	Disable
		01	Enable

Scan the following barcode to enable command controlling .

Scan the following barcode to enable command controlling .(HEX: AA 04 40 06 00 42 BB)



#~%INS:%4006S00%~#

1.10.1 Indicator Controlling

Make sure the scanner in SPP Mode and enable the SPP Controlling Mode, then you can send HEX code to control LEDs / Beeper / Vibrate to respond as you wish.

Format 1:

AA (Start)
04 (Length of instructs)
C8 (Code/default)
SUM (R:0x01, G:0x02, B:0x04, BUZZ:0x08, Vibrate:0x10)
00~01 (OFF/ON)
XOR (XOR result)Can be count by XOR tool or HEX Calculate.
BB (END)

For example.
Red LED Command(1 times):
HEX.
ON: AA 04 C8 **01** 01 CC BB
OFF: AA 04 C8 **01** 00 CD BB

Start	length	value 1	value 2	value 3	XOR	End
AA	0x04	0xC8	0x01	0x01	CC	BB
AA	04	C8	R:0x01, G:0x02, B:0x04, BUZZ:0x08, Vibrate:0x10	00:OFF 01:ON	XOR(length, C8, value2, value 3)	BB

Green LED Command(1 times):

HEX.

ON: AA 04 C8 **02** 01 CF BB

OFF: AA 04 C8 **02** 00 CE BB

Start	length	value 1	value 2	value 3	XOR	End
AA	04	C8	02	01	CF	BB
0xAA	0x04	0xC8	R:0x01, G:0x02, B:0x04, BUZZ:0x08, Vibrate:0x10	0x00:OFF 0x01:ON	XOR(length, C8, value2, value 3)	0xBB

Beeper Command(1 times)

ON: AA 04 C8 08 01 C5 BB

OFF: AA 04 C8 08 00 C4 BB

Start	length	value 1	value 2	value 3	XOR	End
AA	04	C8	08	01	C5	BB
0xAA	0x04	0xC8	R:0x01, G:0x02, B:0x04, BUZZ:0x08, Vibrate:0x10	00:OFF 01:ON	XOR(length, C8, value2, value 3)	0xBB

Vibrate Command(1 times)

HEX.

ON: AA 04 C8 10 01 DD BB

OFF: AA 04 C8 10 00 DC BB

Start	length	value 1	value 2	value 3	XOR	End
AA	0x04	0xC8	0x10	01	CC	BB
0xAA	0x04	0xC8	R:0x01, G:0x02, B:0x04, BUZZ:0x08, Vibrate:0x10	0x00:OFF 0x01:ON	XOR(length, C8, value2, value 3)	0xBB

Format 2:

AA	(Start)
06	(Length of instructs)
C0	(Code/default)
SUM	(R:0x01， G:0x02， B:0x04， BUZZ:0x08, Vibrate:0x10)
00~FF	(Blink/beep/vibrate times)
01~FE	(Duration)*10ms
02~FF	(Interval time)*10ms
XOR	(XOR result)Can be count by XOR tool or HEX Calculate.
BB	(END)

Example 1

HEX. AA 06 C0 **08** 03 0A 14 D3 BB(Means Beeping 3times totally, 100ms duration and wait 200ms between each beep).

Start	length	value 1	value 2	value 3	value 4	value 5	XOR	End
AA	06	C0	0x08	03	0A	14	D3	BB
0xAA	0x06	0xC0	R:0x01, G:0x02, B:0x04, **BUZZ:0x08,** Vibrate:0x10	times	Duration *10ms	Interval times*10 ms	XOR (length ,value1 , value 2,value 3,value 4,value 5)	0xBB

Example 2(Parallel)

HEX. AA 06 C0 **0A** 03 C8 C8 CF BB (Means **Green led** & **Beeper** reaction 3times totally, 2 seconds duration and wait 2second between each flash).

Start	length	value 1	value 2	value 3	value 4	value 5	XOR	End
AA	06	C0	0A	03	C8	C8	CF	BB
0xAA	0x06	0xC0	R:0x01, **G:0x02,** B:0x04, **BUZZ:0x08,** Vibrate:0x10 SUM=0x02+0x0 8=0x**0A**	times	Duration *10ms	Interval times*10 ms	XOR (length ,value1 , value 2,value 3,value 4,value 5)	0xBB

Example 3(Parallel)

HEX. AA 06 C0 **1A** 03 64 C8 73 BB (Means **Green led** &**Beeper**& **Vibrator** reaction at the same

time, 3times totally, 1 seconds duration and wait 2second between each reaction).

