RL6100-2D 2D Barcode Scanner User Manual

Service mailbox

server@realinn.cn

In order to correctly use the bar code scanner, please read the instruction carefully and do not arbitrarily scan the settings code otherwise some settings may not be available.

Please keep this instruction for reference in the future.

If you have any question or concern about the operation of the scanner, please contact us at Email:

server@realinn.cn

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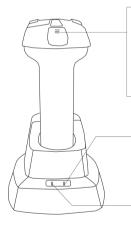
Product Specification

Model-Number	RL6100-2D
Connection	433MHz Wireless
Memory	2M = 10000 barcodes
Battery capacity	2200mAh
Voltage	DC 5V
Standby current	18uA-5mA
Charging power	5V-400mA
Printing Contract	>25%
Light source	617nm LED
LED life	12000 hours
Button life	8000,000 times
Sensor	640*480 CMOS
Illumination	6500K LEDs
Indication	Buzzer & LED
Resolution	3 mil
CPU	ARM 32-bit Cortex
Printing Contract	>25%
Decoding speed	500 times/sec
Scanning angle	Angle of rotation360°, inclination± 65°,declination ± 60°
Anti-interference	0-100000Lux Max
Drop test	2.0m
Certificate	CE, FCC, RoHS , IP54
	UPC-A, UPC-E, EAN-8, EAN-13, Code 128, Code 39, Code 93,
Applicable 1D barcode	Code 11, Interleaved 2 of 5, Standard 2 of 5, Industrial 2 of 5,Coda
	bar
Applicable 2D barcode	QR Code, Data Matrix, PDF417, Aztec code, Maxicode, etc

Packing List

- •Bar code scanner*1
- •USB cable*1
- •Instruction manual*1
- •USB base station*1

LED Description



Pink led 1: Charging indicator

During charging, the pink led 1 is flashing all the time.

When the pink led 1 is off, it is fully charged.

when the pink led 1 is off, it is fully charge

Red led 2: Low power indicator

The red led 2 flashs three times when the battery is running low.

Green led 3: Decoder indicator

Pull the trigger once, the green led 3 flashes once.

Green led 4: Contact status indicator

The scanner is in good contact with the base electrode, the green led 4 is on.

If the green led 4 is off, the contact isn't good.

Blue led 5: Base receiving status indication

The blue led 5 is always on, it means the base can receive data. The base receives one bar code and the blue led 5 flashes once.

If the blue led 5 is flashing all the time, then the base can not receive data.

Set Up Step

The scanner has been paired with the base station, and set up already.

- **Step 1**, Power on the scanner by pressing the button. The buzzer has a triple beeps, the green light on the top of scanner will be on.
- **Step 2.** Insert the USB base station into the USB port of computer. The USB base station's blue light will be on.
- **Step 3.** Open notepad on computer and move cursor to the blank where scanning output should be placed. Scanning results can be displayed on computer then.

If the barcode does not displayed , $\;\;$ please set up the scanner again according to the following steps.

- Step 1. Unplug the USB base station and plug it in again
- Step 2. Within 30 seconds, scan these codes in order.



1. Resrore default



2 Match



3. Instant upload mode



4. USB HID

Step 3. Open Word on computer, move cursor to the blank, scan a barcode to see if it can be uploaded.

FAQs:

Q1. If i scan a product barcode, will it include the name of the product in the file automatically?

Answer:

The scanner works like a keyboard. The scanner does not interpret what the barcode is, it just "types" out a string of alphabet numeric characters that the barcode represents.

it's up to the database software you are using to interpret what that string of characters means. Once you acquire the barcodes, you have to correlate them to something more meaningful by either purchasing a software service that will interpret the barcode and relate it to a product, or you can use your own internal inventory system to assign the barcodes to specific products.

After creating the relationship between your barcode and the corresponded information, when you enter the barcode into the software by the scanner, your software will look up the barcode and then output the related information of your product.

Q2. Why does scanner not read the barcode exactly. When I use the scanner to read a barcode of an item, I get a different result from the barcode itself.

Example 1, There are two separate barcodes together. It scanned the first 12 digits in the barcode but not the last five.

