

RL6100-1D

1D Barcode Scanner

User Manual

Service Mailbox:
server@realinn.cn

V1

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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 temporarily.

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 following Email:

server@realinn.cn

You are suggested to write down the model & the specific scenario and consult the maintenance person should you find the scanner abnormal.

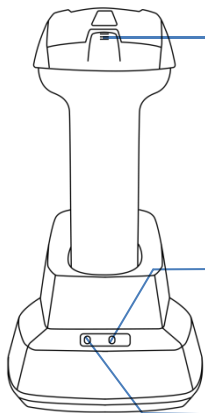
Technical Parameter

Mfr P/N	RL6100-1D
Radio Frequency	433MHz Wireless
Wireless Range	< 100m in environment that has obstacles < 400m in barrier-free environment
Memory	100000 barcodes
Battery capacity	1400mAh
Charging power	DC 5V 400mA
Standby current	18uA-5mA
Working current	15-40mA
Printing Contract	>25%
Light source	650nm LED
LED life	12000 hours
Button life	8000,000 times
Resolution	3.3 mil
CPU	ARM 32-bit Cortex
Bit Error rate	1/20million
Printing Contract	>25%
Decoding speed	260 times/sec
Scanning angle	rotor angel $\pm 30^{\circ}$, inclination $\pm 45^{\circ}$, declination $\pm 60^{\circ}$
Drop test	2.0m
Certificate	CE , FCC , RoHS , IP54
Applicable 1D barcode	UPC/EAN, UPC/EAN with complementary, Code39, Code39 Full ASCII, Codabar, industrial/Interleaved 2of 5, Code93, MSI, Code11, ISBN, ISSN,China post

Packing list

- Barcode scanner*1
- USB Cable*1
- Instruction Manual*1
- Wireless 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.

Red led 2: Low power indicator

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

Blue led 3: decoder indicator

Pull the trigger once, the blue 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 blue 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.



Resore default



Match



Instant upload mode



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 with 2/5 extra digits-ON" on page 26.

Example 2, The original barcode is "abc12345", the scanning result is "+A+B+C+D12348", the scanner put "+" between character.

Solution : Please scan the code "Code 39 FULL ASCII-On" on page 26.

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 suffix" on page 23.

Q5. How to add Tab?

Answer:

To add Tab, please read the code" Add tab" on page 23.

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

Answer:

To add two enter, please read these codes in order. (on page 29-35)

"Insert character"

"All barcode type"

"Data group 1"

"After barcode"

"013 CR/ENTER"

"013 CR/ENTER"

"Save settings"

Troubleshooting

Problem	Possible Reason	Solution
Insert the USB base station into the PC 's USB port, the base station' s blue led 5 is flashing all the time.	No driver in the computer.	Update USB driver
	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 4 does not turn on.	bad contact of electrode.	Contact us for replacement.
Power on the scanner, the buzzer does not beep, the blue 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 ot anther USB port for charging.
	The base station or USB cable is broken.	Contact us for the replacement

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

Optional Function settings

Settings of the barcode scanner can be changed by scanning the setup barcodes included in this manual.

1. Pairing Mode Setting

1.1 One scanner to one USB base station : One scanner only transmits barcode to one USB base station.

Pairing operation:

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

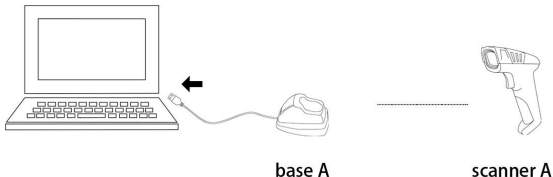


Match

Pairing indication:

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

NOTE : 30 seconds after the USB base station is inserted, the scanner cannot match the USB base station. If the pairing fails, please unplug the USB base station 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.

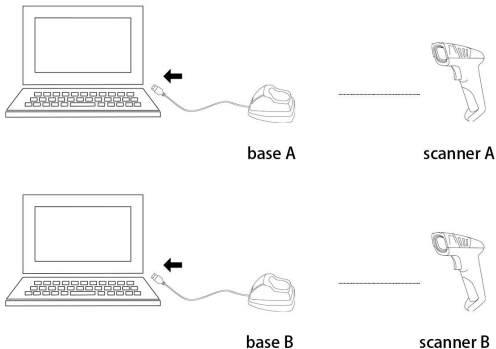
If you want to use them on multiple computers, each with own scanner and base station. Please follow the setps

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

.....