Start	length	value 1	value 2	value 3	value 4	value 5	XOR	End
AA	06	C0	1A	03	64	C8	73	BB
0xAA	0x06	0xC0	R:0x01, **G:0x02,** B:0x04, **BUZZ:0x08,** **Vibrate:0x10** SUM=0x02+0x08+0x10=0x**1A**	times	Duration *10ms	Interval times*10ms	XOR (length,value1, value2,value3,value4,value5)	0xBB

Example 4(Queue)

HEX. AA 06 C0 **10** 01 1E 00 C9 BB AA 06 C0 08 03 0A 14 D3 BB(Means Beeping 3times totally, 100ms duration and wait 200ms between each beep)+ vibrate 1 times before beeping

Start	length	value 1	value 2	value 3	value 4	value 5	XOR	End
AA	06	C0	10	01	1E	00	C9	BB
AA	06	C0	08	03	0A	14	D3	BB
0xAA	06	0xC0	R:0x01, G:0x02, B:0x04, **BUZZ:0x08,** **Vibrate:0x10**	times	Duration *10ms	Interval times*10ms	XOR (length,value1, value2,value3,value4,value5)	0xBB

1.10.2 Trigger Controlling

Trigger ON:

HEX: AA 02 B1 B3 BB

Trigger OFF:

HEX: AA 02 B0 B2 BB

1.10.3 Trigger Button Controlling

Disable Trigger Button:

HEX: AA 02 A0 A2 BB

Enable Trigger Button:

HEX: AA 02 A1 A3 BB

1.10.4 Turn off all indications

Disable all indications:

HEX: AA 04 01 07 01 03 BB

Enable default indications:

HEX: AA 04 01 07 00 02 BB

1.11 AIM/CharcterID Output

Scan the following barcode to receive the barcode type in front of barcode data. The barcode type corresponding format refer to *ISO-IEC 15424-2008* and page 53 Programming references.

Function	Item	Parameter	Description
%5001M%	None	00	Disable
	AIM Code Output	01	Enable
	Character ID	02*	Enable

Scan the following barcode to disable the AIM / Character ID Output.
(HEX: AA 04 50 01 00 55 BB)

Scan the following barcode to enable the AIM Code Output. (HEX: AA 04 50 01 01 54 BB)

Scan the following barcode to disable the AIM Output. (HEX: AA 04 50 01 02 57 BB)