Solution: Please scan the code" UPC/EAN extra code-ON" on page 30.

Example 2, The original barcode is "abc12345", the scanning result is "+A+B+C+D12345", the scanner put "+" between character.

Solution: Please scan the code "Code 39 FULL ASCII-On" on page 33. If that is not your case, please send us a clear picture of the barcode and the result you get, our customer service will help you to solve the problem.

Q3. Some barcodes can not be read, why?

Answer:

- A. Incomplete and unclear barcodes might not be read.
- B. It is possible that the setting is off by default for some barcode types which are not commonly used. You need to activate a specific barcode type to get it working.

Please feel free to contact our Customer Service Team for further assistance if you don't know the exact type of barcode that you are referring to.

Q4.Is there any barcodes to remove auto-enter after every scanning?

Answer: To remove the auto-enter, please read the code" Disable end character" on page 22.

Q5. How to add Tab?

Answer: To add Tab, please read the code" Add tab" on page 22.

Q6. Can the scanner send two enter after every scanning? Answer:

To add two enter, please read these codes in order. (on page 39-35)

- "Insert character" (on page 39)
- "All barcode type" (on page 39)
- "Data group 1" (on page 41)
- "After barcode" (on page 42)
- "013 CR/ENTER" (on page 49)
- "013 CR/ENTER" (on page 49)
- "Save settings" (on page 43)
- **Q7**. Is there a way to make the scanner work with a white print on a black background?

Answer: To set the scanner to read white bar code on black ground, please scan the code "White in black background - On" on page 28, 37, 38.

Q8. Is there a way to program the scanner to show the special characters like <RS>、 <GS> or <EOT> when scanning?

Answer: Please contact us at Email: server@realinn.cn , send us the characters you want to display, and our customer service team will help you.

Troubleshooting		
Problem	Possible Reason	Solution
	No driver in the computer.	Update USB driver
Insert the USB base station into the PC 's USB port, the base station' s blue led 3 is flashing all the time.	The USB port is broken.	Connect the base station to another computer to see it works.
	The base station or the cable is broken.	Contact us for replacement.
Put the scanner on the base station , the green led 2 does not turn on.	bad contact of electrode.	Contact us for replacement.
Power on the scanner, the buzzer does not beep, the green light on the top of scanner does not turn on, the red scanning laser does not show up.	The battery run out.	Charge the scanner

The scanner can not hold the charge.	The PC's USB port is broken.	Connect the base station to another USB port for charging.	
	The base station or USB cable is broken.	Contact us for the replacement	
Power on the scanner, the buzzer beeps, the green light on the top of scanner will be on, the red scanning laser does not show up or become a dot.	The laser head is broken.	Contact us for the replacement	
Scanner and USB base station are all in good condition. But the barcode can not be sent to computer.	The scanner failed to match the USB base station.	Unplug the base station and plug it in to PC's USB port, within 30	
	The scanner was set to storage mode, scanned data will be kept in the bu ffer of scanner	seconds scan the following codes in order: "Resrore default" "match" "instructions and codes.	
	The scanner was set to USB virtual com.	"instantly upload mode" "USB_HID"	

Optional Function settings

Settings of the bar code scanner can be changed by scanning the setup bar codes included in this manual.

1. Pairing Mode Setting (for wireless mode only)

1.1 One scanner to one base:

One scanner only transmits bar code to one base.

Pairing operation:

Plug the base into your computer ,scan the code "match" to pair the scanner with the base



Match

Pairing indication:

- (1) If the pairing succeeds, the buzzer beeps "DI da""di di di"
- (2) If the pairing failed, the buzzer beeps "DI---en"

NOTE: 30 seconds after the base is inserted, the scanner cannot match the base.

If the pairing failed, please unplug the base and plug it again, then scan the code "match"



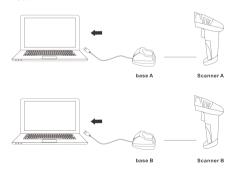
Several units can work independently with different computers in the same area. They won't interface with each other during work.

If you want to use them on multiple computers, each with own scanner and base. Please follow the steps.