Match



1.2. Max.32 Scanner - to - One USB base station

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

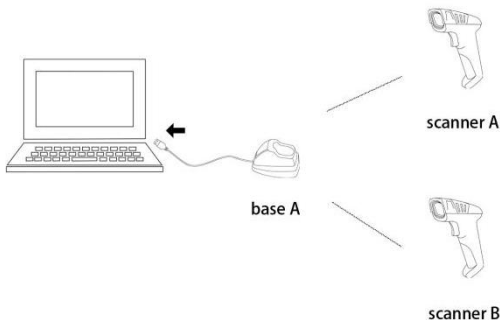
Pairing operation:

- (1) Plug the USB base station A into PC 's USB port
- (2) Scan the code "match" using scanner A to pair the scanner A with the base station A
- (3) Unplug the USB base station 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 station A

...



Match



2. Upload Mode Setting

2.1. 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 blue led 3 flashes once and the buzzer emits a sound like "DI" when the barcode is uploaded successfully.

(2) The blue led 3 flashes once and the buzzer emits a sound like a slow "DI---en" when the barcode can not be uploaded.

Note 1 :

The transmission speed between every character can be changed by scanning the following code. If some characters are missing, please set the scanner to lower transmission speed. The higher the value, the slower the speed is.



Speed 00 *



Speed 05



Speed 10



Speed 15



Speed 20



Speed 30



Speed 40



Speed 50



Speed 60

Please make sure that the USB base station is plugged.

2.2. Storage Mode : Read barcodes and store the barcodes in scanner's own memory. You can upload the data to computer in batches when you need them. Internal storage saves up to 100,000 barcodes.

Note : In storage mode, the barcode will be stored in the scanner and will not come up on your computer instantly. The barcode 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 barcode "Storage mode ".**



Storage mode

**** Put the cursor in the blank, and then scan code below to upload data.**



Upload data

**** Put the cursor in the blank and then scan the code below to show total number of stored barcode.**



Show total storage

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



Zero clearing

Scanning indication:

- (1) The blue led 3 flashes once and the buzzer emits a sound like a fast "DI-en" when the barcode is saved successfully in the built-in memory of the scanner
- (2) The red led 2 flashes once and the buzzer emits a sound like 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 1:

In storage mode, the transmission speed between every barcode can be changed by scanning the following code. The higher the value, the slower the speed is.

Note 2:

If the character upload speed (on page 13) is set to a slower speed , and the barcode upload speed is set to a higher speed. When uploading data in storage mode, the data maybe be lost. If some character or barcode are missing, please set the scanner to lower barcode transmission speed.

Please make sure that the USB base station is plugged.



Speed 000



Speed 010 *



Speed 050



Speed 005



Speed 040



Speed 060

3. Scanning Mode Setting

Two kinds of scanning modes are supported.

3.1. Manual Trigger mode (default) :

User Press the trigger, the scanner will emit a red laser to read the barcode. When user release the trigger, the red laser 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 laser of the scanner will be on all the time.

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



Continuous Scanning Mode

4. Duplicate Barcode Detection

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

** Scan the following code to turn on Same Barcode Detection



Same Barcode Detection-ON

**** Scan the following code to turn off Same Barcode Detection**



Same Barcode Detection-Off

5. Beep Setting

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



Low volume



Medium volume



High volume (default)



Beep-Off

**** Scan one of the following barcode to select the start-up beep mode**



High volume (default)



Medium volume



Low volume



Beep-Off

6. Interface Setting

6.1. 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.

** To set the scanner as a keyboard to enter the barcode , please unplug the USB base station and plug it in again, and then read the following code "USB_HID"



USB_HID

6.2. 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.

when you pull the trigger, the barcode won't come up on universal software like notepad, excel , word etc.

Please contact us if you need to set it to USB virtual COM mode , we will send you the driver and the serial software.

7. Identity Barcode Type

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

Situation 1: Scan the code "Add ID front-on" 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 prefix any more, please scan the code "Add ID front-Off (default)" to hide it.