2. Setup

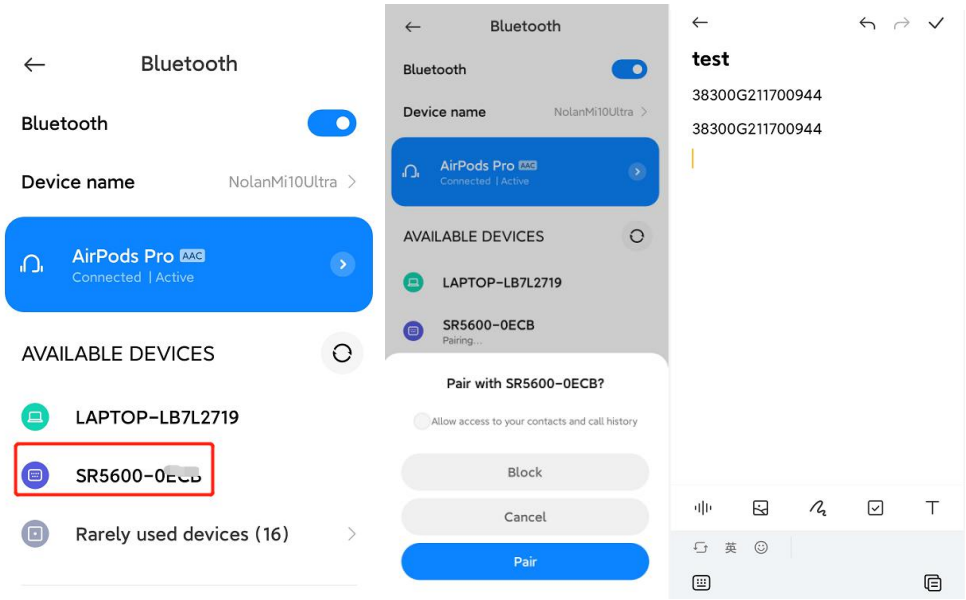
HID Setup

2.1. HID Bluetooth Connection to iOS/iPad/iPhone

1. Scan the barcode 'Pairing Mode' into connectable status.
2. Scan the HID MODE Barcode from this chapter.
3.Select Settings > General > Bluetooth(iOS)
4. Turn the iOS Bluetooth ON.
5. Select Bluetooth Settings and choose SR5600 from the list of discovered devices. The SR5600 displays as SR5600 - xxxx, where xxxx is the The last four digits of the Mac address.

2.2 HID Bluetooth Connection to Android

1. Scan the barcode 'Pairing Mode' into connectable status.
2. Scan the HID MODE barcode from this chapter.
3.Select Settings > Bluetooth(Android)
4. Turn the Android Bluetooth ON.
5 Select Bluetooth Settings and choose SR5600 from the list of discovered devices. The RS5100 displays as SR5600 - xxxxxx, where xxxxxx is the serial number.



User-friendly operation-connect:

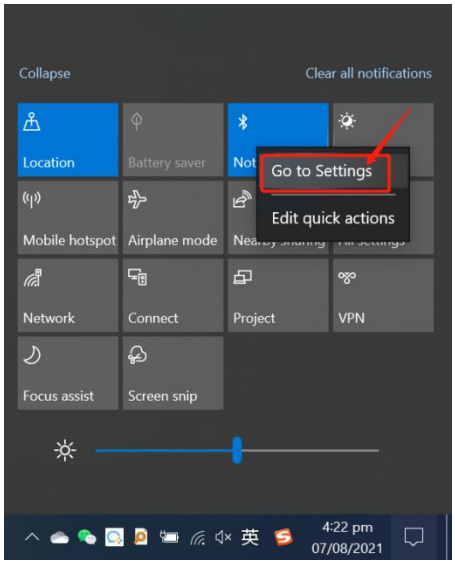
***Make sure the Android's NFC is on and Ring Scanner is power on, Tap NFC to quick pair.**

***Scan a QRCODE(Bluetooth MAC of urovo 's U2 wearable devices) to quick pair and connect.**

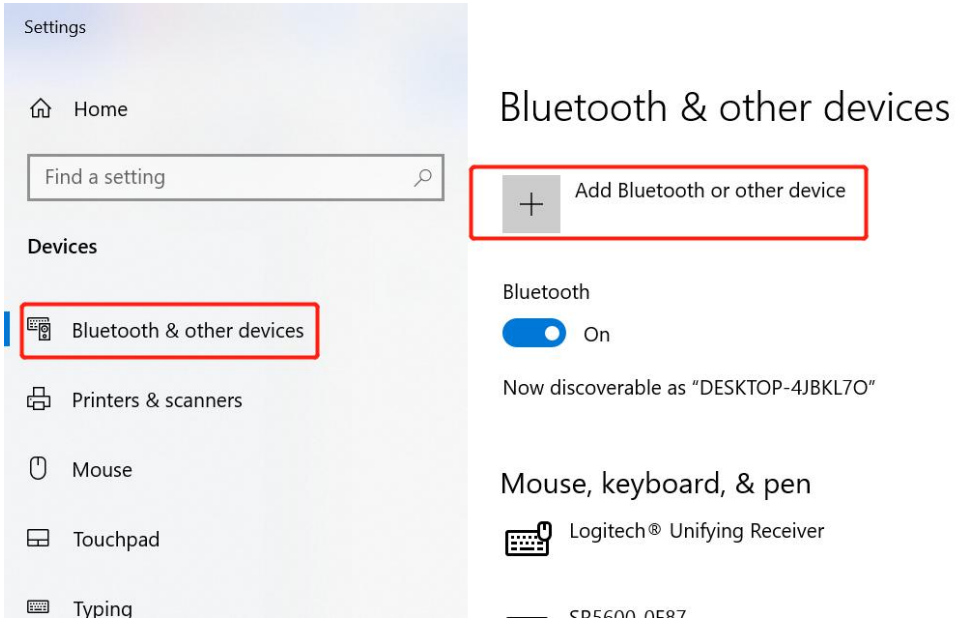
2.3 HID Bluetooth Connection to Windows

To start the connection process aim the SR5600 at about 7" (18 cm) away from the computer screen and scan the barcode of the Pairing Mode.
The SR5600 Scan LEDs start flashing blue indicating that the SR5600 is attempting to establish connection with the computer. The following notifications display upon successful connection.

