2D Barcode Scanner

Full User Manual

V1.7.3

Content

Enable/Disable Configuration Barcode

Scanner can set up when enabled barcode function.In contrast, the scanner can’t set up if disabled. Need to switch on and set up again.

Enable Configuration Function (Default)

Disable Configuration Function

Version No.

Version Number

Factory Default Setting

Scanning the below barcode can restore the scanner the factory default.

Restore Factory Default Configuration

Product User Configuration

Scanning the below barcode can save current parameters as user’s configuration.

Save as User Configuration

Scanning the below barcode can restore for saved user’s configuration.

Restore User Configuration

USB Keyboard Layout

Control Character Escaping

Enable Escape Mode 1

Enable Escape Mode 2

Disable (Default)

CR/LF character processing(USB Keyboard)

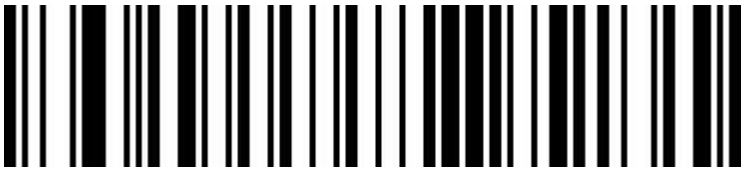
Only 0A(LF) line feed

Only 0D (CR) line feed (Default)

All convert to 0A (LF)/0D(CR)

USB Keyboard Transfer Speed

Used for set up scanning speed under USB keyboard mode. If PC in a lower function, please choose low scanning speed to make sure its accuracy.



Low (Default)

Middle

High

Custom Sending Speed (2ms~50ms)

Convert Case

Original Data (Default)

Case Inversion

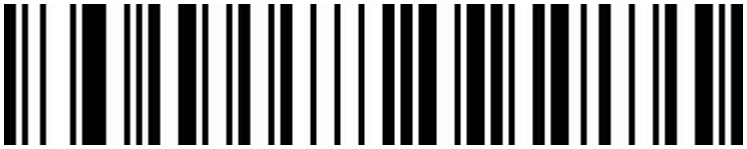
All Convert to Upper Case

All Convert to Lower Case

Keyboard Layouts

English (United States)
(Default)

French (France)



Italian (Italy)

Italian 142 (Italy)

German (Germany)

Spanish (Spain)

Spanish (Latin America)

Finnish

Japanese

Russian (MS)

Russian (typewriter)

Arabic (101)

Irish

Polish (214)

Polish (Programmers)

Dutch (Netherlands)

Czech (QWERTZ)

Portuguese (Portugal)

Portuguese (Brazil)

Swedish (Sweden)

Turkish Q

Turkish F

Greek (MS)

French (Belgium)

English (UK)

Virtual Keyboard

Mode 1: Do not support output the characters between 0x20 to 0xFF by using the virtual keyboard, under the current keyboard layout.
The characters between 0x00~0x1F are output according to the definition of control characters (Refer to Appendix)

Model 2: Support output the characters between 0x20 to 0xFF by using the virtual keyboard. The characters between 0x00~0x1F are output according to the definition of control characters (Refer to Appendix)

Model 3: Support output the characters between 0x00～0xFF by using the virtual keyboard

Turn Off (Default)

Turn On (Mode 1)

Turn On (Mode 2)

Turn On (Mode 3)

Selection of Host Operating System in Virtual Keyboard Mode

WINDOWS (Default)

MAC OS

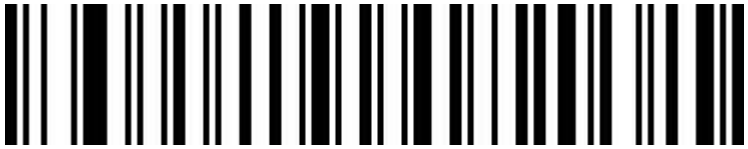
LINUX

Barcode Encoding Configuration

In a normal situation , the barcode encoding was identified accurately.
Please user manual to set up if encountered peculiar characters, that make sure output barcode content correctly.

