2D Wired Barcode Scanner

Setting Manual

Disclaimer

Pleasse read all content of this manual carefully before using product which is described in this manual. This manual is helpful for using product safely. Please keep well for next use.

Do not dismantle terminal equipment or tear up sealed bidding, otherwise our company will do not be responsible for repairing or replacing the terminal.

The pictures in this manual are for reference only. Please refer to the actual product if there is any discrepancy between individual pictures and actual product. For the improvement and update of this product, our company reserves the right to modify the document at any time without notice.

Our company has the final right to interpret this statement.

Version

Version	Description	Date
V1.0	Initial Version	2020-09-20
V1.1	Add Instructions	2020-12-25
V1.2	Add custom setting	2021-02-01
V1.21	Add GS1 composite code setting	2021-02-10
V1.22	Add virtual keyboard setting	2021-02-21
V1.23	Add QR URL code settings, hide characters, and customize data insertion functions	2021-02-25
V1.24	Add USB-HID, Febraban, multi-language code, simplify custom setting instructions	2021-03-12
V1.25	Add instructions for using variable parameters	2021-03-18
V1.26	Add Telepen code setup codes	2021-04-15
V1.27	Add USB high-speed transfer mode	2021-05-15
V1.28	Add low power mode and OCR setup code	2021-08-25
V1.29	Add same code delay time (0-12.5s)	2021-09-23
V1.30	Modify setup code of UPC-E additional bit separator	2021-10-20
V1.31	Add new data output format, central mode, ctrl escape 2, HID message format, setting of instruction feedback value and example of custom parameter setting	2021-12-25
V1.32	Optimize minimum recognition digit of Code 39, I25, Codabar, Code 11 and MSI	2022-01-18
V1.33	Optimize Code 39, I25, Codabar, Code 11 and MSI	2022-01-22

Content

Chapter 1 Comprehensive Settings

Introduction

This manual is mainly used to introduce how to set the corresponding functions of the scanner. There are two ways to set up the scanner.

Setup Code

The scanner can set the corresponding function by reading the setup codes. In the following chapters, we will introduce the corresponding setting options and functions in detail and provide the corresponding setup codes.

Setting Instruction

The host can send a set of hexadecimal strings to set the scanner. In the following chapters, we will introduce the setting command string.

The scanner can be automatically operated by setting instructions. You can also integrate all relevant setting instructions into the software and process relevant instructions in batches through secondary development.

Setup code Identification

Procedure:

In manual scan mode, the operation steps for scanning barcodes are as follows:

1. Press and hold the trigger button of the scanner, the red aiming light will appear.

2. Align the aiming light to the center of the barcode, move the scanner and adjust the distance between it and the barcode to find the best scanning distance.

3. When the prompt sound is heard and the aiming light goes out, it means successful and the scanner will transmit the decoded data to the host.

Note:

During the scanning process, for the same kind of barcodes, there will be a high recognition with a suitable distance. This is the best recognition distance.

Setup Code Function

The setup code can be turned off. When the scanner is set to "On", the setting function will work with setup code is scanned. When the scanner is set to "Off", the error tone will appear and the setting function will not work with setup code is scanned. The default is "On".

RaZdNa

On*

RaZdXa

Off

Setup Code Content

The content of setup code can be sent. After scanning the "Send Content", the content will be sent to the host when the setup code is scanned. After scanning the "Do not send Content", the scanner will no longer send the setup code content. The default is "Do not send Content".

WaZaBb

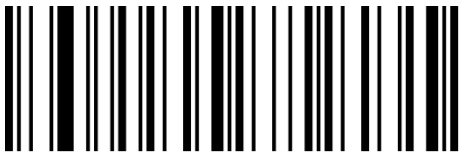
Send Content

WaZaRa

Do not send Content**

Factory Default

All scanners have a factory default setting. The scanner's properties will be set to the default state of the software with scanning the "Factory Default" setup code.



BeQeCe

Factory Default

Instruction:

You could use this barcode in the following situations:

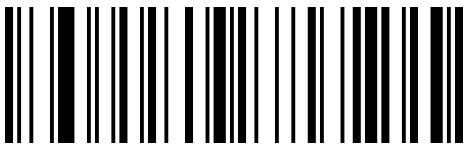
1. Scanner settings are wrong, such as barcodes that cannot be recognized.

2. You forgot what settings you made to the scanner and you do not want to use the previous settings.

3. Some infrequent functions were set and do not want to keep using it.

Version

Use the scanner to scan the version barcode and you will view the information of current scanner version.



BeReCd

Version

User Default Setting

Users can save their frequently used configuration as user default settings. By scanning "Save user default settings", the current configuration information of the device can be saved as user default settings. If the old information has been saved, the new configuration information will replace the original user default setting information after this operation.

UaQdWa

Save user default settings

BeQeEe

Restore user default settings

Example: Set the closed EAN-13 code as a custom user factory value.

Step 1: Scan the barcode of "Open setup code".

Step 2: Scan the barcode "Prohibit scanning EAN-13".

Step 3: Scan the barcode of "Save user default settings".

Step 4: Scan the barcode of "Close setup code".

Sound

All Sounds

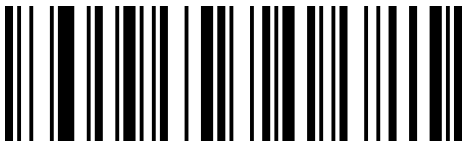
WaZaCb

On**

WaZaSa

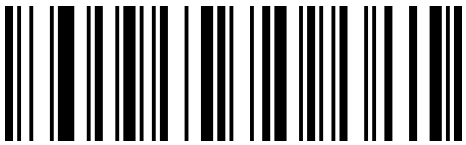
Off

Power-on Sound



RaOdNa

On**



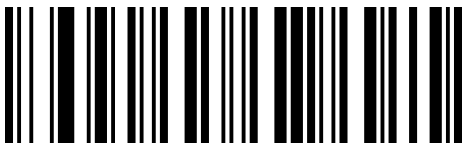
RaOdXa

Off

Setup Code Sound

WaZaZa

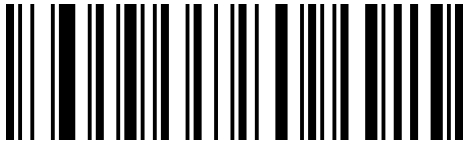
On**



WaZaPa

Off

Sound of Scanning Normal Barcode



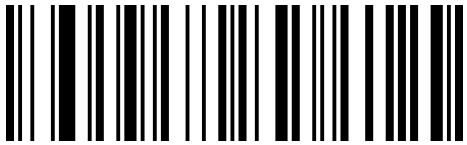
RaDeXa

On**

RaDeNa

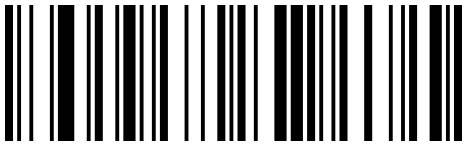
Off

Duration of Scanning Normal Barcode Sound



RaCeZa

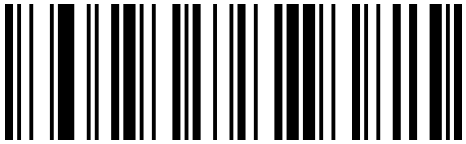
Short



RaCePa

Normal*

Frequency of Sound



LbDeUb

Low frequency 1.6KHZ

LbDeEc

Low-medium frequency 2.0KHZ**

LbDeAb

Medium frequency 2.7KHZ

LbDeKb

High frequency 4.2KHZ

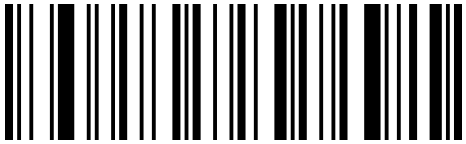
Volume of Sound

BbDePb

Off

BbDeFb

Low



BbDeVa

Medium

BbDeLa

High*

Warning of Error Scanning

GbZaNa

Low frequency 2.5KHZ**

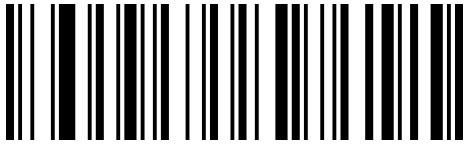
GbZaXa

Medium frequency 3.25KHZ

GbZaHb

High frequency 4.2KHZ

Indicator Light of Scanning Barcode



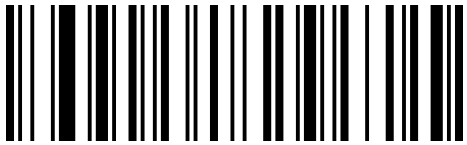
RaBeYa

On**

RaBeOa

Off

The Light State



WaAbRa

Working: On

Standby: Off**

WaAbBb

Working: Off

Standby: On

Light

Illumination Light

It is used for auxiliary lighting.

GbWaHb

On*

GbWaNa

Off

Aiming Light

GbWaZa

On**

GbWaPa

Off

GbWaJb

Continuous

GbWaTb

Flashing

Low-Power Mode

WaQbWa

On

WaQbMa

Off**

Data Format

Data Output Format

The default is Codepage mode.

GbBbVa

Codepage Mode (Notepad，Excel) **

GbBbFb

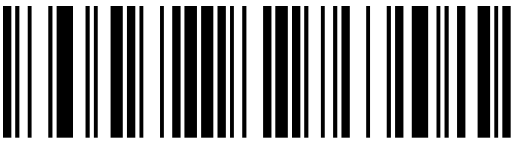
Unicode Mode (WORD，QQ)

GbBbPb

UTF-8 Mode

GbBbLa

Original Data



OdPbYac

European signal byte character

Text Output in Different Countries

After setting the data output format, you need to determine the language system and barcode encoding format currently used by the user's PC, and then scan the following corresponding configuration codes according to the PC's language system and barcode encoding format. The default is the PC system language is CH, UTF8\GB2312 encoding.

PC system language is CH

UTF-8/GB2312 encoding**

0dPbLa

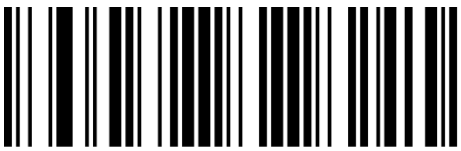
PC system language is CH

BIG 5 encoding

0dPbIbc

PC system language is BIG 5

BIG 5 encoding



0dPbPb

PC system language is CH

Shift-JIS encoding

0dPbJbc

PC system language is JP

Shift-JIS encoding

0dPbVa

PC system language is Korean

CP949 encoding

0dPbFb

PC system language is Thai

CP874 encoding

0dPbGbc

PC system language is Russia

KOI8-R encoding

0dPbHbc

Invoice Function

WaBbXa

On

WaBbNa

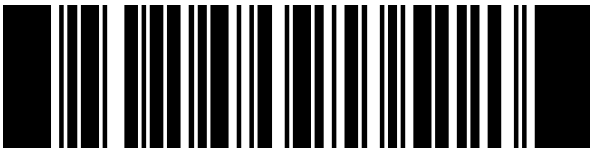
Off**

Image Recognition Settings

Inverse Setting 1

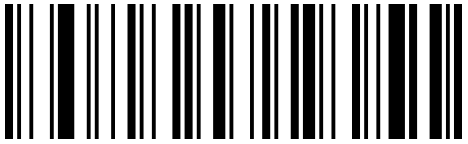
Normal barcode: dark barcode with light background.

Inverted barcode: light barcode with dark background.



CbQdRa

Normal Only*



CbQdLb

Inverse Only

CbQdBb

Normal + Inverse

Note:

In order not to degrade scan performance, Inverse Only and Normal + Inverse will only apply to UPC-A/ UPC-E0/ UPC-E1/ EAN-8/ EAN-13. If you wish to read other inverse barcodes, refer to Inverse Barcode Setting 2.

Inverse Barcode Setting 2

PdZdQbc

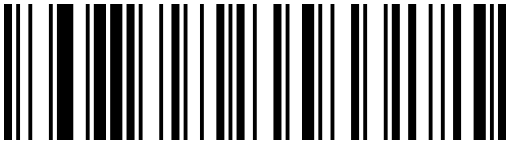
All 1D Symbologies Inverse On

PdAeQbc

All 1D Symbologies Inverse Off*

PdBeQbc

All 2D Symbologies Inverse On

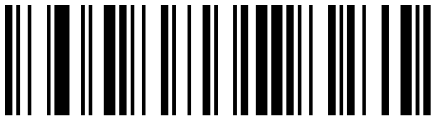


PdCeQbc

All 2D Symbologies Inverse Off*

Central Area

Full Area**



Central Area

Various Central Area

40% Central Area

50% Central Area

60% Central Area**

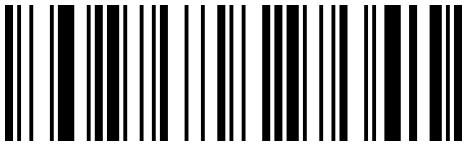
80% Central Area

Prompt for Unsuccessful Reading

The NR (NO READ) message will be sent when the barcode is not read. Any feasible prefix or suffix can be attached to this message.

SaCbCb

On

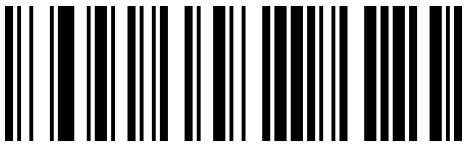


SaCbSa

Off*

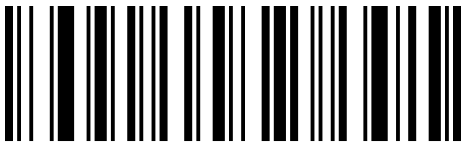
QR URL Code

Scan the setup code below to turn on or off the QR code generated by the URL.



WaQbPa

On*



WaQbZa

Off

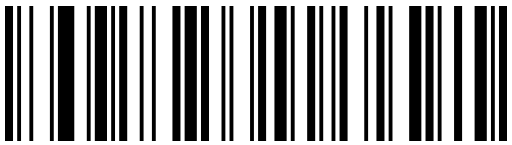
Chapter 2 Communication Settings

Introduction

When using this scanner to communicate with different hosts, you need to set the scanner to the corresponding communication interface mode. You can set the functions of scanner by scanning one or more setup barcodes. You can choose to use USB (USB-KBW, USB-COM, and USB-HID), TTL and RS232 serial communication interface modes, etc.

USB Keyboard Interface

The default is USB-KBW communication. It will simulate USB keyboard input mode without installing driver.

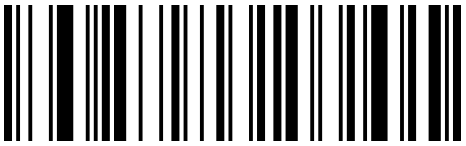


VbZcWag

USB-KBW**

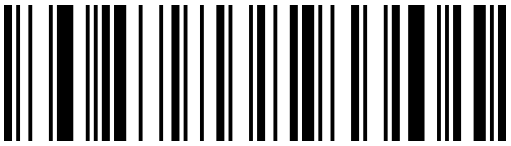
National Keyboard Layout

The keyboard layout setting is applicable to the USB-KBW interface mode and the default is "American English keyboard".



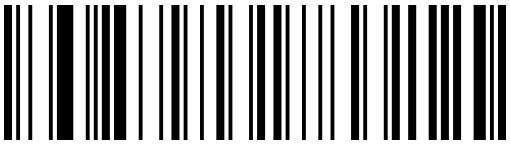
JdCcTc

American English*



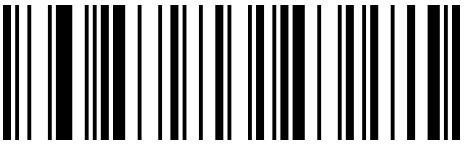
JdCcLbc

Greece (Greek)



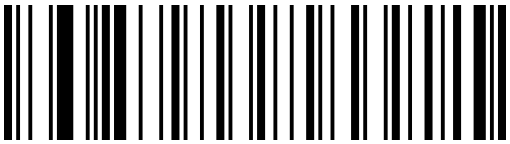
JdCcGbc

Netherlands (Dutch)



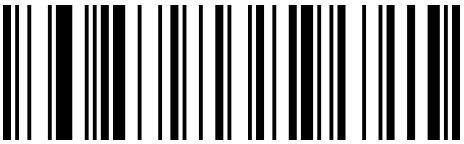
JdCcJc

Spain (Spanish Language)



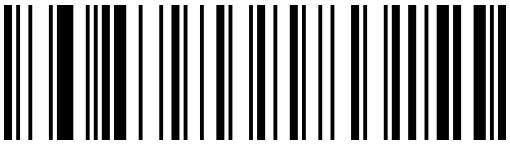
JdCcCbc

Switzerland (German)



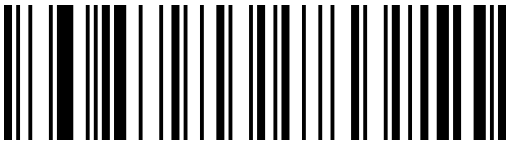
JdCcLa

Brazil (Portuguese)



JdCcEbc

Denmark

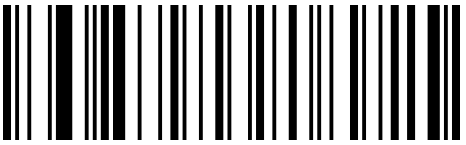


JdCcDbc

England (British English)

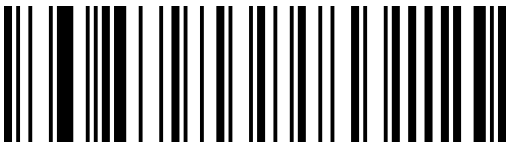
JdCcZb

Italy (Italian)



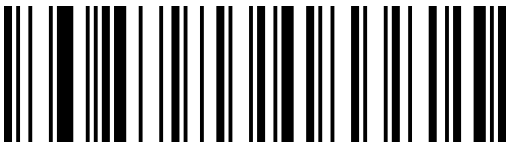
JdCcFb

France (French)



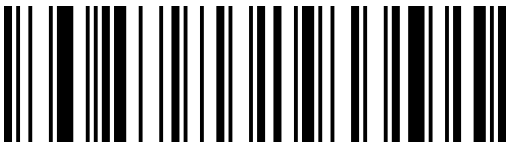
JdCcBbc

Germany (German)



JdCcNbc

Hungary

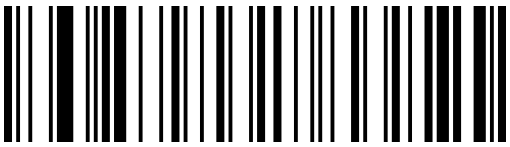


JdCcRbc

Sweden (Swedish)

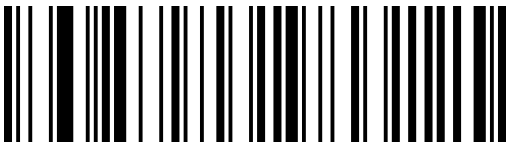
JdCcQbc

Slovak



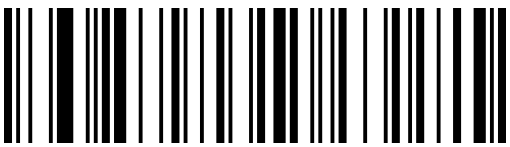
JdCcIbc

Portugal (Portuguese)



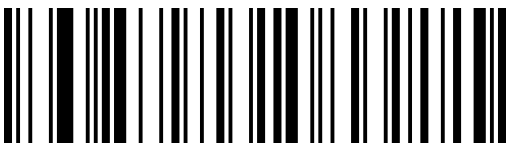
JdCcSbc

Romania



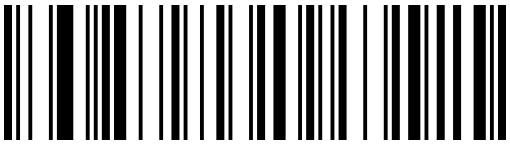
JdCcWqc

Belgium (French)



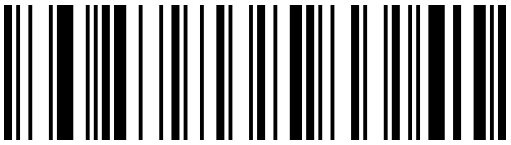
JdCcTbc

Turkish-F



JdCcXac

Turkish-Q

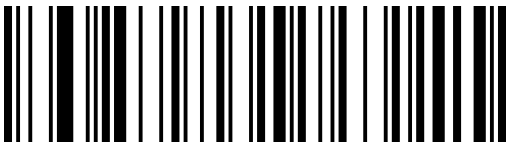


JdCcObc

Poland (Polish)

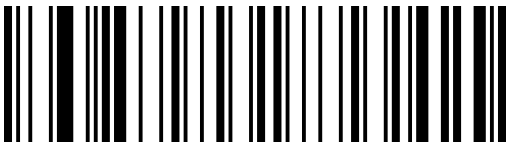
JdCcQdc

Russia (Russian MS)



JdCcVac

Japan (Japanese)



JdCcGdc

Ukraine

Output Mode of Control Character

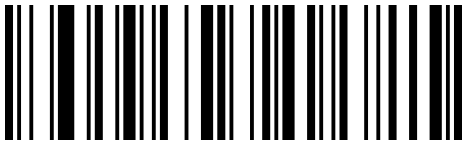
Output mode selection of control character (0x00-0x1F) in ASCII code:

Output function key: control characters are used as custom function keys. See "Appendix-Control Character List" for specific functions.