- (1) Plug the base A into PC's USB port.
- (2) Scan the code "match" using scanner A to pair the scanner A with the base A.
- (3) 30 seconds after the base A is plugged , plug the base B into Another PC' s USB port.
- (4) Scan the code "match" using scanner B to pair the scanner B with the base B.



Match



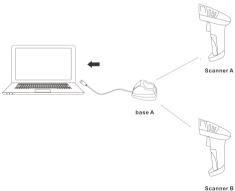
1.2. Max,32 Scanner - to - One base

Multiple scanners transmit barcode to one base. One base can connect to 32 scanners at most

Pairing operation:

- (1) Plug the base A into PC 's USB port
- (2) Scan the code "match" using scanner A to pair the scanner A with the base Δ
- (3) Unplug the base A and plug it to PC 's USB port again
- (4) Scan the code "match" using scanner B to pair the scanner B with the base A





2. Upload Mode Setting

1.1. Instant Upload Mode

Read barcodes and upload it straight to the file you have opened.

** To set the scanner to upload barcode instantly, scan the following code:



Instant upload mode

Scanning indication:

- (1) The buzzer rang "DI" when the barcode is uploaded successfully.
- (2) The buzzer rang a slow "DI---en" when the barcode can not be uploaded.

If some character are mixed up, please set the scanner to lower transmission speed.

The transmission speed between every character can be changed by scanning the following code. The higher the value, the slower the speed is.



Speed 00 (default)



Speed 30



Speed 15



Speed 40







Speed 60

1.2. Storage Mode

Read bar codes and store the bar codes in scanner's own memory. You can upload the data to computer in batches when you need them. Internal storage saves up to 10,000 bar codes.

Note: In storage mode, the bar code will be stored and will not come up on your computer instantly. The bar code comes up on your computer only when you scan the settings code "upload data".

** To convert scanner from "instant upload mode" to "storage mode", scan the following bar code "Storage mode".



Storage mode

** To upload data from memory, put the cursor in the blank, and then scan the "Upload Data" barcode, it will upload all the stored barcode at a time.



Upload data

** To show total number of stored bar code, put the cursor in the blank, and then scan the "Show total storage" bar code. It will out put

"TotalCounters: xx".



Show total storage

** Scan the barcode "Clear data" to clear all the stored barcode. (for storage mode only)



Clear data

Scanning indication:

- (1) The buzzer rang a fast "DI-en" when the barcode is saved successfully in the built-in memory of the scanner
- (2)The buzzer rang a slow "DI---en" when the barcode can not be saved in the built-in memory of the scanner. The space of memory is not enough and cannot store any more barcodes. Please upload the saved barcode by scanning the code "Upload Data" and then clear the saved barcode by scanning code "zero clearing".

Note: In storage mode, the transmission speed between every barcode can be changed by scanning the following code. If some barcodes are missing, please set the scanner to lower transmission speed.

The higher the value, the slower the speed is.



Speed 000



Speed 002



Speed 050



Speed 001



Speed 040



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3. Scanning Mode Setting

Three kinds of scanning modes are supported.

3.1. Manual Trigger mode (default):

Press the trigger, the scanner will emit light and read the barcode. Release the trigger, the scanner will stop reading barcode and the light will go off.

** Scan the following codes to set the scanner to Manual trigger mode .



Manual trigger mode (default)

3.2. Continuous Scanning Mode

There's no need to click the trigger in this mode. The red light of the scanner will be on at a certain frequency.

The red scanning light will go off once the scanner scans barcode successfully and the scanner will enter into next scanning automatically after a intermittent time. And the red scanning light of the scanner will be on again once the waiting time passes

** Scan the following codes to set the scanner to Continuous Scanning Mode.



Continuous Scanning Mode

3.3. Auto-induction Mode

There's no need to click the trigger under the Auto-induction Mode. Users just need to move the barcodes in front of the scanner. A red light band will show up to read the barcode.

The red light band will go off once the scanner scans barcode successfully or pre-set timeout expires.

** Scan the following codes to set the scanner to Auto-induction Mode .



Auto-induction Mode

** Scan one of the following codes to select the induction sensitivity.



High sensitivity (default)



Medium sensitivity



ow sensiti

Note: In Auto-induction Mode. It will be better to set the scanner out to be longer stand-by time interval. Please refer to the instruction on page 25.