Auto (Default)

GBK Code



UTF-8 Code

KOI8-R Code

Japanese Shift-JIS Code

Output Encoding Format

To output correctly in the specified encoding format.
For example: It's GBK code when output in the Notepad /Excel; It's UNICODE when output in the Word.
When output is English/Latin-1 encode format, the output mode will affected by the function switch of virtual keyboard. When output is GBK/UNICODE, the output mode will compelled to virtual keyboard.

English/Latin-1 (Default)

GBK (Notepad/excel)

UNICODE (Word)

Japanese Shift-JIS code

UTF-8 code

Invoice Function

Switch On/Off Invoice Function

OFF (Default)

On

To ensure the correct output of the invoice content, when switch on the invoice code function, please configure the Chinese character output mode to GBK code (Notepad/Excel), and at the same time switch off like Code ID, User-defined prefix/suffix, and starting character to change original barcode content function.

Invoice Type

VAT Invoice (Special) (Default)

VAT Invoice (Normal)

RS232 Interface Configuration

Baud Rate

4800

9600 (Default)

19200

38400

57600

115200

Data bit, Stop bit, Parity bit

7 Bit, 1 Stop Bit, No Parity

7 Bit,1 Stop Bit, Even Parity

7 Bit,1 Stop Bit, Odd Parity

7 Bit, 2 Stop Bit, No Parity

7 Bit, 2 Stop Bit, Even Parity

7 Bit,2 Stop Bit, Odd Parity

8 Bit,1 Stop Bit, No Parity(Default)

8 Bit,1 Stop Bit, Even Parity

8 Bit,1 Stop Bit, Odd Parity

8 Bit,2 stop Bit, No Parity

8 Bit,2 Stop Bit, Even Parity

8 Bit,2 Stop Bit, Odd Parity

GS Control Character Replacement

Do Not Replace (Default)

If output character is “Ç”, please scan” Virtual keyboard (Mode 1 or Mode 2 or Mode 3)” first.

Replace Ç

Replace |

Replace ^]

Replace]

Replace <GS>

Control Character Output

Disable

Enable(Default)

Scan Mode

Auto Sense Mode off

Scanning by pressing the trigger when auto sense mode is off. It’s default mode.

Off (Default)

Auto Sense Mode on

The scan engine can sense barcode for decoding automatically.

On

Repeat Barcode Detection

Using for decoding same barcode of interval time, it will decode only one time if not exceeded set time.

500ms

750ms (Default)

1s

2s

Center Mode

When center mode is turned on, the scan engine only reads the barcode located in the center area, this configuration is disabled as default.

Off(Default)

On

Light Configuration

LED Indicator Light

Off

On (Default)

Buzzer Configuration

Volume Setting

Low

High (Default)

Scanner Start Prompt Tone Setting

Off

On (Default)

Successful Decoding Prompt Tone Setting

Off

On (Default)

Successful Decoding Prompt Audio Frequency Setting (Tone)

1 (Default)

2

3

Custom

Successful Decoding Prompt Duration Setting

Long (Default)

Short

Error Warning Prompt Frequency Setting (Tone)

There will be four consecutive error warning tones if data transmission fails, and a single error warning tone when the unrecognized configuration code is scanned.

Low (Default)

Middle

High

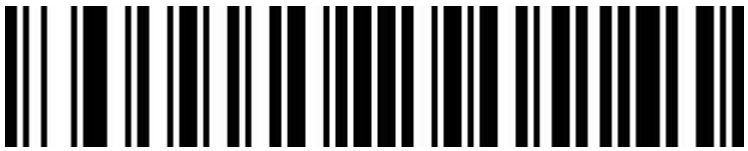
Prefix and Suffix Configuration

Start Character

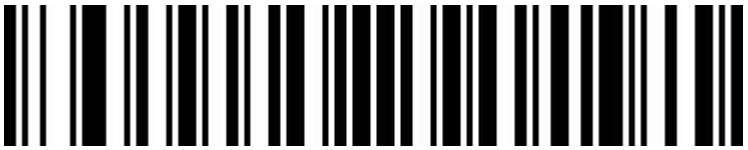
None (Default)