Output Ctrl combination key (this function is used with prefixes and suffixes): Ctrl combination key outputs control characters. See "Appendix-Control Character List" for specific functions.

ALT mode output control characters: support full control character output in Chinese environment. See "Appendix-ASCII code table" for specific functions.

Output Enter & DownArrow: shield other control characters, only output: 0x07 output Enter, 0x0A output DownArrow, and 0x0D output Enter.



QbBbQa

Output function key*

QbBbAb

Output Ctrl combination key (Escape 1)

QbBbEc

Output Ctrl combination key (Escape 2)

QbBbKb

ALT mode output control characters

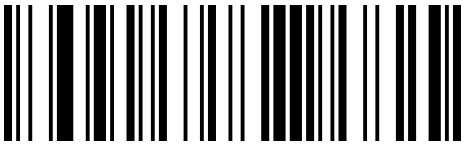
QbBbUb

Output Enter & DownArrow

Output Method of Virtual Keyboard

Output mode of control character (0x20-0xFF) in ASCII code:

When the virtual keyboard is turned on, all characters between 0x20 and 0xFF will be output with virtual keyboard.



WaBbPa

Turn off virtual keyboard*

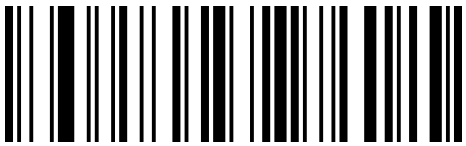
WaBbZa

Turn on virtual keyboard

Case Conversion

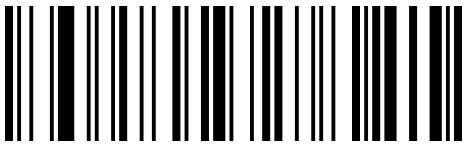
BbLdOa

Conversion Off*



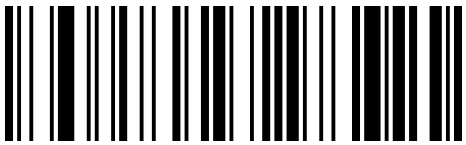
BbLdYa

All Upper



BbLdIb

All Lower



BbLdSb

Inverse

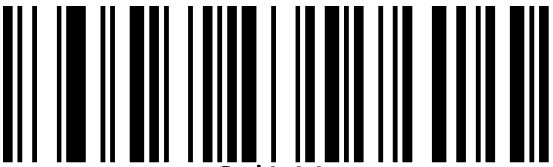
USB Transmission Speed

OdJcVac

Normal*

OdJcJc

Fast

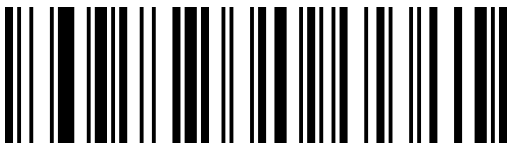


OdJcVa

Very Fast

USB-COM Virtual Serial Port (CDC)

When the scanner uses a USB connection, and at the same time you want the host to receive data through a serial port, you should use the USB virtual serial port. From the perspective of the host system interface, the scanner is connecting to the host through a serial port. This feature requires the corresponding driver to be installed on the host.

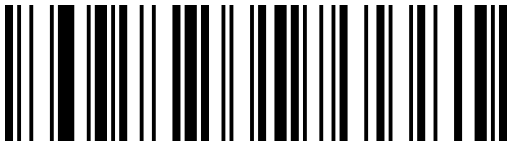


VbZcXag

USB-COM

USB HID-POS

The USB HID-POS interface is recommended for new application software. It can send 56 characters in a single USB message, and it is faster than the analog keyboard interface. You need to restart the scanner after setting the HID-POS.
Features:
#Based on HID interface, no driver is required.
#Support two-way communication.
#The communication speed is much faster than the analog keyboard interface and the traditional RS-232 interface.



VbZcYag

HID-POS

PID(HEX): B4B1
VID(HEX): 0525

HID-POS Message Format

The scanner will send message after scanning successfully.

	Bit							
Byte	7	6	5	4	3	2	1	0
0	message ID = 0x02							
1	Length of barcode data							
2	]							
3	AIM ID first character							
4	AIM ID second character							
5-60	Barcode data (1-56)							
61	Code ID							
62	reserve : 0x00							
63	-	-	-	-	-	-	-	0 : data has been sent 1 : data has not been sent

TTL/RS232 Serial Port Interface

Serial communication interface is a common way to connect scanners and host devices. It can be used to connect host devices such as PC and POS machines. When the scanner uses the serial communication interface, the serial communication protocol parameter configuration must be completely matched between the scanner and the host device to ensure the accuracy of the transmitted data.

Default communication protocol of serial port interface: baud rate 9600, no check character.

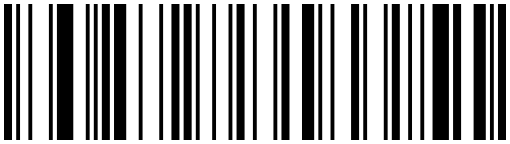
VbZcNc

TTL/RS232

Parameter	Default
Serial Communication Type	Standard TTL/RS232
Baud Rate	9600
Parity Type	None
Data Bits	8
Stop Bits	1

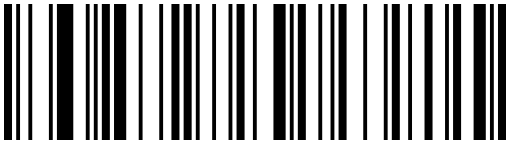
Serial Port Transmission Speed (Delay between Characters)

This parameter is used to adjust the delay time between the barcode characters of the scanner. When the input host needs slower data transmission, scan the corresponding barcode below to increase the inter-character delay, which can adjust the transmission speed to improve the safety and integrity of the data output.



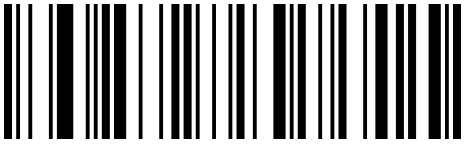
JdGeKbc

Low transmission speed: 25ms



JdGeVac

Medium transmission speed: 10ms



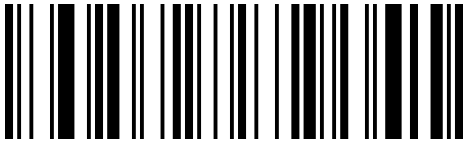
JdGeVa

High transmission speed: 1ms*

Default = 1ms

Range: 0-255ms

Please refer to "Appendix-Customized Parameter Example" for setting steps.

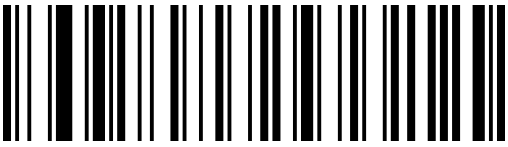


TdGeLa

Delay time between custom characters

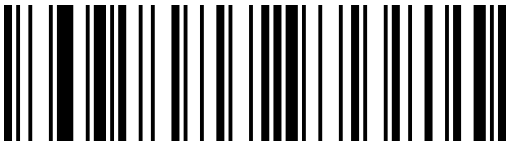
Baud Rate

The baud rate is the number of bits transmitted per second in serial data communication. The baud rate used by the scanner and the data receiving host must be consistent to ensure the accuracy of data transmission. The scanner supports the baud rates listed below in bit/s.



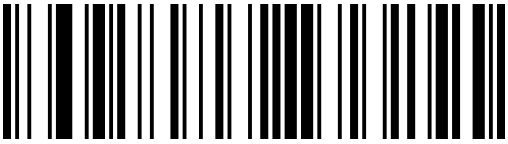
VbCdRdc

4800bps



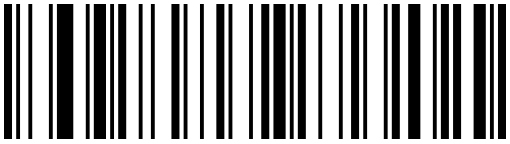
VbCdSdc

9600bps**



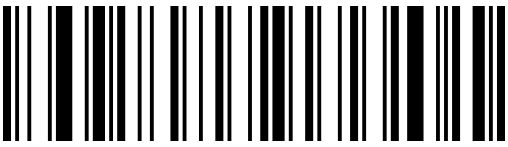
VbCdUdc

19200bps



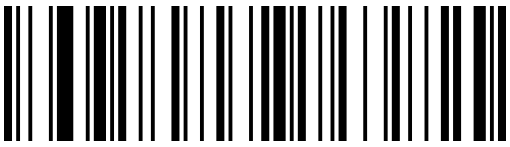
VbCdVdc

38400bps



VbCdWdc

57600bps



VbCdVac

115200bps

Chapter 3 Scanning Mode

Manual

You can set the scanning mode of the scanner according to your needs. The default scanning mode is manual scanning. In this mode, the scanner starts to scan the code after pressing the trigger button. It will stop after the code is scanned successfully or the trigger button is released.

The default scanning mode is "Manual".

VbBeJb

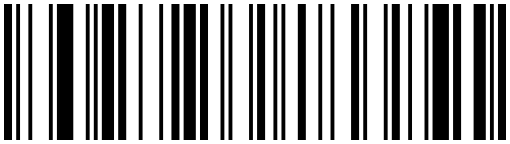
Manual*

Manual - Trigger Timeout

When timeout is reached, the scanner stops scanning and waits for another trigger press.

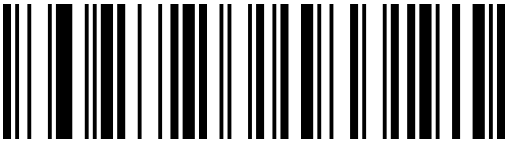
UaZcCb

Infinite



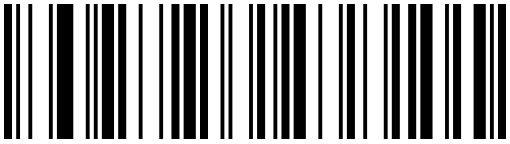
MdZcAbc

3s*



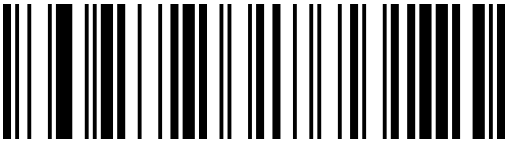
MdZcKbc

5s



MdZcJcc

10s



MdZcIdc

15s

MdZcVaHa

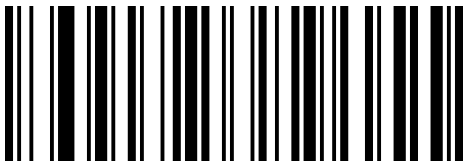
20s

Manual - Custom Trigger Timeout

Custom reigger timeout is used to set a custom trigger timeout time.

Default: 3s; Tolerance: 200ms; Range: 0-50s.

Please refer to "Appendix-Customized Parameter Example" for setting steps.



WdZcLa

Custom Trigger timeout

Continuous

After setting, the scanner will be in continuous scanning state without triggering and the scanning engine starts to scan the code immediately. When the scanning is successful or the single scanning time is over, the scanning engine will wait for a period of time (settable) and it will start next scanning automatically.

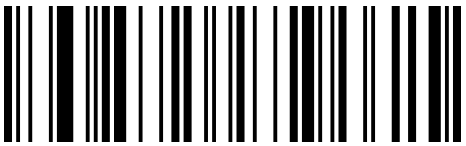
If the following conditions do not occur, the scanning engine will work in cycles as described above: during the code scanning process, the user can also click the trigger button to manually pause the code scanning. The scanning engine will scan the code cyclically with clicking the trigger button.

VbBeZa

Continuous

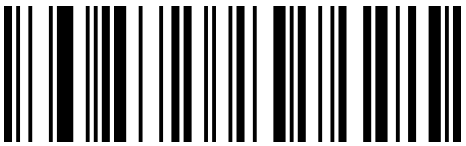
Continuous - Same Barcode Scanning Delay

Default: 800MS, continuous scanning mode only.



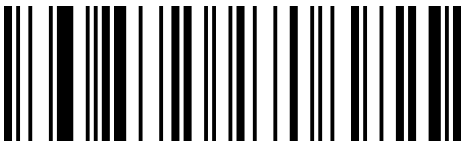
JdHeLa

No delay



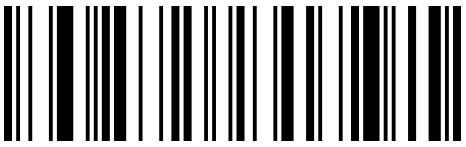
JdHeVa

Delay 100MS



JdHeFb

Delay 200MS

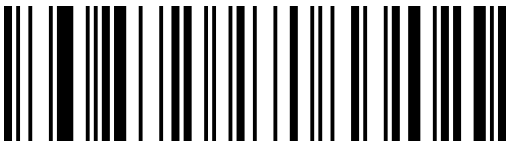


JdHeNd

Delay 800MS**

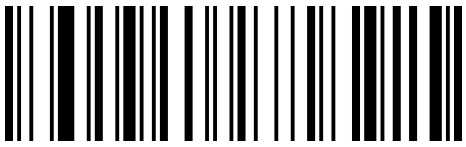
JdHeXac

Delay 1200MS



JdHeFbc

Delay 2000MS



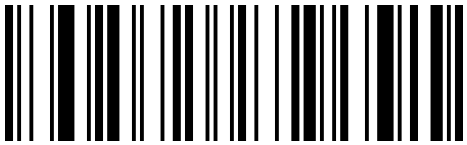
RaHeCb

No timeout

Continuous - Customize the Same Barcode Scanning Delay

Customize the same barcode scanning delay is used to set the timeout time of the customized same barcode scanning delay, default: 800ms, step length: 100ms, range: 0-25000ms.

For setting steps, please refer to "Appendix-Customized Parameter Example"



TdHeLa

Customize the same barcode scanning delay

Induction

VbBePa

Induction

Note:

When using induction scanning mode, the key can be triggered. The scanner will enter induction scanning mode automatically when the key trigger timeout.

Induction - Image Stabilization Time

In the induction mode, when the scanner stops scanning the barcode, it will enter a process of re-adapting to the changes in the scanning environment (image). After the image is stabilized, it will enter the induction state and wait for the barcode to appear. By modifying the image stabilization timeout, the time to adapt to the environment can be adjusted.

OdCbVa

50ms

OdCbFb

100ms

OdCbPb

150ms

OdCbZb

200ms

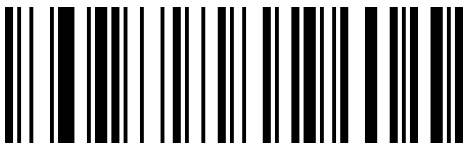
OdCbJc

250ms**

Induction - Customized Image Stabilization Time

Default: 250ms, step length: 50ms, range: 0-25000ms.

For setting steps, please refer to "Appendix-Customized Parameter Example".

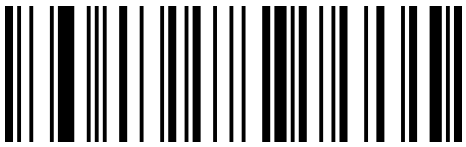


YdCbLa

Customize the same barcode scanning delay

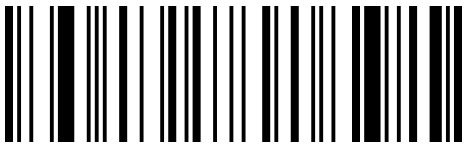
Induction - Sensitivity

Sensitivity refers to the degree of change in the detection scene in the induction scanning mode. When the scanning module judges that the degree of scene change meets the requirements, it will switch from the monitoring state to the scanning state.