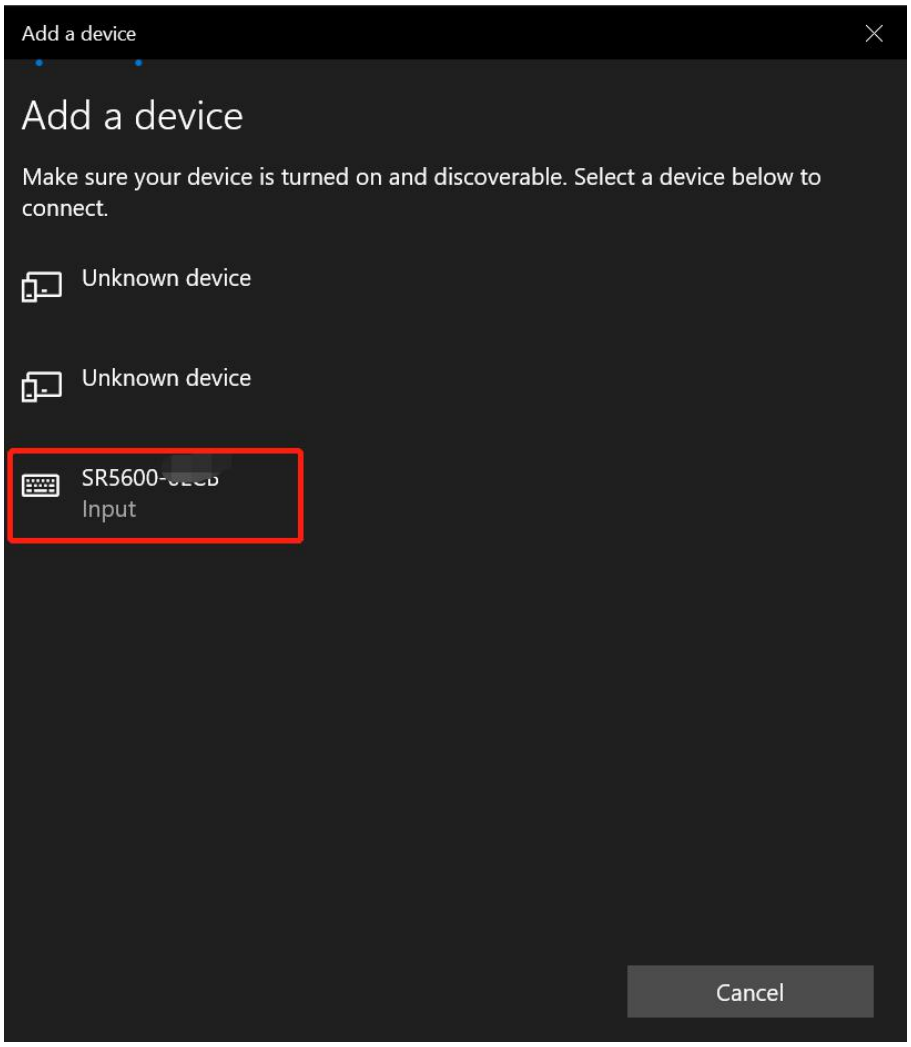
1. Scan the barcode 'Pairing Mode' into connectable status.
2. Scan the HID MODE barcode from this chapter.
3.