STX

Terminal Character



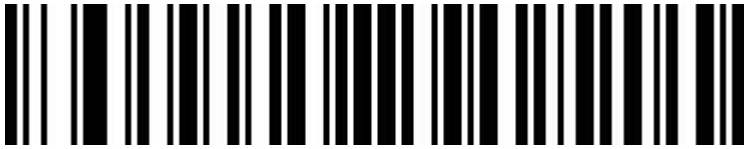
None



Enter

LF

CR/LF (Default)



TAB

ETX

Custom Prefix

Output Options

On

Off (Default)

Edit

Clear All Custom Prefix

Set Custom Prefix

(Please set up ID Table ,Data, and edit barcode refer to the appendix after scanning.)

Custom Suffix

Output Options

On

Off (Default)

Edit

Clear All Custom Suffix

Set Custom Suffix

(Please set up ID Table ,Data, and edit barcode refer to the appendix after scanning.)

Code ID

Output Options

Off (Default)

Enable Code ID Before Barcode

Enable Code ID After Barcode

Edit

Set Custom Code ID

(Please set up ID Table ,Data, and edit barcode refer to the appendix after scanning.)

Clear All Custom Code ID

AIM ID

Off (Default)

Enable AIM ID Before Barcode

Enable AIM ID After Barcode

Barcode Prefix and Suffix Order Selection

Prefix

Start Character+CODE ID+AIM ID+Custom Prefix (Default)

Start Character+ Custom Prefix + CODE ID+AIM ID

Suffix

Custom Suffix+CODE ID+AIM ID+Terminal Character (Default)

CODE ID+AIM ID+Custom Suffix+Terminal Character

Data Edition

The Data editing function can customize the barcode content into the three fields of Start/Center/End by configuring the Start/End field length.

Please configure the length of the Start/End field and the transport configuration according to the actual needs.

Note: Custom presuffix, start, end, CODE ID, AIM ID and other non-barcode content will not be affected by the data editing function.

Transmission Configuration

Transfer the full Data field

Only transfer the Start field

Only transfer the Center field

Only transfer the End field

Field Length Configuration

Set Start field length

Set End field length

Inverse color barcode selection

(Only 1D/DataMatrix/Aztec)

Normal Color

Inverse Color

Both (Normal/Inverse)

Non-standard Barcode Option

When non-standard barcode decoding enabled, scanner can be better compatible with some non-standard barcodes, but the probability of reading errors will increase.

Disable(Default)

Enable

Barcode Type Selection

Enable/Disable All barcodes

Enable all barcodes will low down decoding speed. So, we suggest you switch on scanner when needed. (Default is switch on state)

Enable All

Disable All

Enable/Disable All 1D barcodes

Enable All

Disable All

Enable/Disable All 2D barcodes

Enable All

Disable All

Codabar

Enable

Disable

Codabar Start/Terminal Character

Don’t Send Codabar Start/Terminal Character (Default)

Send Codabar Start/Terminal Character

Set Length Range for Codabar

Minimum Length (0~50bit)

Maximum Length (0~50bit)

Code 39

Enable

Disable

Code 39 Parity Check

Disable (Default)

Enable But Not Transfer

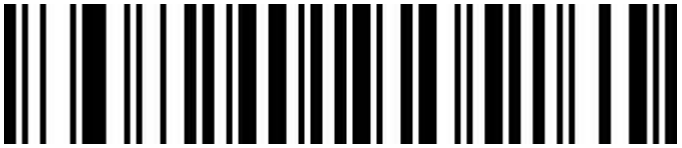
Enable & Transfer

Code 39 Full ASCII

Enable

Disable (Default)

Code 39 Start/Terminal Character



Don’t Send Code 39 Start/Terminal Character(Default)

Send Code 39 Start/Terminal Character

Set Length Range for Code 39

Minimum Length (0~50bit)

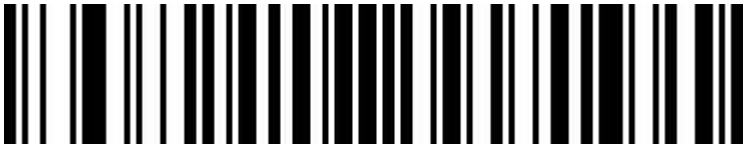
Maximum (0~50bit)