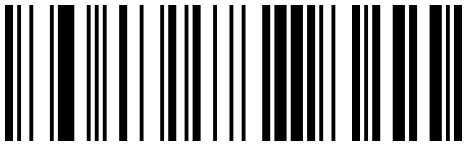
AcDbVa

High**



AcDbFb

Medium



AcDbPb

Low

Chapter 4 Data Editing

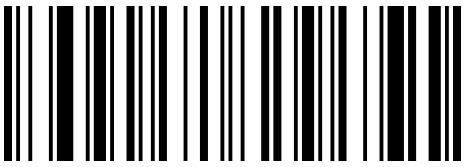
Introduction

Data editing format:

<Start characters><Custom prefix><AIM ID><Code ID><Barcode data><Custom suffix><Terminator>

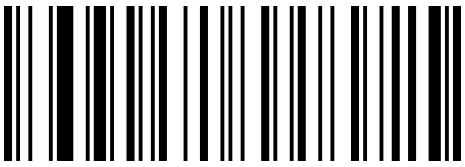
Code ID Prefix

The default is "Off"



WaFbRa

Off**



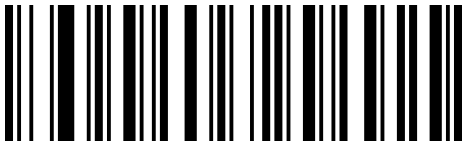
WaFbBb

On

AIM ID Prefix

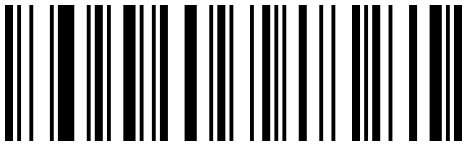
AIM means Automatic Identification Manufacturers.

Please refer to "Appendix-Code ID & AIM ID" for the barcode type corresponding to AIMID



QaXdQa

Off**



QaXdAb

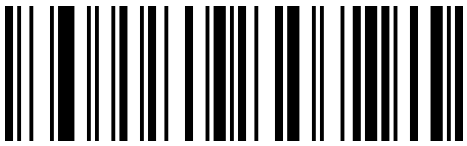
On

Custom Prefix

Setting for Custom Prefix

Add up to 10 characters for the custom prefix.

For setting steps, please refer to "Appendix-Customized Parameter Example"

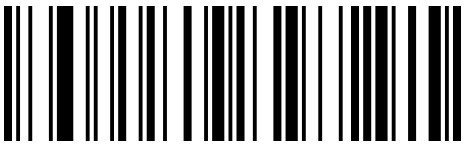


BeReTd

Set custom prefix

Clear Custom Prefix

Scan the "Clear custom prefix" barcode to clear all custom prefix characters.



BeReSd

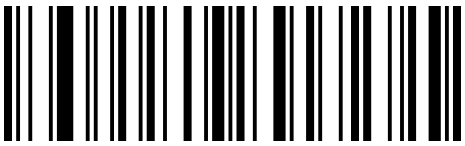
Clear custom prefix

Custom Suffix

Setting for Custom Suffix

Add up to 10 characters for the custom suffix.

For setting steps, please refer to "Appendix-Customized Parameter Example"

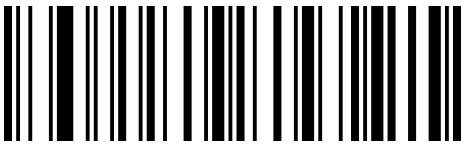


BeReWd

Set custom suffix

Clear Custom Suffix

Scan the "Clear custom suffix" barcode to clear all set custom suffix characters.



BeReRd

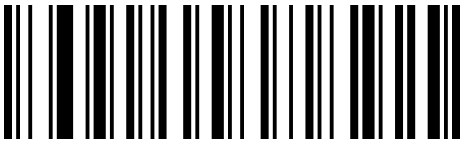
Clear custom suffix

Hide Characters

The function of hiding characters can realize the function of displaying only a certain segment of data by controlling different fields of the barcode content to achieve the function of hiding the data.

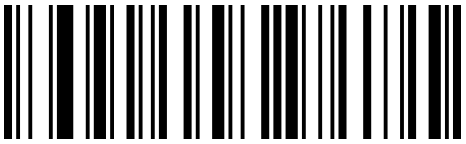
First, we divide a barcode data into three groups of head, middle, and tail data, and then set the length of the head, middle, and tail according to actual needs. Finally, set the fields that need to be displayed according to actual needs.

Hide Leading Characters



WaQbCb

Hide leading characters: On

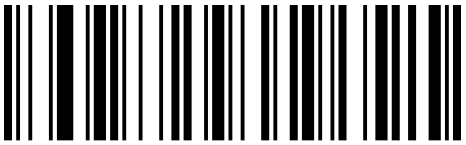


WaQbSa

Hide leading characters: Off**

Hidden Numbers of Leading Character

The range is 1-255. For setting steps, please refer to "Appendix-Customized Parameter Example"



YdRbLa

Hidden Numbers of Leading Character

Hide Middle Characters

WaQbBb

Hide middle characters: On

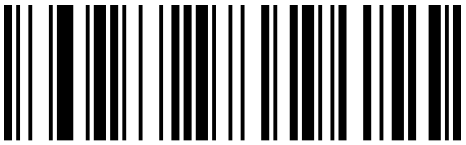
WaQbRa

Hide middle characters: Off**

Initial Position of Hidden Middle Characters

If you want to hide the data after the third character (the position is 4th), the decimal value of the digital setup code is: "0", "0", "3".

For setting steps, please refer to "Appendix-Customized Parameter Example".

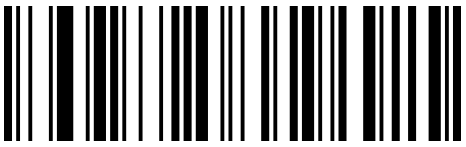


YdSbLa

Initial Position of Hidden Middle Characters

Hidden Numbers of Middle Character

The range is 1-255. If you need to hide 16 characters, the decimal value of the number setup code is: "0", "1", "6". For setting steps, please refer to "Set Digital Code".



YdTbLa

Hidden Numbers of Middle character

Hide Trailing Characters

WaQbAb

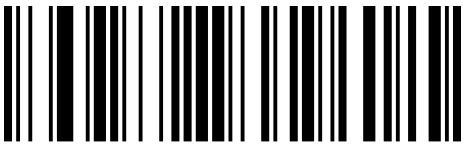
Hide trailing characters: On

WaQbQa

Hide trailing characters: Off**

Hidden Numbers of Trailing Character

The range is 1-255. For setting steps, please refer to "Appendix-Customized Parameter Example".

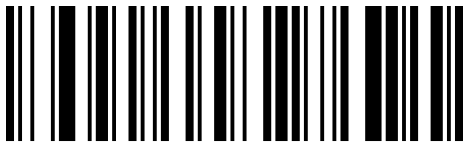


YdUbLa

Hidden Numbers of Trailing Character

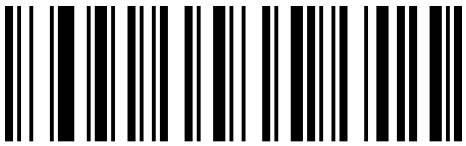
Insert Custom Character

It supports inserting custom character at any position of the barcode, up to 10 bytes.



WaQbYb

Display custom characters: On

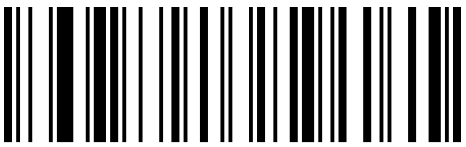


WaQbOa

Display custom characters: Off**

Insertion Position of Custom Character

If the position where the characters need to be inserted is 16 characters, the decimal value of the number setup code is: 0, 1, 6. For the setting steps, please refer to "Setting the Digital Code".

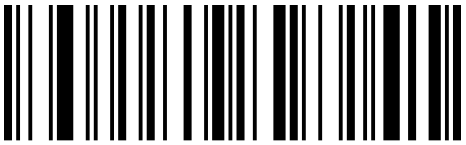


YdFcLa

Insertion Position of Custom Character

Custom Character to Insert

Set and insert custom characters, scan the custom characters to be set, the setting steps are similar to the custom prefixes and suffixes, please refer to "Appendix-Examples of custom parameters"



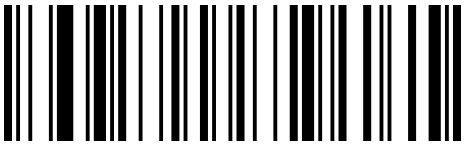
BeReYc

Custom Character to Insert

Character Replacement

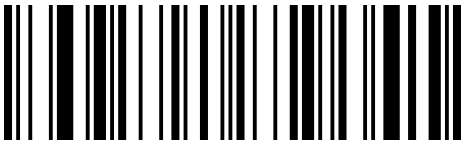
The character replacement function supports replacing any character (character being replaced) appearing in the barcode with another character that needs to be displayed.

For setting steps, please refer to "Appendix-Customized Parameter Example".



VdEeLa

Character to be replaced



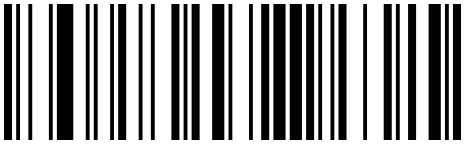
VdFeLa

Replacement character

Note: If you need to clear the replacement character, set the "character to be replaced" to NULL, that is, the decimal is "000".

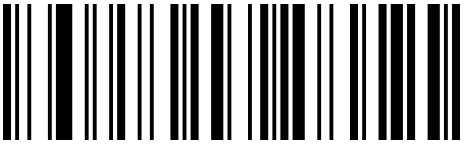
Start Character STX and End Character ETX

The start character and the end character are used to mark the begain or end of a complete data message. The start character/stop character must be the first/last content of a piece of data when it is sent, and there will be no data before it. Default is no start character, no end character.



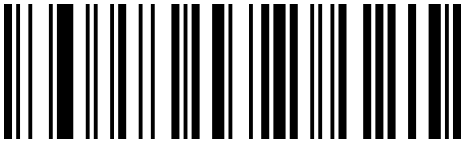
BbKdPa

No start and end characters **



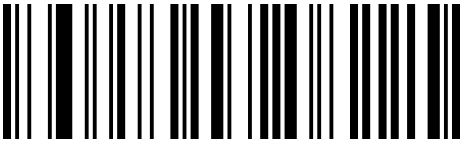
BbKdJb

Start character is <STX>



BbKdZa

End character is <ETX>

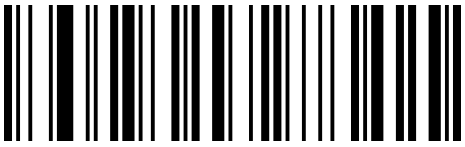


BbKdTb

Start and end characters are <STX+ETX>

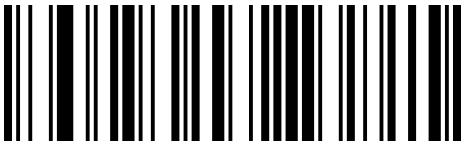
Terminator

The terminator is used to mark the end of a complete data message. The terminator must be the last content when a piece of data is sent, and there will be no additional data after that.



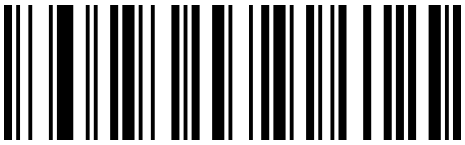
LbKdGb

<CR>(0x0D)**



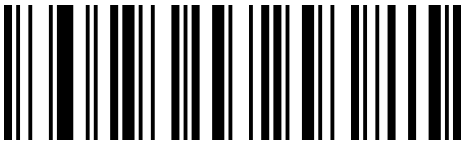
LbKdUc

<LF>(0x0A)



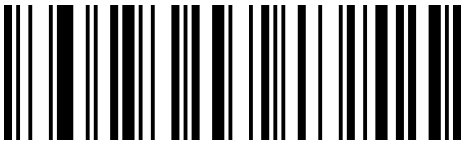
LbKdWa

<CR><LF>(0x0D,0x0A)



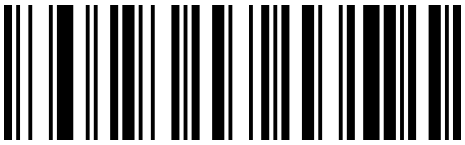
LbKdQb

<HT>(0x09)



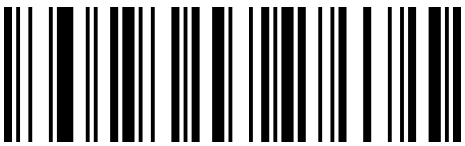
LbKdAc

<CR><CR>(0x0D,0x0D)



LbKdKc

<CR><LF><CR><LF>(0x0D ,0x0A, 0x0D ,0x0A)



LbKdMa

NONE

Chapter 5 Barcode Parameter Setting

Introduction

Each type of barcode has its own unique attributes, and the scanner can be adjusted to adapt to these attribute changes through the setup codes in this chapter. The scanning speed will be faster with fewer barcode types are turned on. You can turn off the barcode types which are not necessary to improve the working performance.

Global Setting

GbYaXa

All barcode types: On

GbYaHb

All barcod types: Off

GbYaZa

1D barcode: On

GbYaJb

1D barcode: Off

GbYaBb

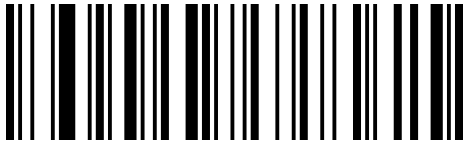
2D barcode: On

GbYaLb

2D barcode: Off

Note: The setup code will not be closed when closing all barcodes.

UPC-A



QaYaBb

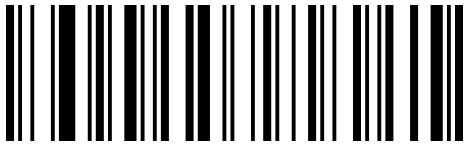
On**

QaYaRa

Off

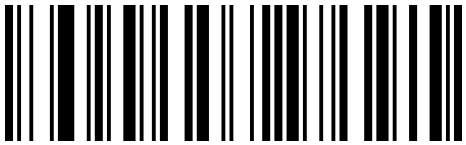
Transmit Check Character

The UPC-A barcode data is fixed to 12 characters, and the 12th digit is the check character, which is used to verify the correctness of all 12 characters. The default is transmitting check character.



QaTdCb

On**

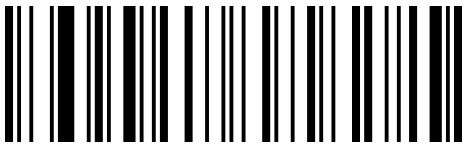


QaTdSa

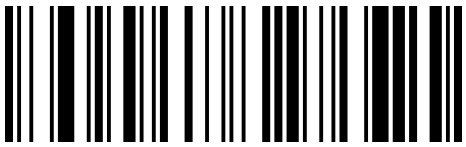
Off

2/5 Additional Digits

Additional digits refer to the 2 or 5 digital barcodes appended to the normal barcode, as shown in the figure below. The blue wire frame on the left is the normal barcode, and the red wire frame on the right is the additional digit. The default is closing the additional digits.



QaIbCb
2 additional digits: On



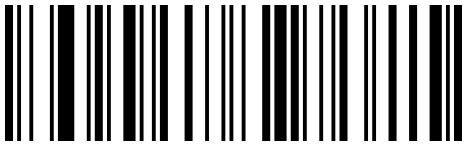
QaIbSa
2 additional digits: Off**

QaIbBb
5 additional digits: On

QaIbRa
5 additional digits: Off**

Mandatory Additional Digits

When scanning "mandatory additional digits", the scanner can only read barcodes with additional digits.



QaIbYa
On

QaIbOa
Off**

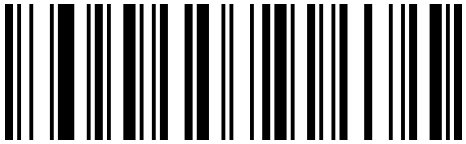
Additional Digit Separator

When this feature is enabled, there is a space between the barcode data and the additional data. When this feature is disabled, there are no spaces. Default is On.

QaIbXa
On**

QaIbNa
Off

Transmit System Character



QaTdWa

On**

QaTdMa

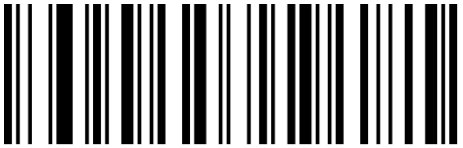
Off

Convert to EAN-13

The default is no conversion.

QaTdVa

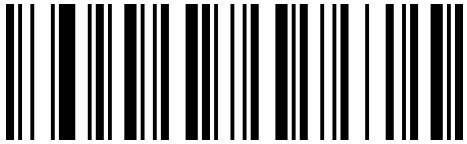
On



QaTdLa

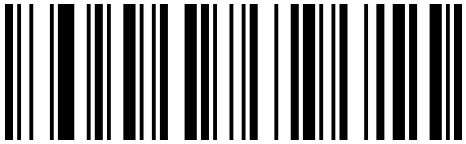
Off**

UPC-E



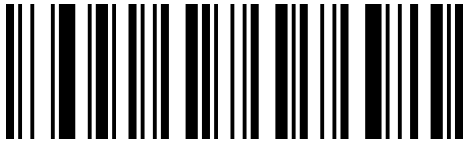
QaYaVa

UPC-E0: On**



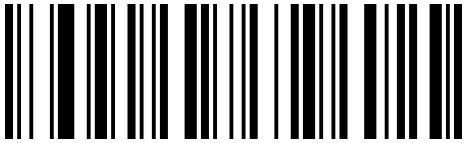
QaYaLa

UPC-E0: Off



WaYaVa

UPC-E1: On

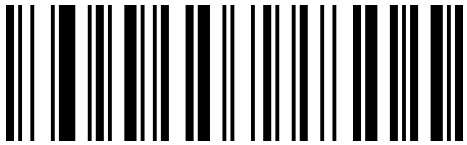


WaYaLa

UPC-E1: Off**

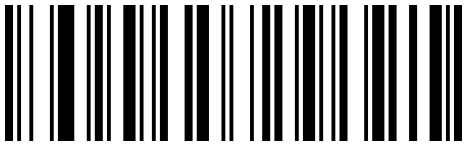
Transmit Check Character

The UPC-E barcode data is fixed to 8 characters, and the 8th digit is the check character, which is used to verify the correctness of all 8 characters. The default is to transmit the check character.



QaTdBb

On**

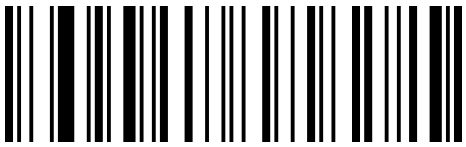


QaTdRa

Off

2/5 Additional Digits

Additional digits refer to the 2 or 5 digital barcodes appended to the normal barcode, as shown in the figure below. The blue wire frame on the left is the normal barcode, and the red wire frame on the right is the additional digit. The default is closing the additional digits.