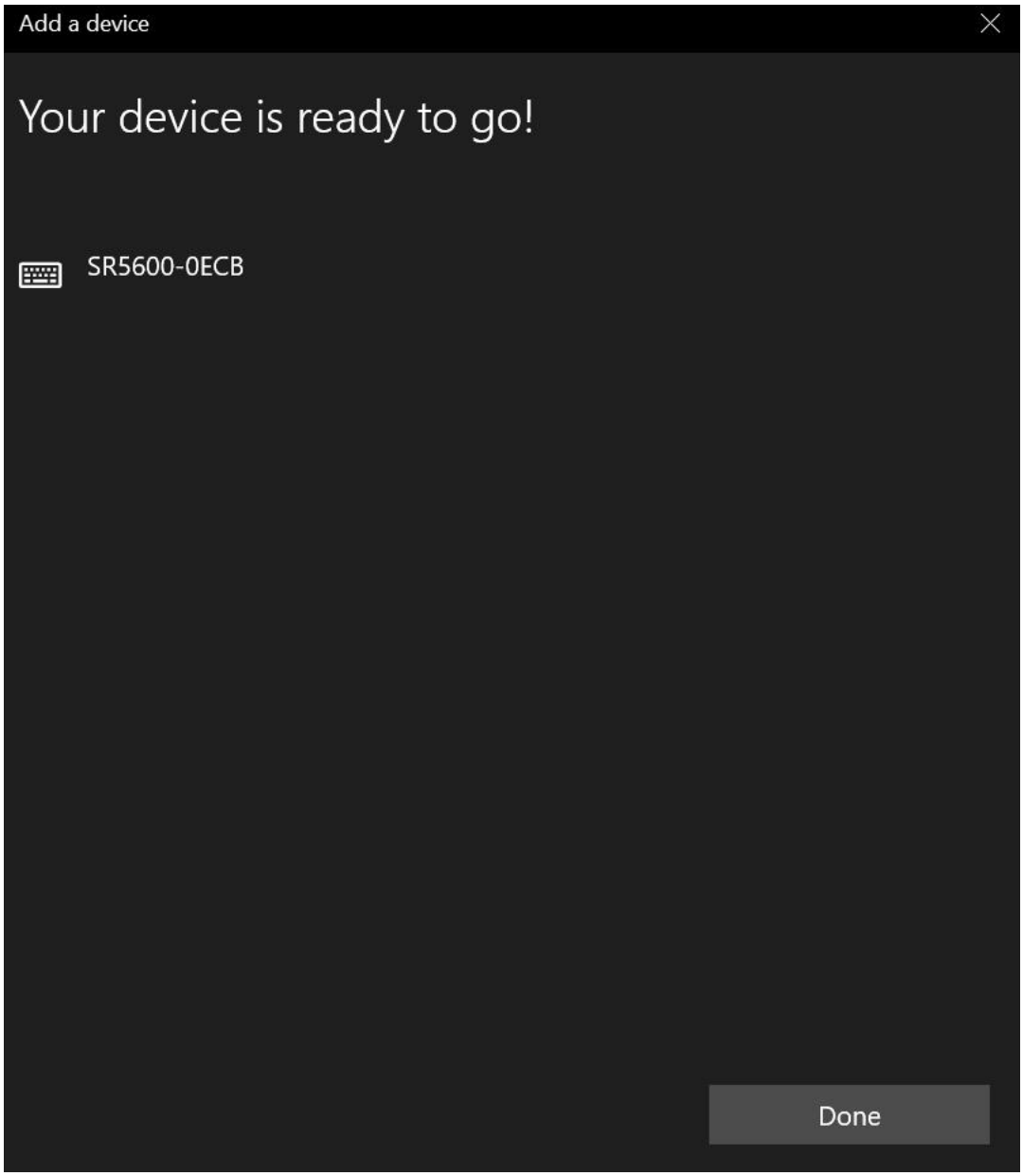


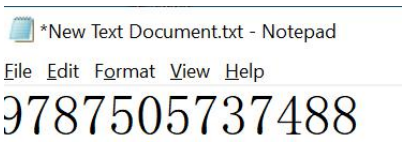
4.



5.Default PIN code is 0000.







<Test in text file.>

2.4 Power Save

If no Bluetooth connection is made within 5 minutes, the ring scanner will auto switch off.