Code 32(Enable code39 first)

Enable

Disable

Code 32 Prefix



Enable

Disable(Default)

Interleaved 2 of 5 (ITF25)

Enable

Disable

Interleaved 2 of 5 (ITF25) Check Bit

Disable Check Bit (Default)

Enable Check and Don’t Send Check Bit

Enable Check & Send Check Bit

Interleaved 2 of 5 (ITF25) Length Selection

Random Length (6-50bits) (Default)

6 Bits

8 Bits

10 Bits

12 Bits

14 Bits

16 Bits

18 Bits

20 Bits

22 Bits

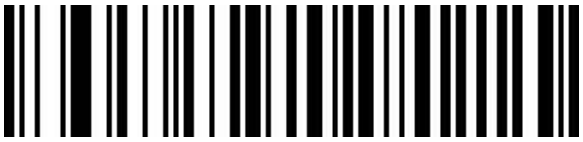
24 Bits

Set Length Range for Interleaved 2 of 5

Minimum (0~50bits)

Maximum (0~50bits)

Industrial 2 of 5/IATA



Enable

Disable

Set Length Range for Industrial 2 of 5

Minimum (0~50bits)

Maximum (0~50bits)

Matrix 2 of 5 (4-24bit)

Enable

Disable

Set Length Range for Matrix 2 of 5

Minimum (0~50bits)

Maximum (0~50bits)

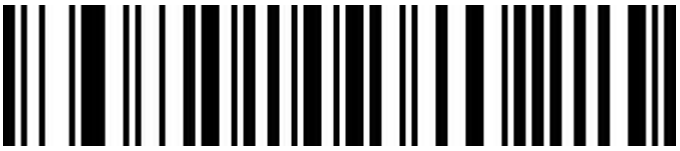
Code 93

Enable

Disable

Set Length Range for Code 93

Minimum (0~50bits)



Maximum (0~50bits)

Code 11

Enable

Disable (Default)

Code 11 Parity Check Output

Enable

Disable (Default)

Code 11 Parity Selection

Disable (Default)

1 Bits

2 Bits

Set Length Range for Code 11

Minimum (0~50bits)

Maximum (0~50bits)

Code 128

Enable

Disable

ISBT-128

Disable

Enable

GS1-128

Enable

Disable

Set Length Range for CODE-128

Minimum (0~50bits)

Maximum (0~50bits)

UPC-A

Enable

Disable

UPC-A Check Bit

Send UPC-A Check Bit (Default)

Don’t Send UPC-A Check Bit

UPC-A Leading Digits

Send UPC-A Country Code+System Digits(Convert to EAN-13)

Send UPC-A System Digits(Default)

Don’t Send UPC-A System Digits

UPC-E

Enable

Disable

UPC-E Check Bit

Send UPC-E Check Bit (Default)

Don’t send UPC-E Check bit

UPC-E Expand to UPC-A

Enable

Disable (Default)

UPC-E Leading Digits

Send UPC-E Country Code+System Digits

Send UPC-E System Digits(Default)

Don’t Send UPC-E System Digits

EAN/JAN-8

Enable

Disable

EAN-8 Convert to EAN-13

Disable EAN-8 convert to EAN-13(Default)

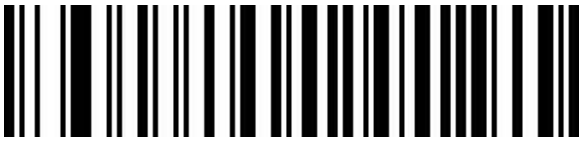
Enable EAN-8 convert to EAN-13

EAN-8 Check Bit

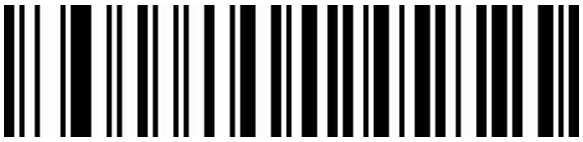
Send EAN-8 Check Bit(Default)