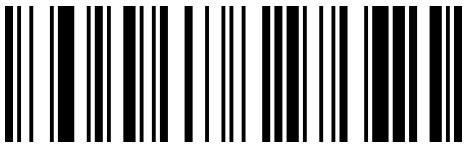


QaIbCb

2 additional digits: On

QaIbBb

5 additional digits: On



QaIbSa

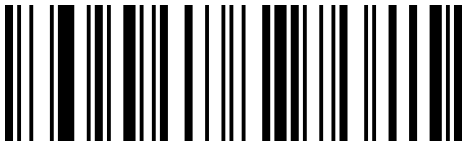
2 additional digits: Off**

QaIbRa

5 additional digits: Off**

Mandatory Additional Digits

When scanning "mandatory additional digits", the scanner can only read barcodes with additional digits.



QaIbYa

On

QaIbOa

Off**

Additional Digit Separator

When this feature is enabled, there is a space between the barcode data and the additional data. When this feature is disabled, there are no spaces. Default is On.

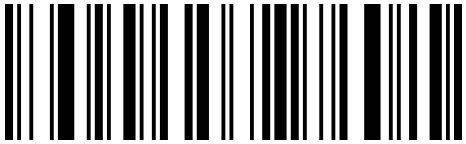
QaIbXa

On**

QaIbNa

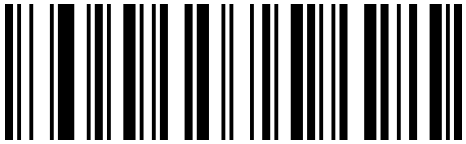
Off

Transmit System Character



QaTdYa

On**

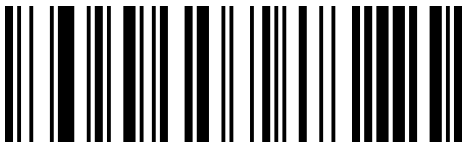


QaTdOa

Off

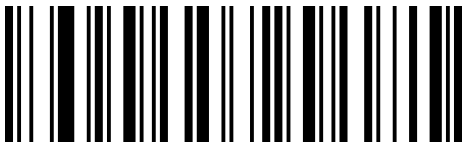
Convert to UPC-A

The default is not to convert.



QaTdAb

On



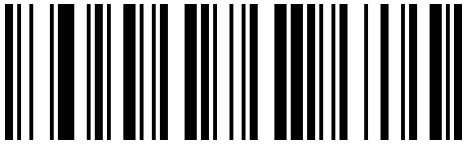
QaTdQa

Off**

EAN/JAN 8

QaYaZa

On**

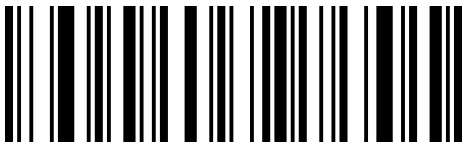


QaYaPa

Off

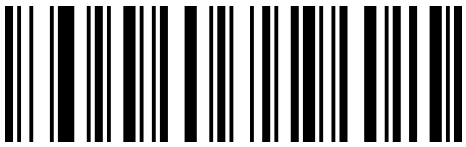
Transmit Check Character

EAN/JAN 8 barcode data is fixed to 8 characters, the 8th digit is the check character, used to verify the correctness of all 8 characters, the default is transmit the check character.



QaXdVa

On**

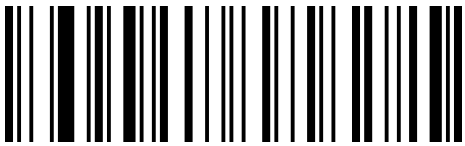


QaXdLa

Off

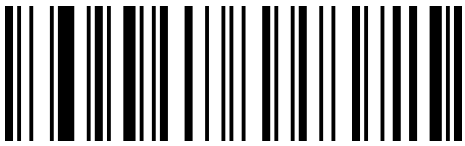
2/5 Additional Digits

Additional digits refer to the 2 or 5 digital barcodes appended to the normal barcode, as shown in the figure below. The blue wire frame on the left is the normal barcode, and the red wire frame on the right is the additional digit. The default is closing the additional digits.



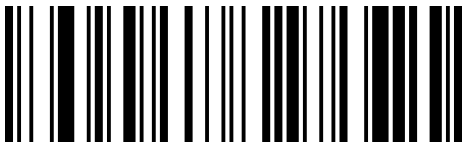
QaIbCb

2 additional digits: On



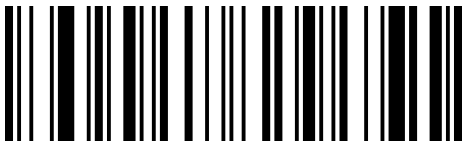
QaIbBb

5 additional digits: On



QaIbSa

2 additional digits: Off**

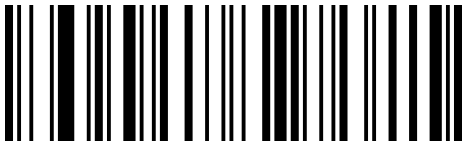


QaIbRa

5 additional digits: Off**

Mandatory Additional Digits

When scanning "mandatory additional digits", the scanner can only read barcodes with additional digits.



QaIbYa

On

QaIbOa

Off**

Additional Digit Separator

When this feature is enabled, there is a space between the barcode data and the additional data. When this feature is disabled, there are no spaces. Default is On.

QaIbXa

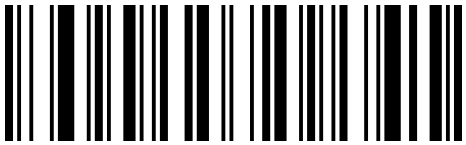
On**

QaIbNa

Off

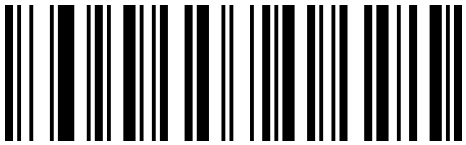
Convert to EAN13

The EAN 8 barcode type supports conversion settings. After the extension is turned on, the barcode information is converted to 13 digits, and the type is converted to EAN13. The default is not to convert.



QaTdXa

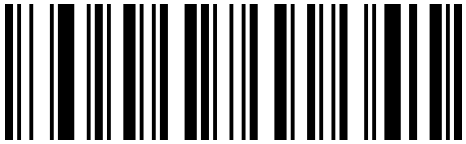
On



QaTdNa

Off**

EAN/JAN 13



QaYaWa

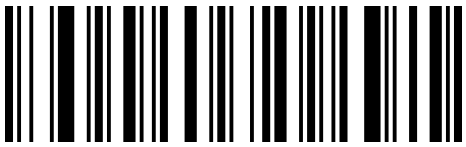
On**

QaYaMa

Off

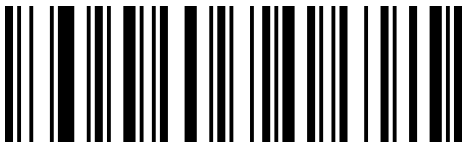
Transmit Check Character

EAN/JAN 13 barcode data is fixed to 13 characters, the 13th digit is the check character, used to verify the correctness of all 12 characters, the default is transmit check character.



QaXdXa

On**

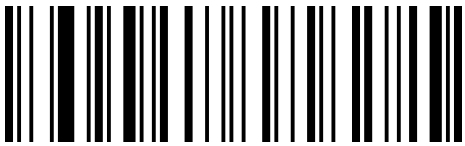


QaXdNa

Off

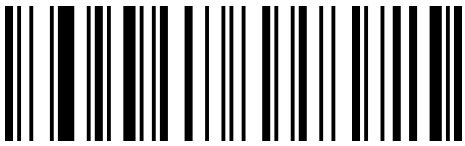
2/5 Additional Digits

Additional digits refer to the 2 or 5 digital barcodes appended to the normal barcode, as shown in the figure below. The blue wire frame on the left is the normal barcode, and the red wire frame on the right is the additional digit. The default is closing the additional digits.



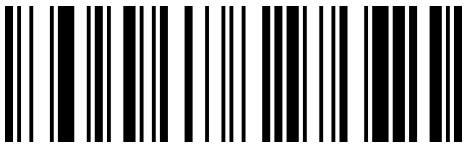
QaIbCb

2 additional digits: On



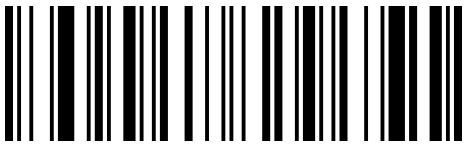
QaIbBb

5 additional digits: On



QaIbSa

2 additional digits: Off**

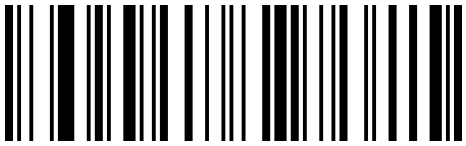


QaIbRa

5 additional digits: Off**

Mandatory Additional Digits

When scanning "mandatory additional digits", the scanner can only read barcodes with additional digits.



QaIbYa

On

QaIbOa

Off**

Additional Digit Separator

When this feature is enabled, there is a space between the barcode data and the additional data. When this feature is disabled, there are no spaces. Default is On.

QaIbXa

On**

QaIbNa

Off

Convert to ISBN

QaJbCb

On

QaJbSa

Off**

Transmit ISBN Check Character

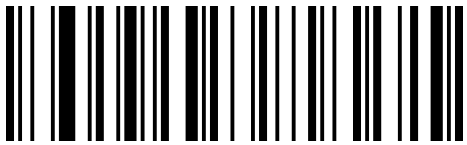
QaJbAb

On

QaJbQa

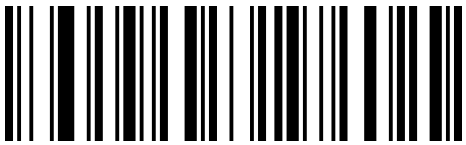
Off**

Convert to ISSN



RaVcCb

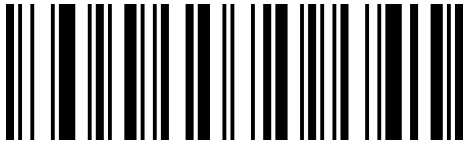
On



RaVcSa

Off**

ISSN



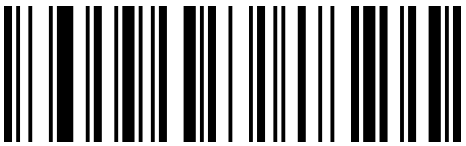
QaTdXa

On

QaTdNa

Off**

Transmit ISSN Check Character



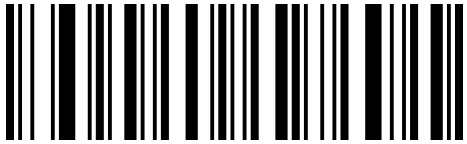
RaVcAb

On

RaVcQa

Off**

Code 128



QaXaYa

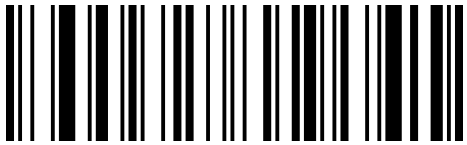
On**

QaXaOa

Off

Number of Recognized Characters

The default number of Code128 is 0-80, and the scanner can be configured to only scan Code 128 barcodes whose number is between (including) the minimum number (0-80) and the maximum number (0-80).



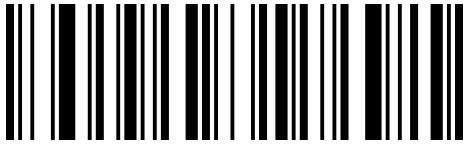
XdIbLa

Minimum

XdJbLa

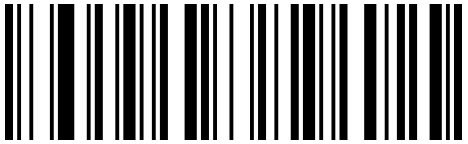
Maximum

GS1-128(UCC/EAN 128)



RaYcVa

On**

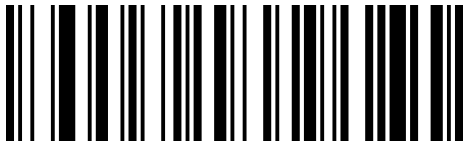


RaYcLa

Off

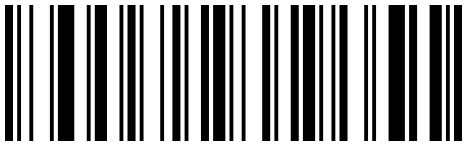
Number of Recognized Characters

The default number is 0-80, and the scanner can be configured to only scan GS1-128 barcodes whose number is between (including) the minimum number (0-80) and the maximum number (0-80).



XdKbLa

Minimum

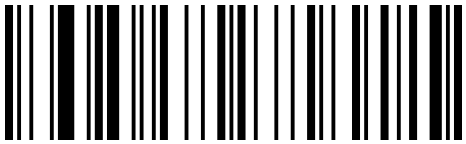


XdLbLa

Maximum

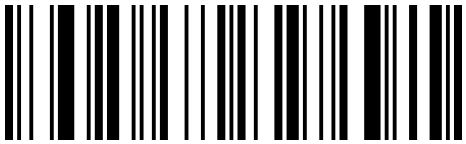
ISBT 128

ISBT 128 Connect Function



TaCeCb

On

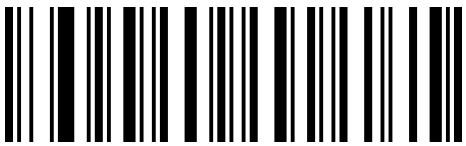


TaCeSa

Off**

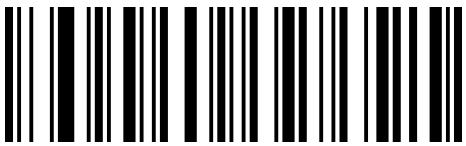
Note: ISBT 128 is a subcategory of Code128, which can be turned on or off through the Code128 setting. The ISBT128 connection function is used to set whether to scan ISBT barcodes with additional digits. When the setting is enabled, ISBT 128 with or without additional digits can be scanned.

Code 39



QaXaWa

On**



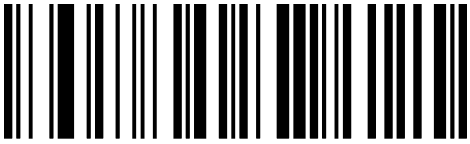
QaXaMa

Off

Check Character

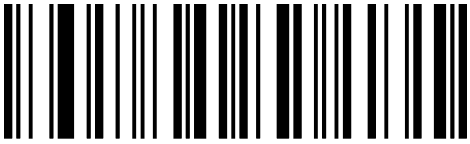
Code 39 barcode data is not mandatory to include a check character. If there is a check character, it is the last character of the data. The check character is a value calculated based on all data to check whether the data is correct.

The default is "No Check".



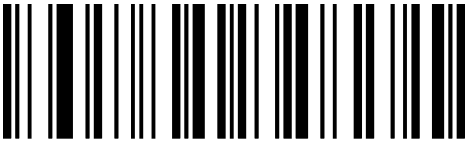
IbNePa

No Check**



IbNeZa

Check and Transmit

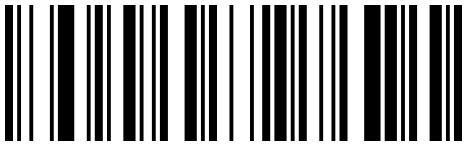


IbNeJb

Check but Not Transmit

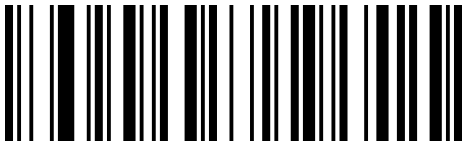
Start and End Characters

Code 39 barcode data has a character "*" before and after it is used as the start character and end character. You can set whether to transmit the start character and end character together with the barcode data after the barcode is successfully read.



QaVdVa

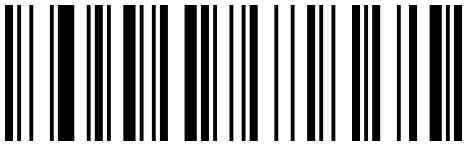
On



QaVdLa

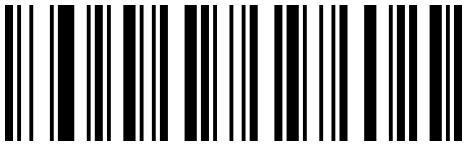
Off**

Full ASCII Characters



QaYaCb

On



QaYaSa

Off**

Number of Recognized Characters

The default number is 0-48, and the scanner can be configured to only scan Code 39 barcodes whose number is between (including) the minimum number (0-48) and the maximum number (0-48).

XdMbLa

Minimum

XdNbLa

Maximum

Code 32Pharmaceutical (PARAF)

Code 32 is also named Code 32 Pharmaceutical, is a form of Code 39 barcode used by Italian pharmacies. This barcode is also called PARAF.

The output format of Code 32 is: * + A + 8 digits + 1 check digit + *.

QaYaAb

On

QaYaQa

Off**

Transmit Check Character

WaYaWa

On**

WaYaMa

Off

Code 32 Add Prefix “A”

QaVdXa

On

QaVdNa

Off**

Code 32 Failed Scan

QaZaCb

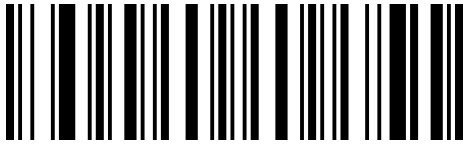
On**

QaZaSa

Off

Note: Code 32 Pharmaceutical barcode is a subcategory of Code 39. When Code 32 is not turned on, it is an error to scan the output of Code 32, that is, the default Code 32 failed to scan is turned on. When Code 32 is turned off and failed to scan, it will be under the circumstances, it is not allowed to scan the Code 32 barcode, and at this time, it is not allowed to scan the normal Code 39 barcode.

Code 93



QaXaXa

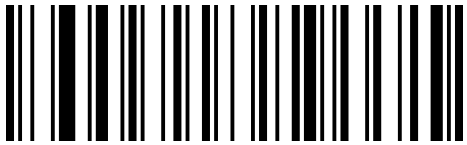
On**

QaXaNa

Off

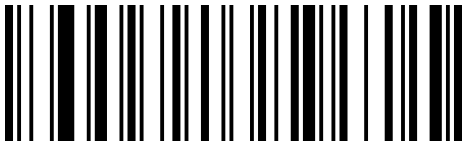
Number of Recognized Characters

The default number is 0-80, and the scanner can be configured to only scan Code 93 barcodes whose number is between (including) the minimum number (0-80) and the maximum number (0-80).