4.Anti-duplication Setting

In continuous scanning mode or auto-induction mode, maybe the same bar code is read two or more times.

Here are two ways to avoid this problem.

Method1. Turn on the Anti-duplication function

** Scan the following code to turn on Anti-duplication function.

If you turn on the function, the scanner can not upload the barcode it has read before.



Anti duplication - ON

** Scan the following code to turn off Anti-duplication function.



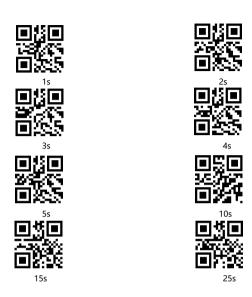
Anti-duplication-Off

Method 2: Set the time interval.

 $\ensuremath{^{**}}$ Scan one of the following code to set the time interval.

After reading a bar code, at the pre-set time interval, the scanner can not read the same bar code.

The scanner can read the same bar code only when pre-set time interval passes.



5.Battery Remaining

To show up how much the Battery is left, put the cursor in the blank, and then scan the following barcode. It will output "DumpEnergy: xx%" .



6. Aiming & LED Light Setting

5.1 Aiming Mode

The red beam that projected by the scanner can help user to find out the best reading distance.

Normal mode: red beam appears when the user press the trigger
Always on: red beam always appears when the scanner is electrified

** Scan one of the following code to select the Aiming mode



Normal mode(default)



Always on

5.2 White LED light Mode

The white beam offers auxiliary lighting for reading.

When the white beam projects on the target object, it can improve the decoding performance and the adaptability of weak ambient light.

Normal mode: white beam appears when the user press the trigger Always on: white beam always appears when the scanner is electrified ** Scan one of the following code to select the led light mode



Always o

7. Case Sensitivity Setting

The scanner can change all the letter cases of barcode into uppercase or lowercase.

It takes "Not to Alter the Letter Case of barcodes" as default, letter case of barcodes can be altered through scanning correspondent bar code below.

Note: Please deactivated caps lock on keyboard first.

** Scan one of the following code to select the letter case



All upper case



Swap upper case/ lower case



All lower case



Not altering the Letter Case (default)

8. Identify Barcode Type

This is to identify what type of the barcode is, follow the below steps to confirm:

Scan code "Add Code ID " below, then scan your goal barcode, there will be a character BEFORE the barcode you scanned, and this character states your Barcode Type. After that, if you don't need this ID any more, scan the code "Turn off ID (default)" to hide it.



Scan

Goal Barcode



Turn off ID (default)

Code	Barcode Type
Α	UPC-A, UPC-E, EAN-8, EAN-13
В	Code 39
C	Codabar
D	Code 128
E	Code 93
F	Interleaved 2 of 5
Н	CODE11
I	MSI
N	GS1 DataBar-14, GS1 DataBar Limited, GS1 DataBar Expanded
Р	PDF417
Q	DataMatrix(DM)
R	QR

- S Aztec Code
- T Maxi Code

9. Frequently-used End Character Setting

By default, the scanner is sending a 'carriage return' after scanning a code (the same as pressing the 'enter' key).

To add TAB Key, please scan the code " TAB"



Disable end character



Carriage Return



Carriage Return & Line-Feed



TAR

10. Beep Setting

**Scan one of the following bar code to select the decoding beep mode



Beep-Off



Medium volume



Low volume



High volume -Default

** Scan one of the following barcode to select the booting beep mode



Beep-Off



Medium volume



Low volume



High volume -Default

11. Interface Setting

11.1 USB-HID mode

In the HID protocol, there are 2 entities: the "host" and the "device".

The host communicates with the device and receives input data from the device on actions performed by the human.

The most common example of a "host" is a PC.

The "device" is the entity that directly interacts with a human, such as a keyboard or mouse.

If you want to set the scanner as a keyboard to enter the barcode , please read code "USB HID"



USB HID

11.2 USB virtual COM mode

In USB virtual COM mode, the scanner needs to work with driver and serial software.

Expected final behavior is that even if you open up another page , the scanned information will show up in the window of serial software.