Don’t Send EAN-8 Check Bit

EAN/JAN-13



Enable



Disable

EAN-13 Check Bit

Send EAN13 Check Bit (Default)

Don’t Send EAN13 Check Bit

UPC/EAN/JAN Additional Code

Ignore Additional Code(Default)

Decode Additional Code

Adaptive Additional Code

EAN13 Convert to ISBN

Enable

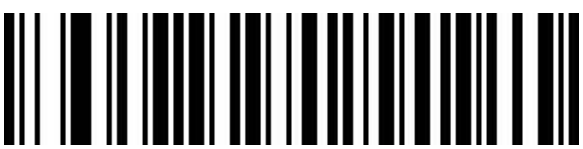
Disable (Default)

EAN13 Convert to ISSN

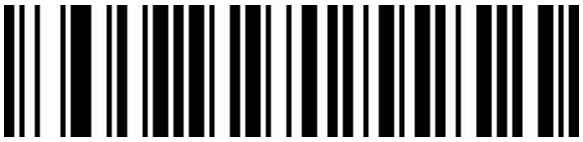
Enable

Disable (Default)

GS1 DataBar (RSS14)



Enable



Disable

GS1 DataBar Limited

Enable

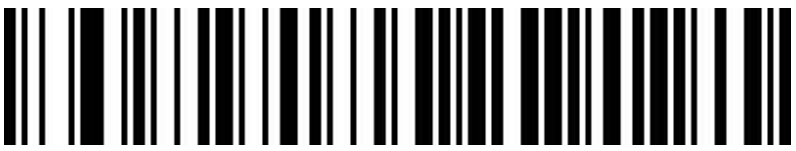
Disable

GS1 DataBar Expanded

Enable

Disable

GS1 Composite



Enable

Disable(Default)

MSI

Enable

Disable(Default)

MSI Check Bit

Send MSI Check Bit

Don’t Send MSI Check Bit(Default)

MSI Check Bit Option

1 Check Bit(Default)

2 Check Bits

MSI 2 Check Bits Option

MOD10/MOD10(Default)

MOD10/MOD11

MSI Code Reading Length Setting

Minimum Reading Length(0-50digits)

Maximum Reading Length(0-50digits)

Febraban

Note: Please disable AIM ID function before opening Febraban function.

Enable/Disable Febraban Code(ITF25)

Enable

Disable(Default)

Enable/Disable Febraban code(Code128)

Enable

Disable(Default)

Febraban Check Bit

Enable Check Bit

Disable Check Bit(Default)

PDF417

Enable

Disable

Micro PDF417

Enable

Disable

QR Code

Enable

Disable

QR Code URL Link

Disable

Enable

Micro QR

Enable

Disable

Data Matrix

Enable

Disable

Aztec Code

Enable

Disable

Appendix

Data and Edit barcode

0

1

2

3

4

5

6

7

8

9

A

B

C

D

E

F

Cancel Current Setting

Cancel A String of Data from Previous Read

Cancel The Data from Previous Read

Save

Barcode ID Type Table

Code type	HEX	CODE
All codes	99	
Codabar	61	a
Code128	6A	j
Code32	3C	<
Code93	69	i
Code39	62	b
Code11	48	H
EAN-13	64	d
EAN-8	64	d
GS1 DataBar	52	R
GS1-128 (EAN-128)	6A	j
2 of 5		
Interleaved 2 of 5	65	e
Matrix 2 of 5	76	v
Industry 2 of 5/IATA	44	D
UPC-A	63	c
UPC-E	63	c
ISBN	42	B
ISSN	6E	n
MSI	6D	m
Aztec Code	7A	z
DataMatrix	75	u
PDF417	72	r
Micro PDF417	53	S
QR Code	51	Q
Micro QR Code	51	Q