XdEcLa

Minimum



XdFcLa

Maximum

Code 11

QaWaYa

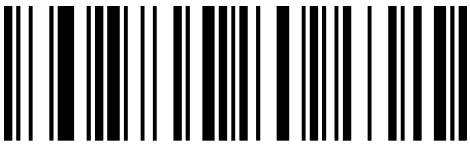
On

QaWaOa

Off**

Check Character

Code 11 barcode data has check characters, which can be the last 1 or 2 characters of the data. The check character is a value calculated based on all data to check whether the data is correct.



SbOeXa

1 check character, On

SbOeNa

2 check characters, On**

SbOeRb

1 check character, Off

SbOeHb

2 check characters, Off

Off

Number of Recognized Characters

The default number is 2-80, and the scanner can be configured to only scan Code 11 barcodes whose number is between (including) the minimum number (2-80) and the maximum number (2-80).

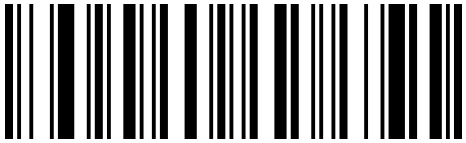
XdObLa

Minimum

XdPbLa

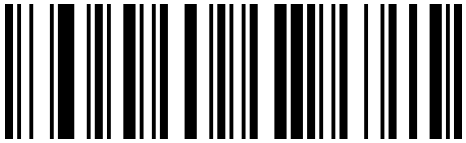
Maximum

Codabar (NW-7)



QaXaZa

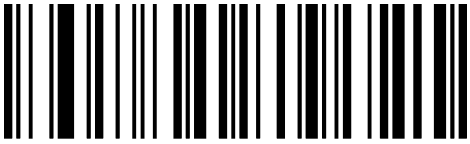
On*



QaXaPa

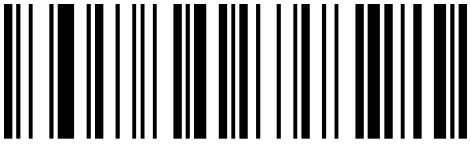
Off

Check Character



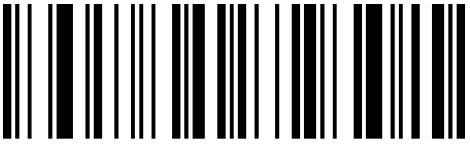
IbNeRa

No Check**



IbNeBb

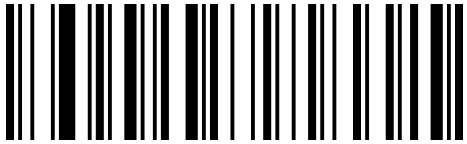
Check and Transmit



IbNeLb

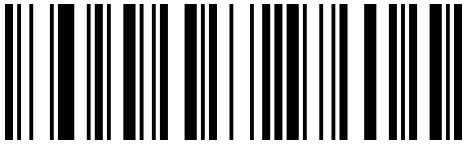
Check but Not Transmit

Start and End Characters



QaVdCb

On

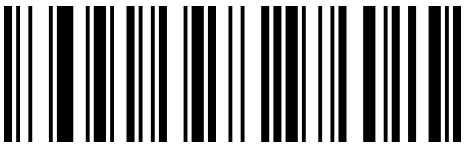


QaVdSa

Off**

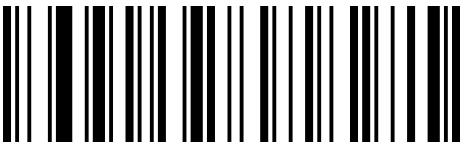
Start and End Characters Format

Start and end characters of Codabar are allowed to be one of the four characters "A", "B", "C", and "D"; the end character is also allowed to be one of "T", "N", "*", " E".



WaMbSa

ABCD/ABCD**

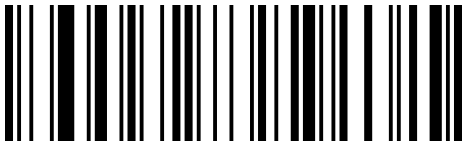


WaMbCb

ABCD/TN*E

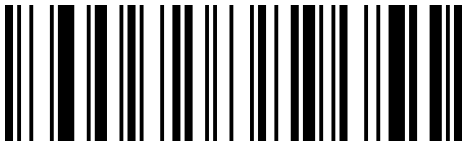
Number of Recognized Characters

The default number is 2-60, and the scanner can be configured to only scan Codabar barcodes whose number is between (including) the minimum number (2-60) and the maximum number (2-60).



XdGcLa

Minimum



XdHcLa

Maximum

Interleaved 2 of 5

QaXaAb

On**

QaXaQa

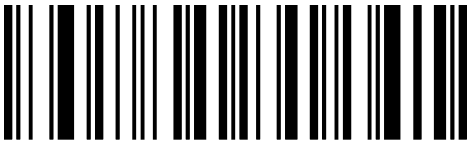
Off

Check Character

Interleaved 2 of 5 barcode data is not mandatory to include a check character. If there is a check character, it will be the last character of the data. The check character is a value calculated based on all data to check whether the data is correct. You can turn on or off the check according to your needs, and set whether to send check characters.

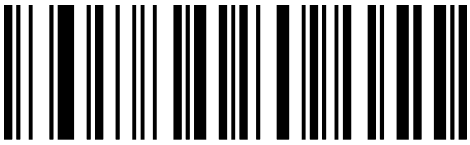
The code number of Interleaved 2 of 5 barcode must be an even number. The check character is included in the code. If it is an odd number, the first digit should be filled with 0.

The default is “No Check”



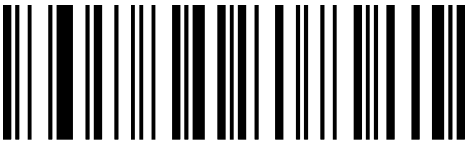
IbNeNa

No Check**



IbNeXa

Check and Transmit



IbNeHb

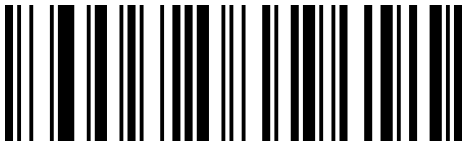
Check but Not Transmit

Number of Recognized Characters

The default number is 1-80, and the scanner can be configured to only scan Interleaved 2 of 5 barcodes whose number is between (including) the minimum number (1-80) and the maximum number (1-80).

XdSbLa

Minimum



XdTbLa

Maximum

Matrix 2 of 5

QaWaAb

On**

QaWaQa

Off

Check Character

Matrix 2 of 5 barcode data is not mandatory to include a check character. If there is a check character, it will be the last byte of the data. The check character is a value calculated from all data except the check character to check whether the data is correct.

The default is "No Check".

AbBbRa

No Check**

AbBbBb

Check and Transmit

AbBbLb

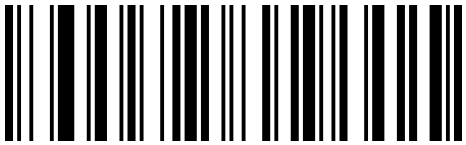
Check but Not Transmit

Number of Recognized Characters

The default number is 1-80, and the scanner can be configured to only scan Matrix 2 of 5 barcodes whose number is between (including) the minimum number (1-80) and the maximum number (1-80).

XdYbLa

Minimum



XdZbLa

Maximum

Industrial 2 of 5

QaXaVa

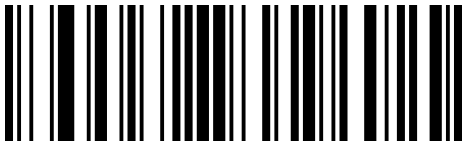
On**

QaXaLa

Off

Number of Recognized Characters

The default number is 1-45, and the scanner can be configured to only scan Industrial 2 of 5 barcodes whose number is between (including) the minimum number (1-45) and the maximum number (1-45).



XdUbLa

Minimum

XdVbLa

Maximum

Standard 2 of 5(IATA 2 of 5)

QaWaZa

On

QaWaPa

Off**

Number of Recognized Characters

The default number is 1-45, and the scanner can be configured to only scan Standard 2 of 5 barcodes whose number is between (including) the minimum number (1-45) and the maximum number (1-45).

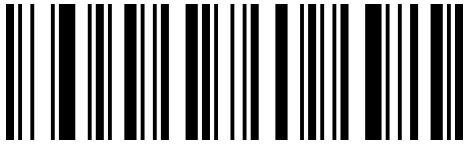
XdWbLa

Minimum

XdXbLa

Maximum

MSI Plessey



QaYaXa

On

QaYaNa

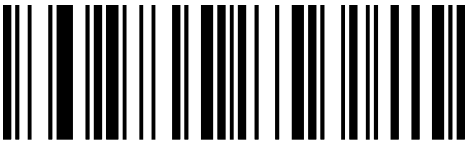
Off**

Check Character

MSI Plessey barcode data is not mandatory to include check characters. If there is a check character, it will be the last 1 or 2 characters of the data. The check character is a value calculated from all data except the check character to check whether the data is correct.

SbOeQa

No Check**

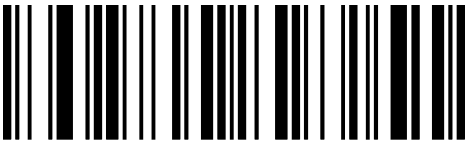


SbOeOc

Mode10 Check but Not Transmit

SbOeId

两个 Mode10 Check but Not Transmit

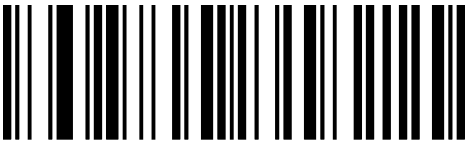


SbOeYc

Mode10&Mode11 Check but Not Transmit

SbOeAb

Mode10 Check and Transmit



SbOeKb

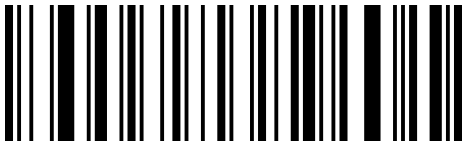
Mode10&Mode11 Check and Transmit

SbOeUb

Two Mode10 Check and Transmit

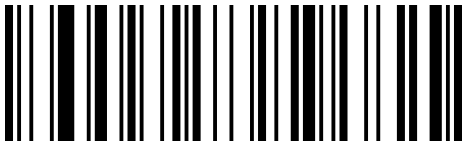
Number of Recognized Characters

The default number is 1-255, and the scanner can be configured to only scan MSI Plessey barcodes whose number is between (including) the minimum number (1-255) and the maximum number (1-255).



XdCcLa

Minimum



XdDcLa

Maximum

Telepen

QaWaCb

On

QaWaSa

Off**

Telepen Character Format

QaWaBb

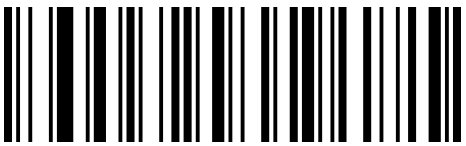
Number Format

QaWaRa

Number + Letter Format**

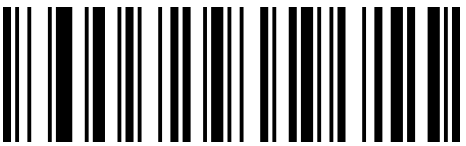
Number of Recognized Characters

The default number is 1-60, and the scanner can be configured to only scan Telepen barcodes whose number is between (including) the minimum number (1-60) and the maximum number (1-60).



XdQbLa

Minimum

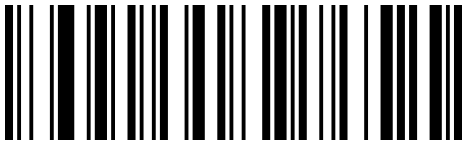


XdRbLa

Maximum

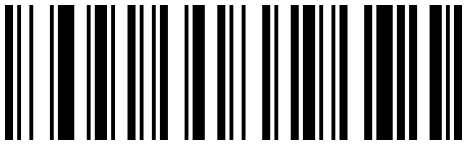
Febraban

(ITF25 Type)



WaNbVa

On



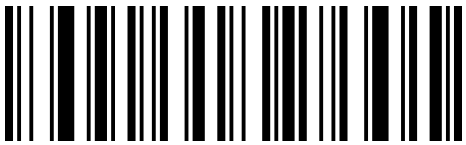
WaNbLa

Off**

(Code 128 Type)

WaNbWa

On



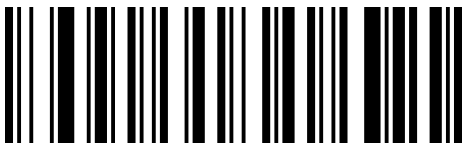
WaNbMa

Off**

Check Character

WaNbXa

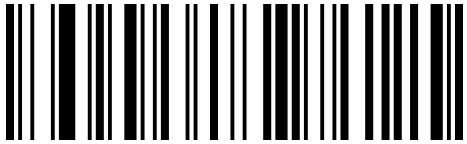
On



WaNbNa

Off**

GS1 DataBar 14(RSS-14)



QaAbYa

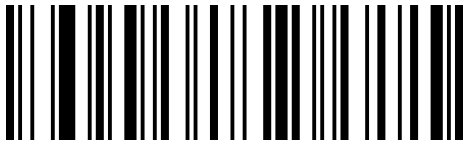
On**

QaAbOa

Off

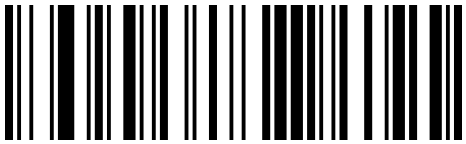
Note: GS1 DataBar 14 si also known as GS1 Databar Omnidirectional、RSS-14

GS1 DataBar Limited (RSS-Limited)



QaAbZa

On**



QaAbPa

Off

Note: GS1 DataBar Limited is also known as RSS-Limited

GS1 DataBar Expanded (RSS-Expanded)

QaAbAb

On**

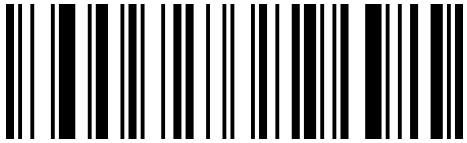
QaAbQa

Off

Note: GS1 DataBar Expanded is also known as RSS-Expanded

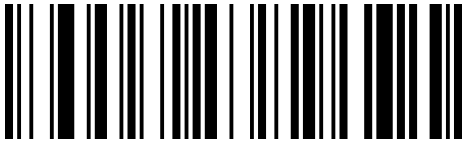
Number of Recognized Characters

The default number is 4-74, and the scanner can be configured to only scan GS1 Databar Expanded barcodes whose number is between (including) the minimum number (4-74) and the maximum number (4-74).



XdIcLa

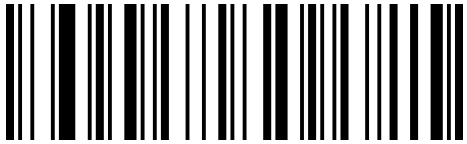
Minimum



XdJcLa

Maximum

QR Code



QaCbXa

On**

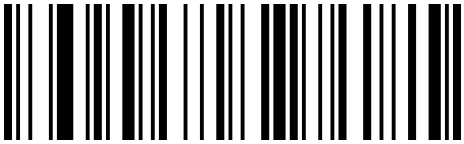
QaCbNa

Off

QR Code Normal/Reverse

QaCbOa

Normal only**



QaCbYa

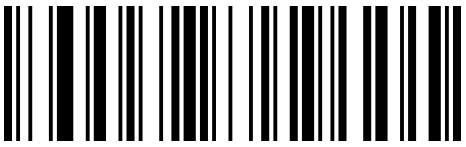
Normal + Reverse

Number of Recognized Characters

The default number is 1-7089, and the scanner can be configured to only scan QR Code whose number is between (including) the minimum number (1-7089) and the maximum number (1-7089).

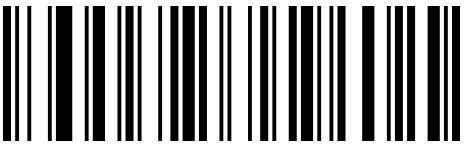
Minimum Number = Minimum Number high byte * 256 + Minimum Number low byte

Maximum Number = Maximum Number high byte * 256 + Maximum Number low byte



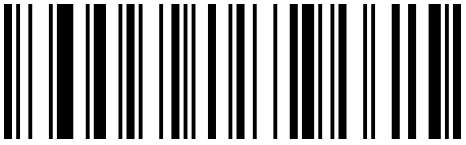
XdYdLa

Minimum Number (Low Byte)



XdZdLa

Minimum Number (High Byte)



XdAeLa

Maximum Number (Low Byte)

XdBeLa

Maximum Number (High Byte)

Micro QR Code

QaCbAb

On**

QaCbQa

Off

Micro QR Code Normal/Reverse

QaCbRa

Normal Only**

QaCbBb

Normal + Reverse

Data Matrix

QaBbYa

On**

QaBbOa

Off

Data Matrix Rectangular Code

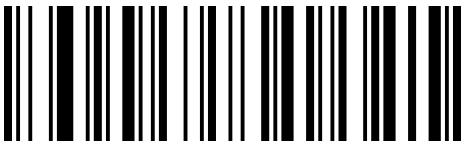
QaBbWa

On

QaBbMa

Off**

Data Matrix Normal/Reverse



QaBbNa

Normal only**

QaBbXa

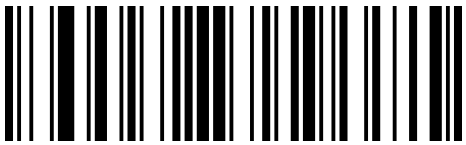
Normal + Reverse

Number of Recognized Characters

The default number is 1-3116, and the scanner can be configured to only scan DataMatrix whose number is between (including) the minimum number (1-3116) and the maximum number (1-3116).

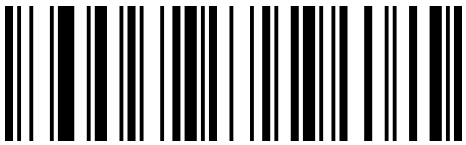
Minimum Number = Minimum Number high byte * 256 + Minimum Number low byte

Maximum Number = Maximum Number high byte * 256 + Maximum Number low byte



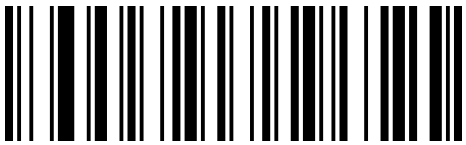
XdUdLa

Minimum Number (Low Byte)



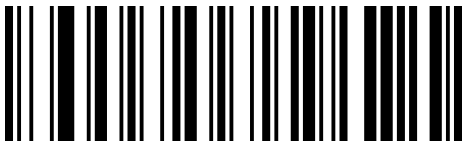
XdVdLa

Minimum Number (High Byte)



XdWdLa

Maximum Number (Low Byte)



XdXdLa

Maximum Number (High Byte)

PDF 417

QaWaVa
On**

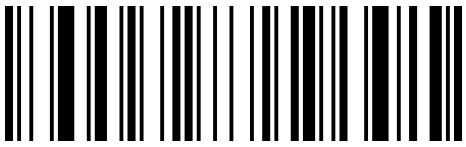
QaWaLa
Off

Number of Recognized Characters

The default number is 1-2750, and the scanner can be configured to only scan PDF 417 whose number is between (including) the minimum number (1-2750) and the maximum number (1-2750).