Please let us know if you need to set it to USB virtual COM mode, we will send you the driver.

12.Stand-by Setting

By default, it is set to be 1 minutes. The scanner will enter into stand-by mode if there is no operation on it over 1 minutes. In stand-by mode, the CPU is still working. Short press on the trigger can wake it up.

**Scan one of the following barcode to set the time interval, when it's idle exceeding the time interval you set,the scanner will enter into stand-by mode





1 minutes -Default



30 minutes



166 minutes

 ** Scan the following code to power off the scanner. The electricity consumption is 0.



60 minutes

13. Keyboard Language Setting

The scanner support 25 international keyboards.

You are suggested to set the keyboard language of the scanner to be in agreement with that in real use by scanning the correspondent barcode listed below.





NORWAY



PORTUGA



SERBIA/YUGOSLAVIA



SLOVENIA



FINLAND



CANADIAN-FRENCH



CROATIA



SWITZERLAND (FRENCH)



CZECHOSLOVAKIA (CZECH)



SWITZERLAND (GERMAN)



CZECHOSLOVAKIA (SLOVAK)



POLAND



UNIVERSAL

14.Enable / Disable Barcode Type

One-dimensional code



All 1D code-On



All 1D code-Off*

1D code (white in black background)



White in black background-On



White in black background-Off*

UPC-A



UPCA-On*



UPCA Check digit-Off



UPCA Check digit-On*



UPCA to EAN13-On



UPCA to EAN13-Off*

UPC-E



UPCE-On'



LIDCE Off



UPCE Check digit-On*



UPCE Check digigt-Off



UPCE to UPCA-On



UPCE to UPCA-Off*

EAN-8



EAN8-Off

EAN-13





UPC/EAN Extra Code



UPC/EAN extra code-On



Code 128



Code128-On*



Interleaved 2 of 5



Interleaved 2 of 5-On, Code1



Interleaved 2 of 5-On, Code2

Note: To enable it to read the interleaved 2 of 5 code, please read the 2 setting code above orderly.





Interleaved 2 of 5 check digit-On



Interleaved 2 of 5 check digit-Off*

Matrix 2 of 5



Matrix 2 of 5-On, code 1



Matrix 2 of 5-On, code 2

Note: To enable it to read the Matrix 2 of 5, please read the 2 setting code above orderly.



Matrix 2 of 5-Off*



Matrix 2 of 5 check digit-On



Matrix 2 of 5 check digit-Off*

Industrial 2 of 5



Industrial 2 of 5-On, code 1



Industrial 2 of 5-On, code

Note: To enable it to read the Industrial 2 of 5code, please read the 2 setting code above orderly.



Standard 2 of 5



Standard 2 of 5-On, code1



Standard 2 of 5-On Code2

Note: To enable it to read the Standard 2 of 5 code, please read the 2 setting code above orderly.





Standard 2 of 5 check digit-On



Standard 2 of 5 check digit-Off*

Code 39







Code39 Full ASCII-On



Code39 Full ASCII-Off*



Code39 start&stop digit -On



Code39 start&stop digit -Off*





Code39 check digit-Off*



Code39 any length string-On

Code 93



Code93-On



Code 11



Code11-On



Code11-Off*



Code11 check digit-On



Code11 check digit-Off*

ITF14



ITF14-On



34





Codabar



Codabar - Or



Codabar-O

MSI



MSI - On, code1



MSI - On, code2

Note: To enable it to read the MSI code, please read the 2 setting code above orderly.



MSI-Off*

PLESSEY



Plessey-On



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GS1-128



GS1-128-On*



GS1-128-Off*

GS1-Databar



GS1-Databar-On



GS1-Databar-Off*

Code 32



Code32-On



Code32-Off*



Code32 prefix A-on



Code32 prefix A-Off*

QR code



OR code-On*





White in black background-On



White in black background-Off*

Data Matrix



Data Matrix-On*



Data Matrix-Off



White in black background-On



White in black background-Off*

PDF 417



PDF 417-Off



White in black background-On



White in black background-Off*

Aztec code



Aztec code-On



Maxi Code



Maxi Code-On



15. Insert and delete Character

The barcode scanners permit special characters to be added at the beginning (prefix) or end (suffix) of the scanned barcode.