AIM ID Table

Code type	AIM ID	Description
Codabar	]Fm	m：0~1
Code128	]C0	m：0，1，2，4
Code32	]A0	
Code93	]G0	
Code39	]Am	m：0，1，3，4，5，7
Code11	]Hm	m：0，1，3，8，9
EAN-13 / EAN-8	]Em	m：0，1，3，4
GS1 DataBar	]e0	
GS1-128 (EAN-128)	]C1	
Interleaved 2 of 5	]Im	m：0，1，3
Matrix 2 of 5	]X0	
Industry 2 of 5	]S0	
UPC-A / UPC-E	]Em	m：0，3
ISBN	]X0	
ISSN	]X0	
Aztec Code	]z0	
DataMatrix	]dm	m: 0~6
PDF417 / Micro PDF417	]Lm	m: 0~5
QR Code / Micro QR Code	]Qm	m: 0~6

Visible Character ASCII Table

Decimal	Hexadecimal	Character	Decimal	Hexadecimal	Character
32	20	<SPACE>	80	50	P
33	21	!	81	51	Q
34	22	“	82	52	R
35	23	#	83	53	S
36	24	$	84	54	T
37	25	%	85	55	U
38	26	&	86	56	V
39	27	‘	87	57	W
40	28	(	88	58	X
41	29	)	89	59	Y
42	2A	*	90	5A	Z
43	2B	+	91	5B	[
44	2C	,	92	5C	\
45	2D	-	93	5D	]
46	2E	.	94	5E	^
47	2F	/	95	5F	_
48	30	0	96	60	`
49	31	1	97	61	a
50	32	2	98	62	b
51	33	3	99	63	c
52	34	4	100	64	d
53	35	5	101	65	e
54	36	6	102	66	f
55	37	7	103	67	g
56	38	8	104	68	h
57	39	9	105	69	i
58	3A	:	106	6A	j
59	3B	;	107	6B	k
60	3C	<	108	6C	l
61	3D	=	109	6D	m
62	3E	>	110	6E	n
63	3F	?	111	6F	o
64	40	@	112	70	p
65	41	A	113	71	q
66	42	B	114	72	r
67	43	C	115	73	s
68	44	D	116	74	t
69	45	E	117	75	u
70	46	F	118	76	v
71	47	G	119	77	w
72	48	H	120	78	x
73	49	I	121	79	y
74	4A	J	122	7A	z
75	4B	K	123	7B	{
76	4C	L	124	7C	|
77	4D	M	125	7D	}
78	4E	N	126	7E	~
79	4F	O			

Control Character Set (USB keyboard mode)

Decimal	Hexadecimal	Corresponding Key Value (Disable CODE ID)	Corresponding Key Value (Enable CODE ID)
0	00	reserve	Ctrl+@
1	01	Insert	Ctrl+A
2	02	Home	Ctrl+B
3	03	End	Ctrl+C
4	04	Delete	Ctrl+D
5	05	Page Up	Ctrl+E
6	06	Page Down	Ctrl+F
7	07	ESC	Ctrl+G
8	08	Backspace	Ctrl+H
9	09	Tab	Ctrl+I
10	0A	Enter（The configuration of CRLF processing decide how it express）	Ctrl+J
11	0B	Caps Lock	Ctrl+K
12	0C	Print Screen	Ctrl+L
13	0D	Enter（The configuration of CRLF processing decide how it express）	Ctrl+M
14	0E	Scroll Lock	Ctrl+N
15	0F	Pause/Break	Ctrl+O
16	10	F11	Ctrl+P
17	11	Direction key ↑	Ctrl+Q
18	12	Direction key ↓	Ctrl+R
19	13	Direction key ←	Ctrl+S
20	14	Direction key →	Ctrl+T
21	15	F12	Ctrl+U
22	16	F1	Ctrl+V
23	17	F2	Ctrl+W
24	18	F3	Ctrl+X
25	19	F4	Ctrl+Y
26	1A	F5	Ctrl+Z
27	1B	F6	Ctrl+[
28	1C	F7	Ctrl+\
29	1D	F8	Ctrl+]
30	1E	F9	Ctrl+^
31	1F	F10	Ctrl+_

Control Character Set (RS232,USB-VCP)