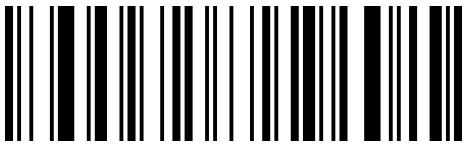
Minimum Number = Minimum Number high byte * 256 + Minimum Number low byte

Maximum Number = Maximum Number high byte * 256 + Maximum Number low byte



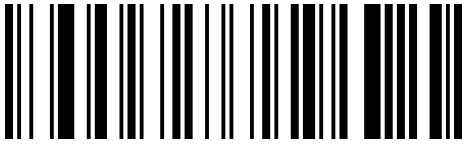
XdGdLa

Minimum Number (Low Byte)



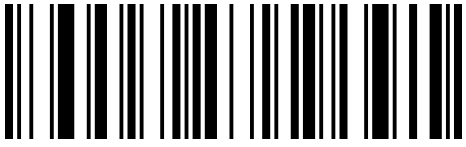
XdHdLa

Minimum Number (High Byte)



XdIdLa

Maximum Number (Low Byte)



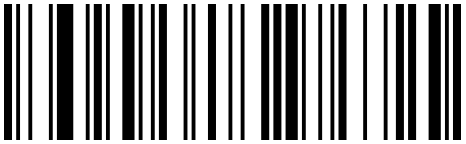
XdJdLa

Maximum Number (High Byte)

Micro PDF 417

QaAbCb

On



QaAbSa

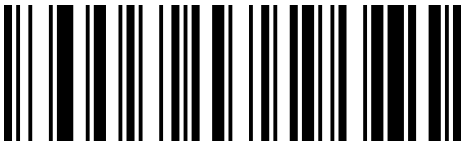
Off**

Number of Recognized Characters

The default number is 1-366, and the scanner can be configured to only scan Micro PDF 417 whose number is between (including) the minimum number (1-366) and the maximum number (1-366).

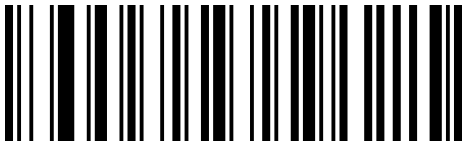
Minimum Number = Minimum Number high byte * 256 + Minimum Number low byte

Maximum Number = Maximum Number high byte * 256 + Maximum Number low byte



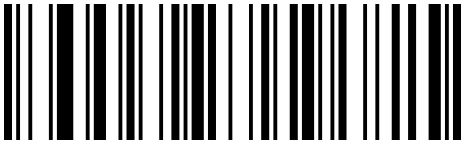
XdKdLa

Minimum Number (Low Byte)



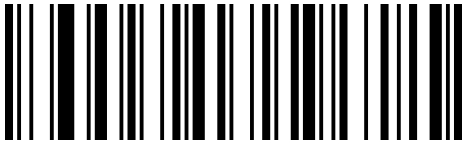
XdLdLa

Minimum Number (High Byte)



XdMdLa

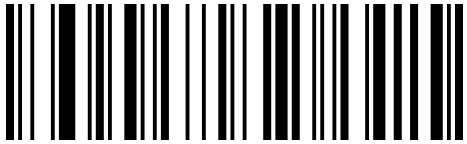
Maximum Number (Low Byte)



XdNdLa

Maximum Number (High Byte)

MaxiCode



QaCbZa

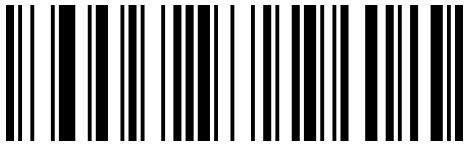
On

QaCbPa

Off**

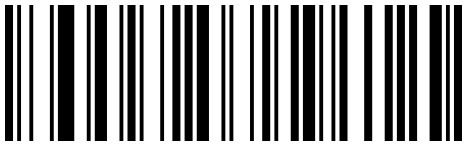
Number of Recognized Characters

The default number is 1-150, and the scanner can be configured to only scan MaxiCode whose number is between (including) the minimum number (1-150) and the maximum number (1-150).



XdSdLa

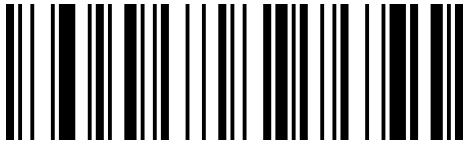
Minimum



XdTdLa

Maximum

Aztec Code



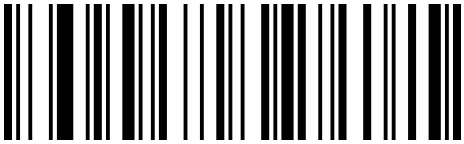
QaCbVa

On

QaCbLa

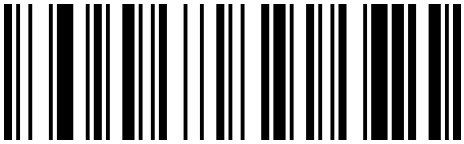
Off**

AztecCode Normal/Reverse



QaCbMa

Normal Only**



QaCbWa

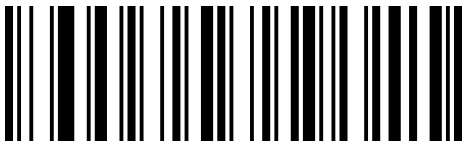
Normal + Reverse

Number of Recognized Characters

The default number is 1-3832, and the scanner can be configured to only scan Aztec Code whose number is between (including) the minimum number (1-3832) and the maximum number (1-3832).

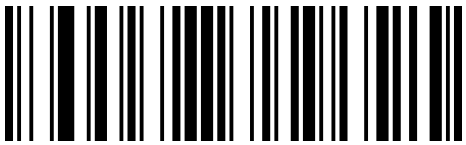
Minimum Number = Minimum Number high byte * 256 + Minimum Number low byte

Maximum Number = Maximum Number high byte * 256 + Maximum Number low byte



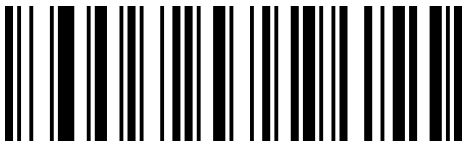
XdOdLa

Minimum Number (Low Byte)



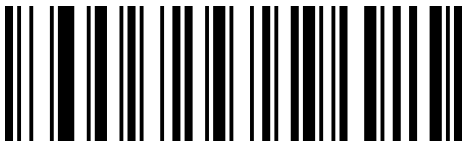
XdPdLa

Minimum Number (High Byte)



XdQdLa

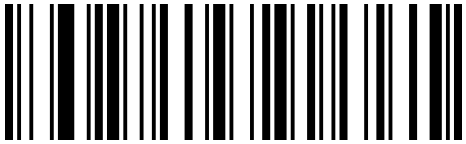
Maximum Number (Low Byte)



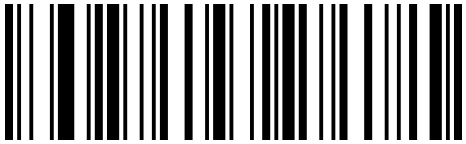
XdRdLa

Maximum Number (High Byte)

HanXin Code



SaRdWa
On



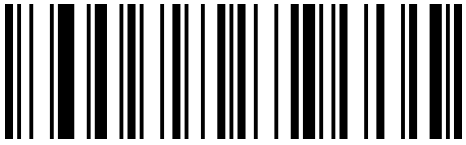
SaRdMa
Off**

Number of Recognized Characters

The default number is 1-7883, and the scanner can be configured to only scan HanXin Code whose number is between (including) the minimum number (1-7883) and the maximum number (1-7883).

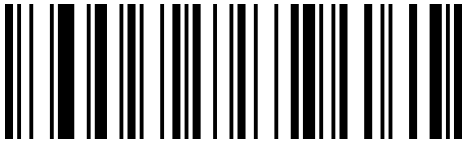
Minimum Number = Minimum Number high byte * 256 + Minimum Number low byte

Maximum Number = Maximum Number high byte * 256 + Maximum Number low byte



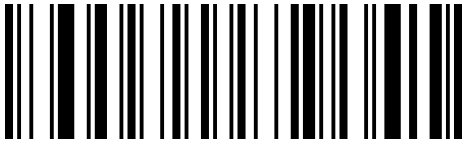
XdCeLa

Minimum Number (Low Byte)



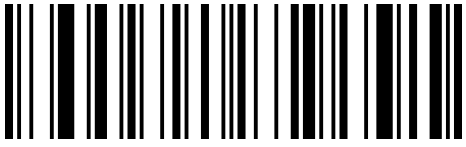
XdDeLa

Minimum Number (High Byte)



XdEeLa

Maximum Number (Low Byte)



XdFeLa

Maximum Number (High Byte)

China Post Code

QaZaBb

On

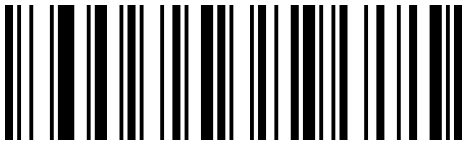
QaZaRa

Off**

Note: China Post Code is also known as Hong Kong2 of 5.

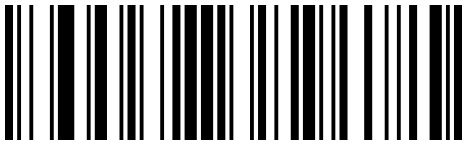
Number of Recognized Characters

The default number is 2-80, and the scanner can be configured to only scan China Post Code whose number is between (including) the minimum number (2-80) and the maximum number (2-80).



XdOcLa

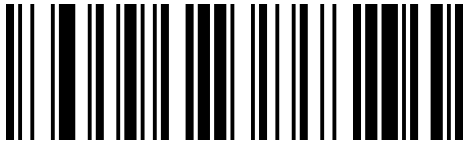
Minimum Number



XdPcLa

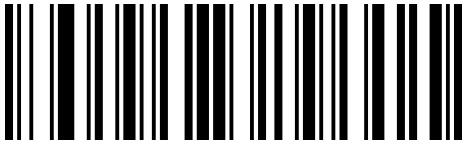
Maximum Number

GS1 Composite Code



RaUcBb

On



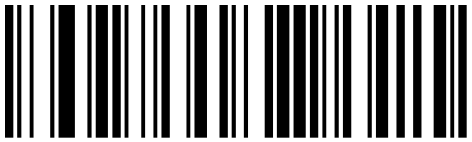
RaUcRa

Off**

UPC Composite

YaNbZa

ON



YaNbPa

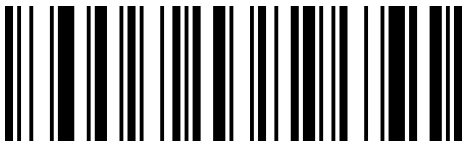
OFF

Number of Recognized Characters

The default number is 1-2435, and the scanner can be configured to only scan GS1 Composite Code whose number is between (including) the minimum number (1-2435) and the maximum number (1-2435).

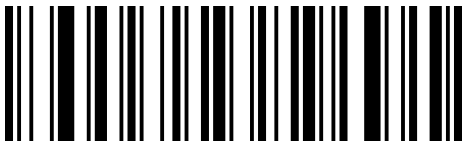
Minimum Number = Minimum Number high byte * 256 + Minimum Number low byte

Maximum Number = Maximum Number high byte * 256 + Maximum Number low byte



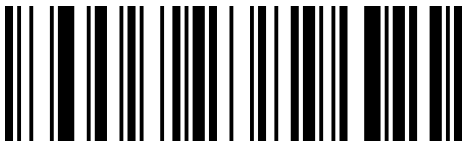
XdKcLa

Minimum (Low Byte)



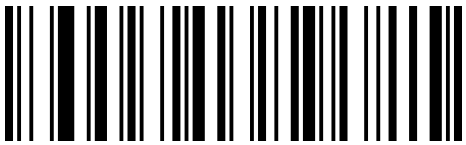
XdLcLa

Minimum (High Byte)



XdMcLa

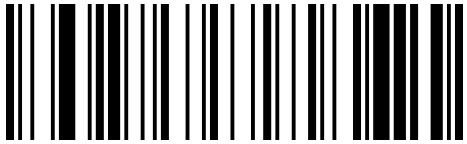
Maximum (Low Byte)



XdNcLa

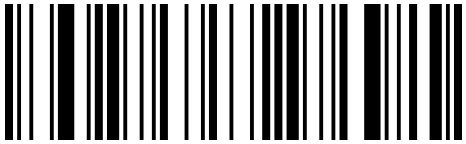
Maximum (High Byte)

OCR



SaBdCb

On

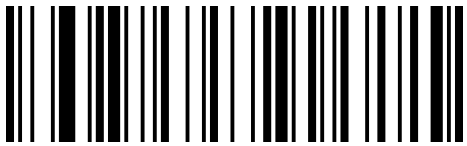


SaBdSa

Off**

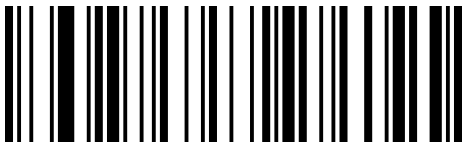
Note: It is used for China ID, please contact us for others.

Passport OCR



SaBdWa

On



SaBdMa

Off**

Note: ID Card OCR will be turned off when Passport OCR is turned on. ID Card OCR will be turned on when Passport OCR is turned off.

Other OCR

OdObLa

Chinese Identity Card: On**

Chapter 6 Communication Instructions

Introduction

Scanner can be setted with serial port. The parameters are: baud rate 9600bps, no check, 8 data bits, 1 stop bit, and no flow control**.**

Command Feedback Value

After sending the command, the scanner will return the corresponding string to indicate the success or failure of the command execution.

Successfully returned : 0x06

Failure returned：0x15

Trigger Instruction

Turn on（Hexadecimal）：16 42 65 52 65 51 62 2E

Turn off (Hexadecimal) ：16 42 65 52 65 52 62 2E

Note: For detailed instructions, please refer to "Appendix-Instruction Set"

ACK/NAK

WaFbMa

On**

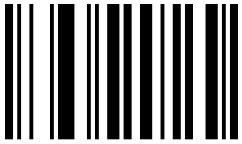
WaFbWa

Off

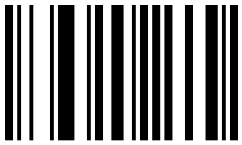
Chapter 7 Appendix

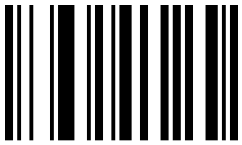
Appendix-Data Code

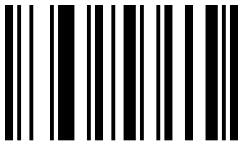
The data code is used to configure the prefix and suffix. When using the data code, it needs to be used in conjunction with "Appendix-Enter/Exit Data Code Setting Mode".

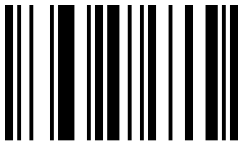

0

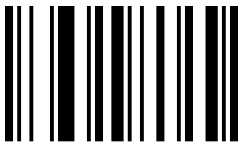

1

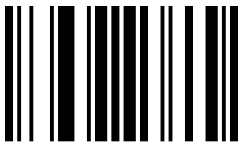

2

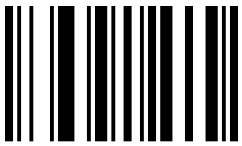

3

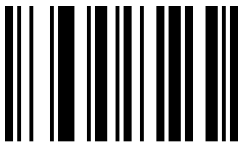

4


5


6


7


8


9

Appendix-Enter/Exit Data Code Setting Mode

When the user configures the prefix and suffix, you need to scan the "enter/exit data code setting mode" setup code first to enter the setting data code mode. After entering the data code configuration mode, only scanning the variable-number configuration code is valid. To set other configuration codes, you need to exit the data code setting mode first.

BeReGe

Enter/Exit data code setting mode

Appendix-Examples of Custom Parameters

Example-add prefix and suffix settings

For example: add a custom prefix of XY to all barcode types

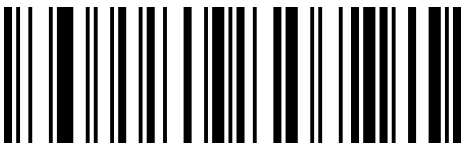
First, check the "Appendix-ASCII Code Table" to check that the three-digit decimal value corresponding to the character XY that needs to be prefixed is 088,089.

Step 1: Scan the "Enter/Exit Data Code Setting Mode" setup code in the appendix (the buzzer will sound 3 times);

BeReGe

Enter/Exit data code setting mode

Step 2: Scan the "Set custom prefix" setup code；

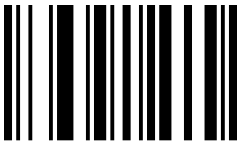


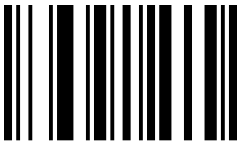
BeReTd

Set custom prefix

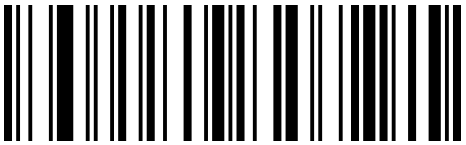
Step 3: Scan "0", "8" and "8" of "Appendix-Data Code" in turn to set the code. (Every three is a group, the buzzer sounds 1, 2 and 3 respectively)。


0


8


8

Step 4: Scan the "Set custom prefix" setup code；

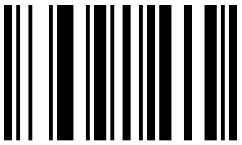


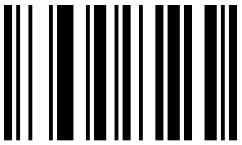
BeReTd

Set custom prefix

Step 5: Scan "0", "8" and "9" of "Appendix-Data Code" in turn to set the code. (Every three is a group, the buzzer sounds 1, 2 and 3 respectively).


0


8


9

Step 5: Scan the setup code of "Enter/Exit Data Code Setting Mode" in the appendix to complete the setting, (the buzzer sounds 3 times).