The character also can be deleted.

First step: Scan one of the following setup code to choose the event.



Insert character



Delete character

Second step: Scan one of the following setup code to choose the barcode type.

Note: if you do not choose the barcode type, the setting will take effect for all barcode type by default.





Third step: Scan one of the following setup code to choose the data group.

Note 1: if you do not choose the data group, the scanner will take "Data

group 1" as default setting.



Note 2

The data group is used to distinguish between different setting events.

it work on the following circumstances:

1). Differentiating the setting for different barcode types

2). Distinguish add / delete prefix or suffix

Different events can take effect at the same time.

Example 1:

If you want to put "A" before the Code39 type barcode, put "B" before the Code128 type barcode.

The setting steps is:

Insert charater> Code39>**Data group 1**>Before barcode>065 A>Saving settings

Insert charater> Code128> Data group 2 > Before barcode> 066 B> Saving settings

After that,

when the scanner read a Code39 barcode, it will add "A" before the barcode. When it read a Code128 barcode, it will add "B" before the barcode.

when it read other type barcode ,like UPC, it will not add any character.

Example 2:

If you want to put "A" before barcode, put "B" after barcode.

The setting steps is:

Insert charater > All barcode type > **Data group 1** > Before barcode > 065 A > Saving settings

Insert charater> All barcode type > **Data group 2** > After barcode > 066 B> Saving settings

After that.

when the scanner read barcode 123456789, the barcode received by the computer will be A123456789B.

Fourth steps: Scan one of the following setup code to choose the position



Before barcode



After barcod

Fifth steps: Choose the character you want to add or the digit you want to delete.

Character table please see page 48.

Note:

For the character deleting event, below is the corresponding deleting characters table.

001 SOH	One character
002 STX	Two characters
003 ETX	Three characters
004 EOT	Four characters
005 ENQ	Five characters
006 ACK	Six characters
007 BEL	Seven characters
008 Back Space	Eight characters
009 HT/TAB	Nine characters
010 LF	Ten characters
	

Sixth steps: Scan the below code to save the setting



Save setting

Note: In the course of character setting, if other unrelated barcodes are scanned, the scanner will exit the character setting.

Insert character operation example

Original barcode: 123456789



	Insert A before barcode	Insert C after third bits of barcode	Insert E after barcode
Step	<u> </u>	<u> </u>	■ 5.■
1			
	Insert character	Insert character	Insert character
Step			回货回
2			
	All barcode type	All barcode type	All barcode type
Step		回想回	回規回
3	12.20mm 回機数		でで紹介 回接数
	Data group 1	Data group 1	Data group 1
Step 4		■醬■	<u> </u>
			部織
	Before barcode	003 ETX	After barcode

Step 5	@09065@ 065 A	@09067@ 067 C	@09069@ 069 E
Step			
6			
	Save setting	Save setting	Save setting
Result:	A 123456789	123 C 456789	123456789 E

If you want to clear the previous inserted character, please scan the following codes orderly:





Insert character

Clear setting

Delete character operation example

Original barcode: 123456789



	Delete one character before barcode	Delete two character after third bits of barcode	Delete three character after barcode
Step 1			
Step 2	Delete character	Delete character	Delete character
Step 3	Data group 1	回报日 在《神》 回译文 Data group 1	回規圖 配換費 Data group 1

Step 4	Before barcode	138 (-50) 138 (-50) 103 ETX	After barcode
Step 5	□ \$ 0 □ #: & @09001@ 001 SOH	@09002@ 002 STX	@09003@ 003 ETX
Step 6	Save setting	Save setting	Save setting
Result:	23456789	1236789	123456

If you want to cancel the previous deleted character, please scan the following codes orderly:



delete character



Clear setting

ASCLL Barcode Table



















































@09030@ 030 RS

031























































































@09115@

115 s

@09116@ 116 t

@09114@

114



































































150 r_Ctrl on

@09151@ 151 r_Ctrl off





















4(KP)





























@09174@ 174 Up

175 Down

62











189



190 Num Lock



191 caps lock



192 scroll lock