Add ID front - ON

Scan Goal Barcode



Add ID front-Off

Barcode type	ID	Barcode type	ID
CODE 93	h	MSI/PLESSEY	f
CODABAR	k	EAN-8	d
UPC-A	b	EAN-13	e
UPC-E	c	INTERLEAVED 2/5	i
ISBN	f	CODE 11	m
CODE 39	a	CODE 128	g

8. Keyboard Language Setting

The scanner support 25 international keyboards:

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



UNITED STATES (default)



FRENCH



SERBIA/YUGOSLAVIA



BELGIUM



GERMANY



SLOVENIA



BRAZIL



HUNGARY



SPAIN



CANADIAN-FRENCH



ITALY



SWEDEN



CROATIA



SWITZERLAND (FRENCH)



NETHERLANDS



CZECHOSLOVAKIA (SLOVAK)



UNITED KINGDOM



POLAND



FINLAND



LATIN AMERICA



CZECHOSLOVAKIA (CZECH)



SWITZERLAND (GERMAN)



NORWAY



DENMARK



UNIVERSAL



PORTUGAL

9. Case Sensitivity Setting

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

Letter case of barcodes can be altered through scanning correspondent bar code below.

Note: Please deactivate caps lock on keyboard first.



All Capital



All lowercase



Swap Capital/ lowercase



Cancel capital/lowercase settings

10. Battery Remaining

To know how much electricity remains, put the cursor in the blank and then scan the following barcode.



Battery Reserve

11. Power Off Settings

The scanner will be powered off if there is no operation on it over 2 minutes. 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 be power off.



power off



40s Automatic power off



15mins Automatic Standby



30mins Automatic Standby

12. End Character Setting

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



Add Carriage Return



Add TAB



Disable Suffix













eg. To add Carriage Return, please read code " Add Carriage Return"

To remove Carriage Return, please read code " disable suffix"

13. Barcode setting

The code ending with word "*" is the default settings.

UPCA:	
 UPCA-On*	 UPCA-Off
 Show UPCA check digit*	 Hide UPCA check digit
 Show UPCA Leading digit*	 Hide UPCA leading digit
 UPCA to EAN13-On	 UPCA to EAN13-Off*
UPCE	
 UPCE-On*	 UPCE- Off

 <p>Show UPCE check digit*</p>	 <p>Hide UPCE check digit</p>
 <p>Show UPCE leading digit</p>	 <p>Hide UPCE leading digit</p>
 <p>UPCE to UPCA-On</p>	 <p>UPCE to UPCA-Off*</p>
<p>EAN13</p>	
 <p>EAN13-On*</p>	 <p>EAN13-Off</p>
 <p>Show EAN13 check digit*</p>	 <p>Hide EAN13 check digit</p>
 <p>EAN13 to ISBN-On</p>	 <p>EAN13 to ISBN - Off*</p>
 <p>EAN13 to ISSN - On</p>	 <p>EAN13 to ISSN - Off*</p>

EAN8



EAN8 - On*



EAN8-Off



Show EAN8 check digit*



Hide EAN8 check digit

UPC/EAN Extra code



UPC/EAN extra code-On



UPC/EAN extra code-Off*

Code39



Code39-On*



Code39-Off



Code39 FullASCII-On



Code39FullSCII-Off*



Show Code39 start/stop digit



Hide Code39 start/stop digit*

Code32



Code32- On



Code32-Off*



Show Code32 check digit



Hide Code32 check digit*

Code128



Code128-On*



Code128-Off

Code93



Code93-On*



Code93-Off

Code11



Code11-On*



Code11-Disabel

CODABAR



CODABAR-On*



CODABAR-Off



Show CODABAR start/stop digit



Hide CODABAR start/stop digit*

Industrial 2 of 5



Industrial 2 of 5 -On*



Industrial 2 of 5 -Off

Interleaved 2 of 5



Interleaved 2 of 5 -On*



Interleaved 2 of 5 -Off

MSI



MSI-On



MSI-Off*

14. 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.



All barcode type



UPCE



UPCA



EAN8



EAN13



ISBN/ISSN



Code39



Code128



Code93



Codabar

	
Interleaved 2 of 5	Industrial 2 of 5
	
MSI	Code11
	
China post	GS1D
	
GD1L	GS1E
	
Code32	

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.

	
Group 1	Group 2
	
Group 3	Group 4



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 barcode

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

Character table please refer to ASCII code table on page 35.

Note 1 :

Ten characters can be added or deleted at most.

Note 2 :

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

To remove the insert setting , scan the following code in order



Insert character



Clear setting

To remove the insert setting , scan the following code in order



Delete character



Clear setting

Insert or delete operation for example

In the process of setting, scan the irrelevant barcode, the scanner will exit setting status.