BeReGe

Enter/Exit data code setting mode

Note: You can set up to 10 custom prefixes. Repeat the second and third steps to set multiple prefixes. After each prefix is set, it will automatically switch to the next prefix setting (1-10 from left to right). After setting the 10th, it will automatically jump to the first prefix setting.

Example-Set the length of 1D code

Note:

1. Minimum length> maximum length, any length of the code system can be decoded.

2. Minimum length = maximum length, the decodable length of the code system is fixed to the set value.

3. Some QR codes have no high and low byte settings, you can also refer to this step。

For example: set the reading length of Code 128 to 6-15 digits.

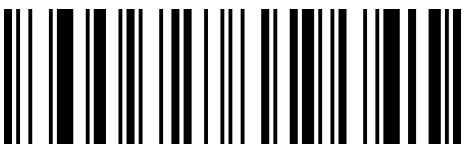
First confirm that the three-digit decimal values corresponding to 6 and 15 are 006 and 015.

Step 1: Scan the setup code of "Enter/Exit Data Code Setting Mode" in the appendix (the buzzer will sound 3 times);

BeReGe

Enter/Exit data code setting mode

Step 2: Scan the "Minimum" setup code of Code 128;



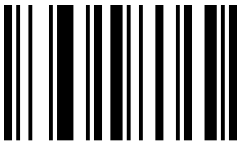
XdIbLa

Minimum

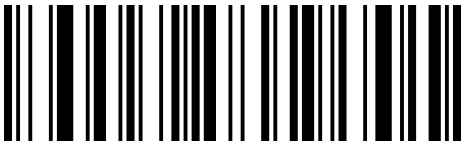
Step 3: Scan "0", "0" and "6" of "Appendix-Data Code" in turn to set the code. (Every three is a group, the buzzer sounds 1, 2 and 3 respectively).


0


0


6

Step 4: Scan the "Maximum" setup code of Code 128;



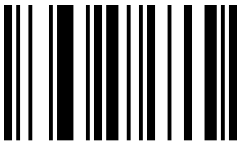
XdJbLa

Maximum

Step 5: Scan "0", "1" and "5" of "Appendix-Data Code" in turn to set the code. (Every three is a group, the buzzer sounds 1, 2 and 3 respectively).


0


1


5

Step 6: Scan the setup code of "Enter/Exit Data Code Setting Mode" in the appendix to complete the setting (the buzzer sounds 3 times).

BeReGe

Enter/Exit data code setting mode

Example-Set the length of the QR code

Note:

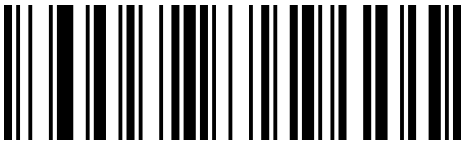
1. Minimum length> maximum length, any length of the code system can be decoded.

2. Minimum length = maximum length, the decodable length of the code system is fixed to the set value.

For example: set the QR Code reading length to 20-300 digits.

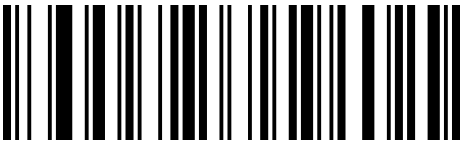
The 2D code length setting is essentially the same as the 1D code length setting, but the minimum/maximum length setting of the 2D code may be greater than 255, so the length needs to be divided into two settings.

For example, when the maximum length of QR is 300, you need to simply decompose the maximum length value before setting, and divide 300 into high and low bytes, then the high byte is 300/256 = 1 (divided up), and the low byte is 300% 256=44 (take the remainder). If the maximum length <256, the high byte is 0.



XdYdLa

Minimum Number (Low Byte)



XdZdLa

Minimum Number (High Byte)

XdAeLa

Maximum Number (Low Byte)

XdBeLa

Maximum Number (High Byte)

Step 1: Scan the "Enter/Exit Data Code Setting Mode" setup code in the appendix (the buzzer will sound 3 times);

BeReGe

Enter/Exit data code setting mode

Step 2: Scan the QR Code "Minimum Number (High Byte)" setup code；

XdZdLa

Minimum Number (High Byte)

Step 3: Scan "0", "0" and "0" of "Appendix-Data Code" in turn to set the code. (Every three is a group, the buzzer sounds 1, 2 and 3 respectively)。

0 0 0

Step 4: Scan the QR Code "Minimum Number (low byte)" setup code；

XdYdLa

Minimum Number (Low Byte)

Step 5: Scan "0", "2" and "0" of "Appendix-Data Code" in turn to set the code. (Every three is a group, the buzzer sounds 1, 2 and 3 respectively)。

0 2 0

Step 4: Scan the QR Code "Maximum Number (High Byte)" setup code；

XdBeLa

Maximum Number (High Byte)

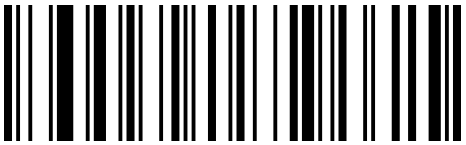
Step 5: Scan "0", "0" and "1" of "Appendix-Data Code" in turn to set the code. (Every three is a group, the buzzer sounds 1, 2 and 3 respectively).


0


0


1

Step 4: Scan the "Maximum Number (low byte)" setup code of Code 128；

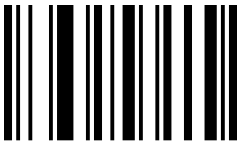


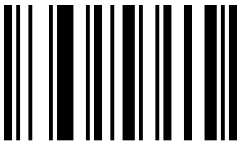
XdAeLa

Maximum Number (Low Byte)

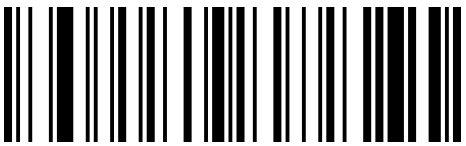
Step 5: Scan "0", "4" and "4" of "Appendix-Data Code" in turn to set the code. (Every three is a group, the buzzer sounds 1, 2 and 3 respectively).


0


4


4

Step 6: Scan the setup code of "Enter/Exit Data Code Setting Mode" in the appendix to complete the setting (the buzzer sounds 3 times).



BeReGe

Enter/Exit data code setting mode

Example-Hidden character settings

For example: set to hide the first 3 characters of the barcode.

Example：1616abcd

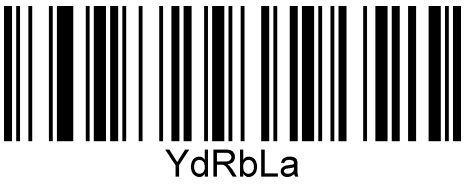
The original content of the barcode is: 1616abcd, output 6abcd after setting the hidden 3 characters in the head.

Step 1: Scan the "Enter/Exit Data Code Setting Mode" setup code in the appendix (the buzzer will sound 3 times);

BeReGe

Enter/Exit data code setting mode

Step 2: Scan the setup code of " Hidden Numbers of Leading Character ";

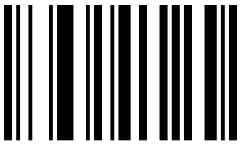


Hidden Numbers of Leading Character

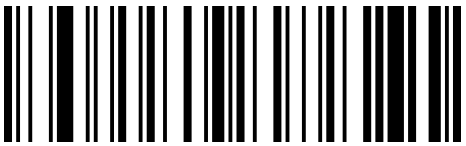
Step 3: Scan "0", "0" and "3" of "Appendix-Data Code" in turn to set the code. (Every three is a group, the buzzer sounds 1, 2 and 3 respectively).


0


0


3

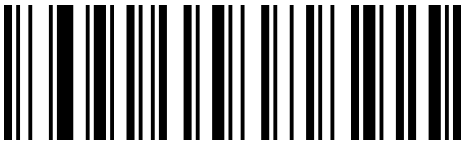
Step 4: Scan the "Enter/Exit Data Code Setting Mode" setup code in the appendix to complete the setting, (the buzzer sounds 3 times).



BeReGe

Enter/Exit data code setting mode

Step 5: Scan the " Hide leading characters: On" setup code;



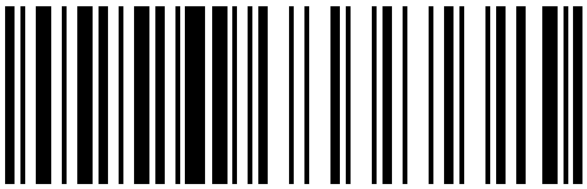
WaQbCb

Hide leading characters: On

Example - Insert Custom Character

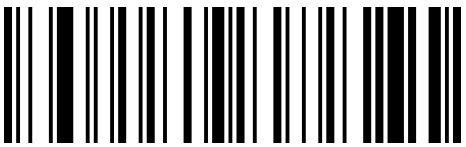
Example: insert X after 4 characters.

From “Appendix-ASCII Code Table”, “4” means “004”, “X” means “088”.



Original content is: 1616abcd，output is: 1616Xabcd.

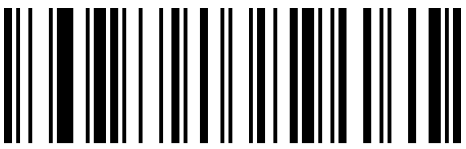
Step 1: Scan the "Enter/Exit Data Code Setting Mode" setup code in the appendix (the buzzer will sound 3 times);



BeReGe

Enter/Exit Data Code Setting Mode

Step 2: scan “Insertion Position of Custom Character” setup code.



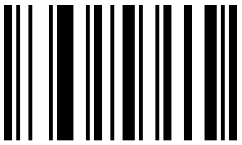
YdFcLa

Insertion Position of Custom Character

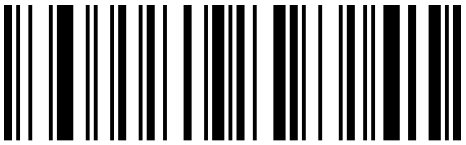
Step 3: Scan "0", "0" and "4" of "Appendix-Data Code" in turn to set the code. (Every three is a group, the buzzer sounds 1, 2 and 3 respectively).


0


0


4

Step 4: scan “Custom Character to Insert” setup code.

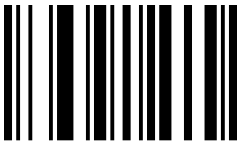


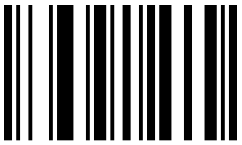
BeReYc

Custom Character to Insert

Step 5: Scan "0", "8" and "8" of "Appendix-Data Code" in turn to set the code. (Every three is a group, the buzzer sounds 1, 2 and 3 respectively).


0


8

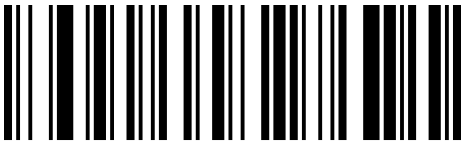

8

Step 4: Scan the "Enter/Exit Data Code Setting Mode" setup code in the appendix to complete the setting, (the buzzer sounds 3 times).

BeReGe

Enter/Exit Data Code Setting Mode

Step 6: scan “Display custom characters: On” setup code.



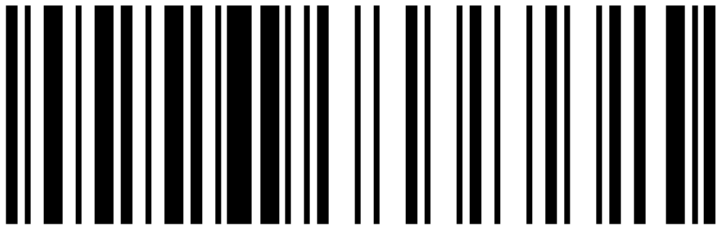
WaQbYb

Display custom characters: On

Example-Character Replacement

For example: replace the 6 appearing in the sample barcode with the letter X.

Appendix-ASCII code table: 6 = 054; X = 088.



The original content of the barcode is: 1616abcd, output 1X1Xabcd after setting.

Step 1: Scan the "Enter/Exit Data Code Setting Mode" setup code in the appendix (the buzzer will sound 3 times);

BeReGe

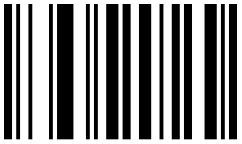
Enter/Exit data code setting mode

Step 2: Scan the "Character to be replaced" setup code;

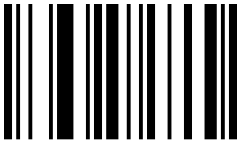
VdEeLa

Character to be replaced

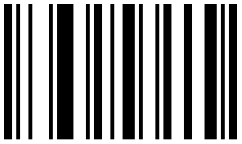
Step 3: Scan "0", "5" and "4" of "Appendix-Data Code" in turn to set the code. (Every three is a group, the buzzer sounds 1, 2 and 3 respectively).



0

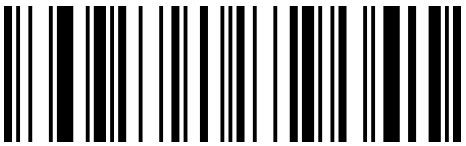


5



4

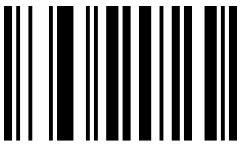
Step 4: Scan the "Replacement character" setup code;



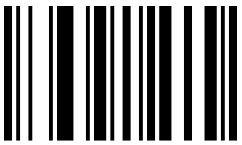
VdFeLa

Replacement character

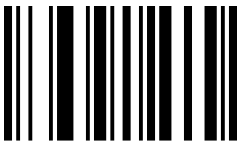
Step 5: Scan "0", "8" and "8" of "Appendix-Data Code" in turn to set the code. (Every three is a group, the buzzer sounds 1, 2 and 3 respectively).



0



8



8

Step 5: Scan the setup code of "Enter/Exit Data Code Setting Mode" in the appendix to complete the setting, (the buzzer sounds 3 times).

BeReGe

Enter/Exit data code setting mode

Appendix-Default Setting Table

Parameter Name	Default Setting	Description
Comprehensive Settings		
Setup code Function	ON	Default On
Send Setup code	OFF	Default Off
Turn on all sound	ON	
Turn on boot sound	ON	
Turn on the setup code sound	ON	
Turn on the decoding success tone	ON	
Duration of successful decoding tone	Normal	
Decoding successful prompt audio rate	2.0KHZ	
Decoding successful prompt tone volume	High	
Error warning tone	Low Frequency	
Turn on the indicator light for successful barcode reading	ON	
Light working mode	Standby off for a long time, working on	

Turn on the fill light	ON	
Turn on the aiming light	ON	
Data output format	Codepage	
Text output in different countrues	UTF-8/GB2312 coding	
Invoice function	OFF	
Image inversion	Normal	
All 1D barcodes are inverted	OFF	
All 2D barcodes are inverted	OFF	
Reading failure prompt	OFF	
Communication Setting		
Interface Mode	USB-KBW	
Keyboard Mode	American English	
Control character output mode	Output function keys	
Open virtual keyboard	OFF	
Case Conversion	OFF	Normal
USB transmission speed	Normal	
Serial port transmission speed	fast	
Baut rate	9600	
Serial verification	No verification	
Data bit	8 bits	

Stop bit	1 bit	
Reading Mode		
Reading mode	Manual reading	
Manual reading mode-key timeout	3S	
Continuous reading-the same barcode reading delay	ON	800MS
Induction reading mode-image stabilization time	250ms	
Induction Reading Mode-Induction Sensitivity	High	
Data Editing		
Send Code ID	OFF	
Send AIM ID	OFF	
Custom Predix	OFF	
Custom suffix	OFF	
Hide head characters	OFF	
Hide middle characters	OFF	
Hide trailing characters	OFF	
Display insert custom characters	OFF	
Start and end character	OFF	None

Terminator	CR
Barcode Parameter Setting	
Open all barcodes	OFF
UPC-A	
Allow reading	ON
Send check character	ON
2 additional digits	OFF
5 additional digits	OFF
Mandatory additional digits, 2 additional digits	OFF
Mandatory additional digits, 5 additional digits	OFF
Send system character	ON
Open separator	ON
Convert to EAN-13	OFF
UPC-E	
Allow reading UPC-E0	ON
Allow reading UPC-E1	OFF
Send check character	ON
2 additional digits	OFF

5 additional digits	OFF	
Mandatory additional digits, 2 additional digits	OFF	
Mandatory additional digits, 5 additional digits	OFF	
Open separator	ON	
Send system character	ON	System Character
Convert to UPC-A	OFF	
EAN-8		
Allow reading	ON	
Send check character	ON	
2 additional digits	OFF	
5 additional digits	OFF	
Mandatory additional digits, 2 additional digits	OFF	
Mandatory additional digits, 5 additional digits	OFF	
Open separator	ON	
Voncert to EAN-13	OFF	
EAN-13		

Allow reading	ON
Send check character	ON
2 additional digits	OFF
5 additional digits	OFF
Mandatory additional digits, 2 additional digits	OFF
Mandatory additional digits, 5 additional digits	OFF
Open separator	ON
Convert to ISBN	OFF
Send ISBN check character	OFF
Convert to ISSN	OFF
Code 128	
Allow reading	ON
Default reading length	0-80
GS 1-128	
Allow reading	ON
Default reading length	0-80
ISBT 128	
Allow reading	OFF

Code 39		
Allow rading	ON	
MOD43 check	OFF	
Send check character	OFF	
Send start and end character	OFF	
Full ASCII	OFF	
Default reading length	0-48	
Code 32		
Allow reading	OFF	
Send check character	ON	
Add A before the barcode	OFF	
Code32 failure reading	ON	
Code 93		
Allow reading	ON	
Default reading length	0-80	
Code 11		
Allow reading	OFF	
Open check character	ON	1 check character
Send check character	ON	
Default reading length	2-80	

Codabar	
Allow reading	ON
Open check character	OFF
Send check character	OFF
Send start and end character	OFF
Start and end character format	ABCD/ABCD
Default reading length	2-60
Interleaved 2 of 5	
Allow reading	ON
Open check character	OFF
Send check character	OFF
Default reading length	1-80
Matrix 2 of 5	
Allow reading	ON
Open check character	OFF
Default reading length	1-80
Industrial 2 of 5	
Allow reading	ON
Default reading length	1-45
Standard 2 of 5	

Allow reading	OFF
Default reading length	1-45
MSI Plessey	
Allow reading	OFF
Open check character	OFF
Send check character	OFF
Default reading length	1-255
Telepen	
Allow reading	OFF
Character Type	Letter type
Default reading length	1-60
Febraban	
Allow reading (ITF25)	OFF
Allow reading (Code128)	OFF
Open Febraban	OFF
RSS-14	
Allow reading	ON
RSS-Limited	
Allow reading	ON
RSS-Expanded	

Allow reading	ON
Default reading length	4-74
QR Code	
Allow reading	ON
Reverse reading	OFF
Default reading length	1-7089
Micro QR Code	
Allow reading	ON
Reverse reading	OFF
Data Matrix	
Allow reading	ON
Allow reading rectangular codes	OFF
Reverse reading	OFF
Default reading length	1-3116
PDF 417	
Allow reading	ON
Default reading length	1-2750
Micro PDF 417	
Allow reading	OFF
Default reading length	1-366

MaxiCode	
Allow reading	OFF
Default reading length	1-150
Aztec	
Allow reading	OFF
Reverse reading	OFF
Default reading length	1-3832
HanXin Code	
Allow reading	OFF
Default reading length	1-7883
China Post Code	
Allow reading	OFF
Default reading length	2-80
GS1 Composite Code	
Allow reading	OFF
Default reading length	1-2435

Appendix-Code ID & AIM ID

Number	Barcode Type	Code ID	AIM ID	Description
1	Code 128	A	]C0	
2	GS1 128	B	]C1	
3	EAN-8	C	]E4	
4	EAN-8 with Add-on	C	]E3	
5	EAN-13	D	]E0	
6	EAN-13 with Add-on	D	]E3	
7	UPC-E	E	]E0	
8	UPC-E with Add-on	E	]E3	
9	UPC-A	F	]E0	
10	UPC-A with Add-on	F	]E3	
11	UPC-E1	E	]X0	
12	ISBN	d	]E0	
13	Code11	1	]Hm	m: 0,1,3
14	Code39 Base32	f	]X0	
15	Interleaved 2 of 5	G	]Im	m: 0,1,3
16	Industrial 2 of 5	h	]S0	
17	Standard 2 of 5	H	]R0	
18	Code 39	I	]Am	m: 0,1,3,4,5,7
19	Codabar	J	]Fm	m: 0,2,4
20	MSI Plessey	K	]Mm	m: 0,1,2,3,5,6,7
21	Code 93	L	]G0	

22	GS1 Databar Omnidirectional	M	]e0	
23	GS1 DatabarLimited	[	]e0	
24	GS1 DatabarExpanded	]	]e0	
25	HongKong 2 of 5(China Post)	P	]X9	
26	Matrix 2 of 5	Q	]X0	
27	PDF417	N	]Lm	m: 0,1,2
28	Micro PDF417	O	]Lm	m: 0,1,2,3,4,5
29	Hanxin	S	]XH	
30	AztecCode	T	]zm	m: 0-9,A-C
31	QR code	U	]Qm	m: 0-6
32	Micro QR	U	]Qm	m: 0-6
33	Data Matrix	V	]dm	m: 0-6
34	Maxi Code	W	]Um	m: 0-3
35	GS1 Composite Code	M/[/] / ...	]e0	
36	Telepen	8	]Bm	m: 0,1,2,4

Note: The CodeID of GS1 Composite Code depends on the type of composite code.