Disable power off

*Enable power off

2.5 Delay 01~10 ms to send (HID)

*1ms

2.6 Inquiry

2.6.1 Inquiry Firmware version

Scan the following barcode to return firmware version.(HEX: AA 04 FF 02 00 F9 BB)

2.6.2 Inquiry Bluetooth MAC

Scan the following barcode to return Bluetooth MAC address.(HEX: AA 04 FF 02 01 F8 BB)

2.6.2 Inquiry Bluetooth Name

Scan the following barcode to return Bluetooth Name.(HEX: AA 04 FF 02 02 FB BB).

2.7 Restore Factory Setting

HEX Value: AA 04 FF 01 00 FA BB

2.8. Indicators & Beeper setting

2.8.1. Power on alarming

OFF

*ON

2.8.2. LED indicator(decode)

OFF

*ON

2.8.3. Beeper setting(decode)

OFF(HEX: AA 02 C2 C0 BB)

*ON(HEX:AA 02 C2 C1 BB)

2.8.4. Duration

*50ms

2.8.5. Volume Level

Low

Middle

*High

2.8.6 Vibrate Setting (decode)

OFF

ON*

2.8.7 Turn off all indications

ON(Turn off)

OFF(Turn on*)

3. Scanner Setting

3.1. Scanning Type

Continuous Barcode Read

Pluse

*Normal(Manual)

3.2. Illumination&Aiming setting

Disable both

Laser aiming only

Illumination only

*Enable both

3.3. Illumination level

Level 1

Level 2

*Level 3

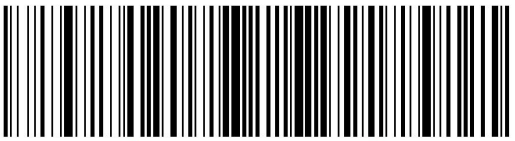
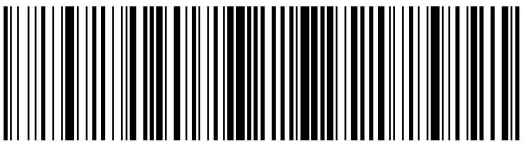
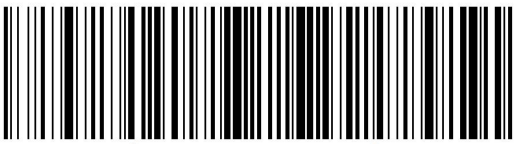
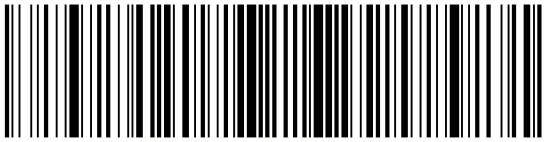
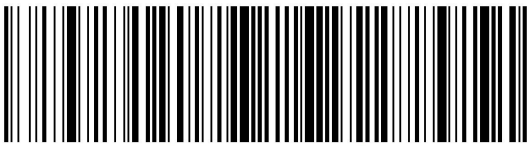
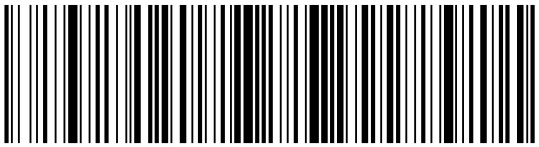
Level 4

3.4. Suffix&Prefix

SR5600 can add 1 prefix and 2 suffix.

‘*’represent default.

Multi-step			Single-step
Function	Description	Parameter	Description
Option %3001M%	Disable	00	
	Enable	01*	
Format %3002M%	<data><suffix 1><suffix 2>	00*	

	<data><suffix 1>	01	
	<data><suffix 2>	02	
	<prefix><data>	03	
	<prefix><data> <suffix 1> <suffix 2>	04	
	<prefix><data> <suffix 1>	05	
	<prefix><data> <suffix 2>	06	
Prefix %3003M%	Prefix value	00~FF	...
		00*	
Suffix 1 %3004M%	suffix 1 value	00~FF	...
		0A*	

		0D	#~%INS:%3004S0D%~#
Suffix 2 %3005M %	suffix 2 value	00~FF	...
		0D*	#~%INS:%3005S0D%~#
		0A	#~%INS:%3005S0A%~#

4. Symbologies

This chapter describes symbology features and provides programming barcodes for selecting these features.

To set feature values, scan a single barcode or a short barcode sequence. The settings are stored in non-volatile memory and are preserved even when the SR5600 powers down.