Decimal	Hexadecimal	Character
0	00	NUL
1	01	SOH
2	02	STX
3	03	ETX
4	04	EOT
5	05	ENQ
6	06	ACK
7	07	BEL
8	08	BS
9	09	HT
10	0A	LF
11	0B	VT
12	0C	FF
13	0D	CR
14	0E	SO
15	0F	SI
16	10	DLE
17	11	DC1
18	12	DC2
19	13	DC3
20	14	DC4
21	15	NAK
22	16	SYN
23	17	ETB
24	18	CAN
25	19	EM
26	1A	SUB
27	1B	ESC
28	1C	FS
29	1D	GS
30	1E	RS
31	1F	US

Configuration of Instructions and Examples

Example for user-defined prefix and suffix:

You can edit 10 characters as prefix or suffix. (In order to make sure the prefix and suffix can output normally, please enable user-defined prefix or suffix first)

Example 1.1:

Set” XYZ” as prefix on all codes
Before set up , please search HEX value for all codes is ”99” (Appendix: barcode type ID Table); find “X””Y””Z” HEX value is “58””59””5A” (Appendix:Visible Character ASCII Table)

Step: Set “User-defined Prefix”; Set “ 9””9””5””8””5””9””5””A” (Appendix: data and edit barcode); Set”Save”.

If you want to revise the scanned barcode before save, please set up “Cancel the data from previous read” or”Cancel a string of data from previous read” to reset. If you want to give up setting scan , then scan” Cancel current setting”.

Example 1.2:

Set ”R” as prefix on QR
Before set up, please search HEX value for QR code is “51”(Appendix: barcode type ID Table); find”R” HEX value is “52” (Appendix:Visible Character ASCII Table)

Step: Set “ Custom prefix”; Set”5””1””5””2” (Appendix: data and edit barcode); Set” Save”.

Example 1.3:

Cancel Custom prefix in QR code

Step: Set” Custom prefix”; Set”5””1”; Set” Save”
Note: If set up prefix on all QR codes, it will default all QR codes prefix after set up.
In contrast, if cancel all prefix / suffix on barcodes, please set “ Clear All Custom Prefix” and “Clear All Custom Suffix”.

Example for barcode length range configuration

Please sure it not bigger than current maximum length range when set up minimum length. Otherwise, it will show error. In the same way, must be make sure it’s not smaller than current minimum length range when set up maximum length.

Example 2.1:

Set Code 128 length range is 4-12bit

Step: Set ”Code 128 Minimum（0~50bit）”; Set”4”; Set “Save” Set ”Code 128 Maximum (0+-50bit)”; Set”1””2”; Set ”Save”

Example 2.2:

Set Interleaved 2 of 5 length is 14bit

It can set up by “ITF25 14bit”, through barcode length range of Maximum /Minimum to set,too.

Step: Set” Interleave 2 of 5 Minimum（0~50bit）”; Set”1””4”; Set”Save” Set” Interleave 2 of 5 Maximum (0+50bit)”; Set”1””4”; Set”Save”

Example 2.3:

Set Code 39 length is random length
Step: Set” Code 39 Minimum（0~50bit）”; Set”0” ; Set”Save” Set”Code 39 Maximum (0+50bit)”; Set”0”; Set ”Save”

Example for USB keyboard transmit speed configuration

If PC in a lower function, it will appear error status. Need to set up a slow scanning speed with customized under USB keyboard mode. Such as: 50ms
Step: Set”Custom Sending Speed”; Set”5””0”;Set”Save”

Warning Tone

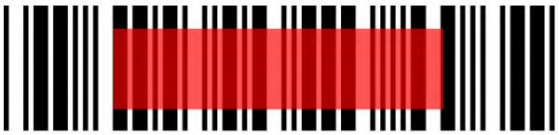
It will appear error warning for 4 times in a continue while transfer failure barcode. Please check if it’s normal work when appear this situation.

Read Skills

To get a good reading performance, a beam of aim light from scanner should be aimed at the centre of barcode, support to aim in any directions for read convenient,too.

More nearly barcode, the beam of aim light is smaller; More further barcode, the beam of aim light bigger. For reading barcode correctly, if barcode is small, the scanner should be close to barcode, if barcode is big, the scanner should be farther to barcode.

If the barcode is highly reflective (for example: coated surface), please adjust the scanner angle to read it successfully.



Safety

Please not direct aim eye when the scanner has a strong ray of light, to avoid causing any hurt or unwell.