Example 1: Insert character: 123456789(Code128)



Insert Ab before barcode	Insert Cd after the third digit of the barcode	Insert Ef after barcode
1,  Insert Characters		
2,  All barcode types		
3,  Data Group 1		
4,  Before barcode	 003 ETX	 After Barcode
5,  065 A	 067 C	 069 E
6,  098 b	 100 d	 102 f
Each data group can insert within 10 characters		
7,  Save Settings		
Setup result		
Ab123456789	123Cd456789	123456789Ef
Removal of insert character settings, Please scan in turn	 Insert Characters	 Clear settings

I : Can set different bar code type, make this setting to this kind of bar code is effective

II : Can set different data group, make different Settings take effect at the same time

Example 2: Delete Character, 123456789(Code128)

























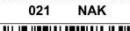
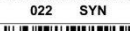
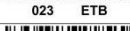
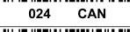

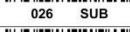
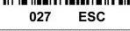




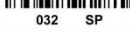






























































Delete one digit before barcode	Delete two digit after the third digit of the barcode	Delete three digit after barcode
1, Delete characters		
2, All barcode types		
3, Data Group 1		
4, Before barcode	 003 ETX	 After Barcode
5, 001 SOH	 002 STX	 003 ETX
6, Save Settings		
Setup result		
23456789	1236789	123456
Removal of delete character settings, Please scan in turn	 Delete characters	 Clear settings

















































I : Can set different bar code type, make this setting to this kind of bar code is effective


















































II : Can set different data group, make different Settings take effect at the same time

ASCII Table

 000 NUL/SP	 001 SOH	 002 STX
 003 ETX	 004 EOT	 005 ENQ
 006 ACK	 007 BEL	 008 Back Space
 009 HT/TAB	 010 LF	 011 VT
 012 FF	 013 CR/ENTER	 014 SO
 015 SI	 016 DLE	 017 DC1
 018 DC2	 019 DC3	 020 DC4
 021 NAK	 022 SYN	 023 ETB
 024 CAN	 025 EM	 026 SUB
 027 ESC	 028 FS	 029 GS
 030 RS	 031 US	 032 SP
 033 !	 034 "	 035 #
 036 \$	 037 %	 038 &
 039 '	 040 ( 041)
 042 *	 043 +	 044 ,
 045 -	 046 .	 047 /

 048 0	 049 1	 050 2
 051 3	 052 4	 053 5
 054 6	 055 7	 056 8
 057 9	 058 :	 059 ;
 060 <	 061 =	 062 >
 063 ?	 064 @	 065 A
 066 B	 067 C	 068 D
 069 E	 070 F	 071 G
 072 H	 073 I	 074 J
 075 K	 076 L	 077 M
 078 N	 079 O	 080 P
 081 Q	 082 R	 083 S
 084 T	 085 U	 086 V
 087 W	 088 X	 089 Y
 090 Z	 091 [ 092 \
 093]	 094 ^	 095 _

 096 ~	 097 a	 098 b
 099 c	 100 d	 101 e
 102 f	 103 g	 104 h
 105 i	 106 j	 107 k
 108 l	 109 m	 110 n
 111 o	 112 p	 113 q
 114 r	 115 s	 116 t
 117 u	 118 v	 119 w
 120 x	 121 y	 122 z
 123 {	 124	 125 }
 126 ~	 127 DEL	 128 F1
 129 F2	 130 F3	 131 F4
 132 F5	 133 F6	 134 F7
 135 F8	 136 F9	 137 F10
 138 F11	 139 F12	 140 l_Shift on
 141 l_Shift off	 142 r_Shift on	 143 r_Shift off

 144 l_Alt on	 145 l_Alt off	 146 r_Alt on
 147 r_Alt off	 148 l_Ctrl on	 149 l_Ctrl off
 150 r_Ctrl on	 151 r_Ctrl off	 152 /(KP)
 153 *(KP)	 154 -(KP)	 155 +(KP)
 156 _(KP)	 157 Enter(KP)	 158 0(KP)
 159 1(KP)	 160 2(KP)	 161 3(KP)
 162 4(KP)	 163 5(KP)	 164 6(KP)
 165 7(KP)	 166 8(KP)	 167 9(KP)
 168 Inert	 169 Delete	 170 Home
 171 End	 172 Page Up	 173 Page Down
 174 Up	 175 Down	 176 Left
 177 Right	 178 Center	 179 Insert
 180 Delete	 181 Home	 182 End
 183 Page Up	 184 Page Down	 185 Up
 186 Down	 187 Left	 188 Right
 189	 190 Num Lock	 191 caps lock
 192 scroll lock		