SPP Command Format:

Code 128 Setting:

Start	length	value 1	value 2	value 3	XOR	End
AA	0x04	0x08	0x01	0x00	0D	BB

HEX:'AA 04 08 01 00 0D BB' to disable Code128 encoding.

Start	length	value 1	value 2	value 3	XOR	End
AA	0x04	0x08	0x01	0x01	0C	BB

HEX:' AA 04 08 01 01 0C BB' to enable Code128 encoding.

*The value 3 is the value following the character "S".

*XOR value can be calculated by (length, value 1,value 2, value 3)

Code 39

To enable or disable Code39, scan the appropriate barcode below.

*Disable Code 39

1 Check digit

2 Check digit

*Do not Transmit Code39 Check Digit(Disable)

*Do not Transmit Code39 2 Check Digit(Disable)

Code 39 Full ASCII

*Disable Code 39 Full ASCII

Enable Code39 Full ASCII

PDF417

Disable PDF417

*Enable PDF417

Data Matrix

Disable Data Matrix

*Enable Data Matrix

Interleaved 2 of 5

*Disable ITF

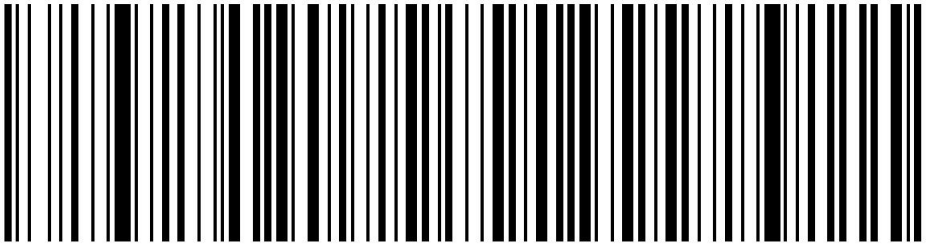
Enable ITF

MaxiCode

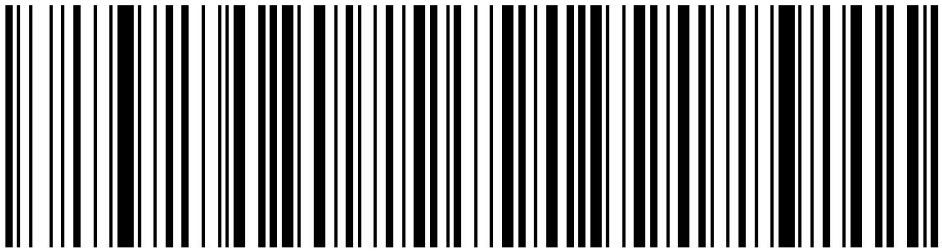
*Disable MaxiCode

Enable MaxiCode

UPC/EAN

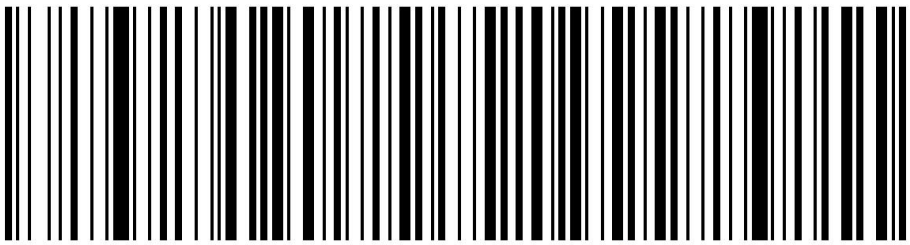


Disable UPC/EAN

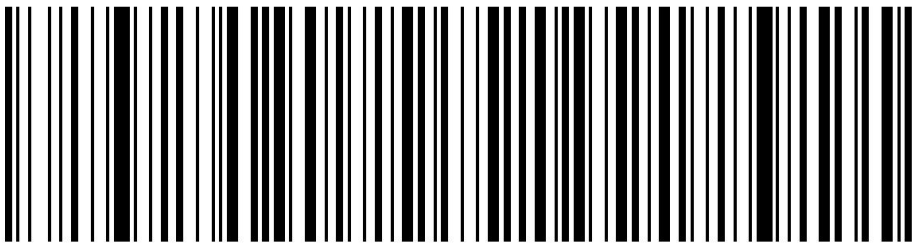


*Disable UPC/EAN

EAN 2 or 5 supplemental setting



Disable 2and5 digit supplemental



Enable 2 and 5 supplemental

Code 93

*Disable Code 93

Enable Code 93

Code 11

*Disable Code11

Enable Code11

Check digit and transmit

Disable Code11

*1 check digit

2 check digit

Do not transmit 1 check digit

Do not transmit 2 check digit

Matrix 2 of 5

*Disable Matrix 2 of 5

Enable Matrix 2 of 5

NEC 2of 5

*Disable NEC 2 of 5

Enable NEC 2 of 5

Hanxincode

#~%INS:%1301S00%~#

*Disable Hanxin Code

#~%INS:%1301S01%~#

Enable Hanxin Code

GridMatrix

#~%INS:%1401S00%~#

*Disable GridMatrix

#~%INS:%1401S01%~#

Enable GridMatrix

Aztec Code

*Disable Aztec Code

Enable Aztec Code

MicroPDF417

*Disable Micro PDF417

Enable Micro PDF417

MSI/PLESSEY

Disable MSI/PLESSEY(*)

Enable MSI/PLESSEY

Dotcode

Disable Dotcode(*)

Enable Dotcode

Standard 2 of 5

Disable Standard 2 of 5

Disable Standard 2 of 5

IATA 2 of 5

Enable

Disable*

CodaBlock_F

*Disable CodaBlock_F

Enable CodaBlock_F

CodaBlock_A

*Disable CodaBlock_A

Enable CodaBlock_A

GS1 DataBar-14

*Disable GS1 DataBar-14

Enable GS1 DataBar-14

Codabar

*Disable Codabar

Enable Codabar

Code 2 of 5

*Disable code 2 of 5

Enable code 2 of 5

Trioptic

*Disable Trioptic

Enable Trioptic

postnet

*Disable postnet

Austranlian Post

Royal Mail(BPO-4-State)

Japan Post

Dutch Post(KIX code)

US Planet

US Postnet

US4State FICS(UPUID-Tag)

USPS 4CB(Intelligent Mail)

Canadian Post

Planet,Postnet

Planet,UPU

Postnet,UPU

Planet,USPS 4CB

Postnet,USPS 4CB

UPU,USPS 4CB

Planet,Postnet,UPU

Planet,Postnet,USPS 4CB

Planet,UPU,USPS 4CB

Postnet,UPU,UPS 4CB

Planet,Postnet,UPU,USPS 4CB

China Post

*Disable China Post

Enable China Post

OCR

Decoding

*Disable OCR

Normal

Inverse

Both

OCR Pattern

User Defined

*Passport

ISBN

Price Field

MicrE-13 B

OCR Fonts

OCR-A

OCR-B

*OCR-A or B

MICR

SEMI

OCR Character

Numeric

Alpha

Alphanumeric

*Any (include space)

OCR Character length : 00~FF

*18

5.Programming Reference

Linear Symbologies

Symbology	ID
Codabar	a
Code 11	h
Code 128/ISBT 128	j
EAN128/GS1128	I
Code39	b
Code 93	i
EAN-13/ISBT 13	d
EAN-8	D
GS1 DataBar	+
GS1 DataBar Limited	-
GS1 DataBar Expanded	)
China (Hong Kang 2 of 5)	Q
Interleaved 2 of 5	e
Matrix 2 of 5	m
Straight 2 of 5 IATA	f
Straight 2 of 5 Industrial	f
IATA 2 of 5	f
MSI	g
UPC-A	c
UPC-E	E
UPC-E1	*
Triopical	=
Others	`

2D Symbologies

Symbology	ID
Aztec	z
Chinese Sensible(Han Xin)	H
Data Matrix	w
MaxiCode	x
DotCode	.
PDF417	r
MicroPDF417	R

QR Code	s
Micro QR	&
OCR	O

Postal Symbologies

Symbology	ID
Australian Post	A
British Post	B
Canadian Post	C
China Post	Q
Intelligent Mail Bar Code	M
Japanese Post	J
Netherlands Post(KIX)	K
Planet Code	L
Postnet	P