Appendix-Control Character List

Note: 0-31 of the ASCII code table are the control characters in different interface modes. The scanner can use the relevant settings to achieve the functions of the following table.

Hexadecimal	ASCII (Decimal)	Corresponding key value (Function key operation)	Corresponding key value (Ctrl key combination operation)
00	00	Null	Ctrl+2
01	01	Keypad Enter	Ctrl+A
02	02	Caps lock	Ctrl+B
03	03	Right Arrow	Ctrl+C
04	04	Up Arrow	Ctrl+D
05	05	Null	Ctrl+E
06	06	Null	Ctrl+F
07	07	Enter	Ctrl+G
08	08	Left Arrow	Ctrl+H
09	09	Horizontal Tab	Ctrl+I
0A	10	Down Arrow	Ctrl+J
0B	11	Vertical Tab	Ctrl+K
0C	12	Backspace	Ctrl+L
0D	13	Enter	Ctrl+M
0E	14	Insert	Ctrl+N

0F	15	Esc	Ctrl+O
10	16	F11	Ctrl+P
11	17	Home	Ctrl+Q
12	18	Print Screen	Ctrl+R
13	19	Delete	Ctrl+S
14	20	tab+shift	Ctrl+T
15	21	F12	Ctrl+U
16	22	F1	Ctrl+V
17	23	F2	Ctrl+W
18	24	F3	Ctrl+X
19	25	F4	Ctrl+Y
1A	26	F5	Ctrl+Z
1B	27	F6	Ctrl+[
1C	28	F7	Ctrl+\
1D	29	F8	Ctrl+]
1E	30	F9	Ctrl+6
1F	31	F10	Ctrl+-

Appendix-ASCII Code Table

Note: 0-31 of ASCII code table are invisible characters, 32-127 are visible characters

Hexadecimal	ASCII (Decimal)	Character
00	00	NUL (Null char.)
01	01	SOH (Start of Header)
02	02	STX (Start of Text)
03	03	ETX (End of Text)
04	04	EOT (End of Transmission)
05	05	ENQ (Enquiry)
06	06	ACK (Acknowledgment)
07	07	BEL (Bell)
08	08	BS (Backspace)
09	09	HT (Horizontal Tab)
0A	10	LF (Line Feed)
0B	11	VT (Vertical Tab)
0C	12	FF (Form Feed)
0D	13	CR (Carriage Return)
0E	14	SO (Shift Out)
0F	15	SI (Shift In)
10	16	DLE (Data Link Escape)

11	17	DC1 (XON) (Device Control 1)
12	18	DC2 (Device Control 2)
13	19	DC3 (XOFF) (Device Control 3)
14	20	DC4 (Device Control 4)
15	21	NAK (Negative Acknowledgment)
16	22	SYN (Synchronous Idle)
17	23	ETB (End of Trans. Block)
18	24	CAN (Cancel)
19	25	EM (End of Medium)
1A	26	SUB (Substitute)
1B	27	ESC (Escape)
1C	28	FS (File Separator)
1D	29	GS (Group Separator)
1E	30	RS (Request to Send)
1F	31	US (Unit Separator)
20	32	SP (Space)
21	33	! (Exclamation Mark)
22	34	" (Double Quote)
23	35	# (Number Sign)
24	36	$ (Dollar Sign)

25	37	% (Percent)
26	38	& (Ampersand)
27	39	` (Single Quote)
28	40	((Right / Closing Parenthesis)
29	41	) (Right / Closing Parenthesis)
2A	42	* (Asterisk)
2B	43	+ (Plus)
2C	44	, (Comma)
2D	45	- (Minus / Dash)
2E	46	. (Dot)
2F	47	/ (Forward Slash)
30	48	0
31	49	1
32	50	2
33	51	3
34	52	4
35	53	5
36	54	6
37	55	7
38	56	8

39	57	9
3A	58	: (Colon)
3B	59	; (Semi-colon)
3C	60	< (Less Than)
3D	61	= (Equal Sign)
3E	62	> (Greater Than)
3F	63	? (Question Mark)
40	64	@ (AT Symbol)
41	65	A
42	66	B
43	67	C
44	68	D
45	69	E
46	70	F
47	71	G
48	72	H
49	73	I
4A	74	J
4B	75	K
4C	76	L

4D	77	M
4E	78	N
4F	79	O
50	80	P
51	81	Q
52	82	R
53	83	S
54	84	T
55	85	U
56	86	V
57	87	W
58	88	X
59	89	Y
5A	90	Z
5B	91	[(Left / Opening Bracket)
5C	92	\ (Back Slash)
5D	93	] (Right / Closing Bracket)
5E	94	^ (Caret / Circumflex)
5F	95	_ (Underscore)
60	96	' (Grave Accent)

61	97	a
62	98	b
63	99	c
64	100	d
65	101	e
66	102	f
67	103	g
68	104	h
69	105	i
6A	106	j
6B	107	k
6C	108	l
6D	109	m
6E	110	n
6F	111	o
70	112	p
71	113	q
72	114	r
73	115	s
74	116	t

75	117	u
76	118	v
77	119	w
78	120	x
79	121	y
7A	122	z
7B	123	{ (Left/ Opening Brace)
7C	124	| (Vertical Bar)
7D	125	} (Right/Closing Brace)
7E	126	~ (Tilde)
7F	127	DEL (Delete)

Appendix-Instruction Set

Note: Serial commands need to be used in serial mode

Function	Setup code	Instruction (HEX)
1. Scan Control-Open Scan	NG	16 42 65 52 65 51 62 2E
2. Scan control-Close Scan	NG	16 42 65 52 65 52 62 2E
3. Turn on the setup code	RaZdNa	16 52 61 5A 64 4E 61 2E
4. Turn off the setup code	RaZdXa	16 52 61 5A 64 58 61 2E
5. Send setup code	WaZaBb	16 57 61 5A 61 42 62 2E
6. Do not send setup code	WaZaRa	16 57 61 5A 61 52 61 2E
7. Restore factory default	BeQeCe	16 42 65 51 65 43 65 2E
8. Read version	BeReCd	16 42 65 52 65 43 64 2E
9. Save user default settings	UaQdWa	16 55 61 51 64 57 61 2E
10. Restore user default settings	BeQeEe	16 42 65 51 65 45 65 2E
11. Turn on all prompts	WaZaCb	16 57 61 5A 61 43 62 2E
12. Turn off all prompts	WaZaSa	16 57 61 5A 61 53 61 2E
13. Turn on the boot sound	RaOdNa	16 52 61 4F 64 4E 61 2E
14. Turn off the boot sound	RaOdXa	16 52 61 4F 64 58 61 2E
15. Turn on the setup code prompt sound	WaZaZa	16 57 61 5A 61 5A 61 2E
16. Turn off the setup code prompt sound	WaZaPa	16 57 61 5A 61 50 61 2E

17. Turn on the decoding success tone	RaDeXa	16 52 61 44 65 58 61 2E
18. Turn off the decoding success tone	RaDeNa	16 52 61 44 65 4E 61 2E
19. Short time for successful decoding	RaCeZa	16 52 61 43 65 5A 61 2E
20. The time of the prompt tone for successful decoding is normal	RaCePa	16 52 61 43 65 50 61 2E
21. Decoding successful prompt audio frequency-very low 1.6KHZ	LbDeUb	16 4C 62 44 65 55 62 2E
22. Decoding successful prompt audio frequency-low 2.0KHZ	LbDeEc	16 4C 62 44 65 45 63 2E
23. Decoding successful prompt audio frequency-medium 2.7KHZ	LbDeAb	16 4C 62 44 65 41 62 2E
24. Decoding successful prompt audio frequency-high 4.2KHZ	LbDeKb	16 4C 62 44 65 4B 62 2E
25. Decoding successful prompt tone volume off	BbDePb	16 42 62 44 65 50 62 2E
26. The volume of the decoding success prompt tone is low	BbDeFb	16 42 62 44 65 46 62 2E
27. The volume of the decoding success prompt tone is medium	BbDeVa	16 42 62 44 65 56 61 2E
28. The volume of the decoding success prompt tone is high	BbDeLa	16 42 62 44 65 4C 61 2E
29. Error warning tone-low frequency	GbZaNa	16 47 62 5A 61 4E 61 2E

30. Error warning tone-medium frequency	GbZaXa	16 47 62 5A 61 58 61 2E
31. Error warning tone-high frequency	GbZaHb	16 47 62 5A 61 48 62 2E
32. Turn on the indicator light for successful barcode reading	RaBeYa	16 52 61 42 65 59 61 2E
33. Turn off the indicator light for successful barcode reading	RaBeOa	16 52 61 42 65 4F 61 2E
34. Reminder light-standby, long off, working on	WaAbRa	16 57 61 41 62 52 61 2E
35. Reminder Light-Standby is always on and work is off	WaAbBb	16 57 61 41 62 42 62 2E
36. Turn on the fill light	GbWaHb	16 47 62 57 61 48 62 2E
37. Turn off the fill light	GbWaNa	16 47 62 57 61 4E 61 2E
38. Turn on the aiming light	GbWaZa	16 47 62 57 61 5A 61 2E
39. Turn off the aiming light	GbWaPa	16 47 62 57 61 50 61 2E
40. The aiming light keeps on	GbWaJb	16 47 62 57 61 4A 62 2E
41. Aiming light flashes	GbWaTb	16 47 62 57 61 54 62 2E
42. Data output format-English	GbBbLa	16 47 62 42 62 4C 61 2E
43. Data output format -Codepage	GbBbVa	16 47 62 42 62 56 61 2E
44. Data output format -Unicode	GbBbFb	16 47 62 42 62 46 62 2E
45. Chinese System-Simplified Chinese	OdPbLa	16 4F 64 50 62 4C 61 2E

46. Chinese System-Traditional Chinese	OdPblbc	16 4F 64 50 62 49 62 63 2E
47. Traditional System-Traditional Chinese	OdPbPb	16 4F 64 50 62 50 62 2E
48. Chinese System-Shift-JIS	OdPbJbc	16 4F 64 50 62 4A 62 63 2E
49. Japanese System-Shift-JIS	OdPbVa	16 4F 64 50 62 56 61 2E
50. Korean System-CP949	OdPbFb	16 4F 64 50 62 46 62 2E
51. Thai Language System -CP874	OdPbGbc	16 4F 64 50 62 47 62 63 2E
52. Russian system -KOI8-R	OdPbHbc	16 4F 64 50 62 48 62 63 2E
53. Turn on the invoice function	WaBbXa	16 57 61 42 62 58 61 2E
54. Turn off the invoice function	WaBbNa	16 57 61 42 62 4E 61 2E
55. Normal image recognition	CbQdRa	16 43 62 51 64 52 61 2E
56. Inverted image recognition	CbQdLb	16 43 62 51 64 4C 62 2E
57. Normal and reverse image recognition	CbQdBb	16 43 62 51 64 42 62 2E
58. All one-dimensional barcodes are turned on in reverse	PdZdQbc	16 50 64 5A 64 51 62 63 2E
59. All one-dimensional barcodes are turned off in reverse	PdAeQbc	16 50 64 41 65 51 62 63 2E
60. All two-dimensional barcodes are turned on in reverse	PdBeQbc	16 50 64 42 65 51 62 63 2E
61. All two-dimensional barcodes are turned off in reverse	PdCeQbc	16 50 64 43 65 51 62 63 2E

62. Allow reading QR URL	WaQbPa	16 57 61 51 62 50 61 2E
63. Prohibit reading QR URL	WaQbZa	16 57 61 51 62 5A 61 2E
64. Open NR	SaCbCb	16 53 61 43 62 43 62 2E
65. Close NR	SaCbSa	16 53 61 43 62 53 61 2E
66. USB-KBW Interface	VbZcWag	16 56 62 5A 63 57 61 67 2E
67. American English	JdCcTc	16 4A 64 43 63 54 63 2E
68. Greece	JdCcLbc	16 4A 64 43 63 4C 62 63 2E
69. Netherlands	JdCcGbc	16 4A 64 43 63 47 62 63 2E
70. Spain	JdCcJc	16 4A 64 43 63 4A 63 2E
71. Swiss German	JdCcCbc	16 4A 64 43 63 43 62 63 2E
72. Brazil	JdCcLa	16 4A 64 43 63 4C 61 2E
73. Denmark	JdCcEbc	16 4A 64 43 63 45 62 63 2E
74. British English	JdCcDbc	16 4A 64 43 63 44 62 63 2E
75. Italy	JdCcZb	16 4A 64 43 63 5A 62 2E
76. France	JdCcFb	16 4A 64 43 63 46 62 2E
77. German	JdCcBbc	16 4A 64 43 63 42 62 63 2E
78. Hungary	JdCcNbc	16 4A 64 43 63 4E 62 63 2E
79. Sweden	JdCcRbc	16 4A 64 43 63 52 62 63 2E
80. Slovakia	JdCcQbc	16 4A 64 43 63 51 62 63 2E
81. Portugal	JdCcIbc	16 4A 64 43 63 49 62 63 2E

82. Romania	JdCcSbc	16 4A 64 43 63 53 62 63 2E
83. Belgium	JdCcWqc	16 4A 64 43 63 5A 61 63 2E
84. Turkish -F	JdCcTbc	16 4A 64 43 63 54 62 63 2E
85. Turkish -Q	JdCcXac	16 4A 64 43 63 58 61 63 2E
86. Poland	JdCcObc	16 4A 64 43 63 4F 62 63 2E
87. Russian language MS	JdCcQdc	16 4A 64 43 63 51 64 63 2E
88. Japan	JdCcVac	16 4A 64 43 63 56 61 63 2E
89. Ukraine	JdCcGdc	16 4A 64 43 63 47 64 63 2E
90. USB keyboard- Output function keys	QbBbQa	16 51 62 42 62 51 61 2E
91. USB keyboard-output Ctrl Key combination	QbBbAb	16 51 62 42 62 41 62 2E
92. USB keyboard- ALT mode output control characters	QbBbKb	16 51 62 42 62 4B 62 2E
93. USB keyboard-output Enter&DownArrow	QbBbUb	16 51 62 42 62 55 62 2E
94. Close the virtual keyboard	WaBbPa	16 57 61 42 62 50 61 2E
95. Open the virtual keyboard	WaBbZa	16 57 61 42 62 5A 61 2E
96. Character conversion-no conversion	BbLdOa	16 42 62 4C 64 4F 61 2E
97. Character conversion-All Upper	BbLdYa	16 42 62 4C 64 59 61 2E
98. Character conversion-All Lower	BbLdIb	16 42 62 4C 64 49 62 2E

99. Character conversion-reverse case	BbLdSb	16 42 62 4C 64 53 62 2E
100. USB transfer speed-Normal	OdJcVac	16 4F 64 4A 63 56 61 63 2E
101. USB transfer speed-High	OdJcJc	16 4F 64 4A 63 4A 63 2E
102. USBtransfer speed-very High	OdJcVa	16 4F 64 4A 63 56 61 2E
103. USB-COM Virtual serial port	VbZcXag	16 56 62 5A 63 58 61 67 2E
104. HID-POS	VbZcYag	16 56 62 5A 63 59 61 67 2E
105. TTL/RS232serial port	VbZcNc	16 56 62 5A 63 41 62 67 2E
106. Baud rate -4800	VbCdRdc	16 56 62 43 64 52 64 63 2E
107. Baud rate -9600	VbCdSdc	16 56 62 43 64 53 64 63 2E
108. Baud rate -19200	VbCdUdc	16 56 62 43 64 55 64 63 2E
109. Baud rate -38400	VbCdVdc	16 56 62 43 64 56 64 63 2E
110. Baud rate -57600	VbCdWdc	16 56 62 43 64 57 64 63 2E
111. Baud rate -115200	VbCdVac	16 56 62 43 64 56 61 63 2E
112. Serial port transmission speed-low	JdGeKbc	16 4A 64 47 65 4B 62 63 2E
113. Serial port transmission speed-medium	JdGeVac	16 4A 64 47 65 56 61 63 2E
114. Serial port transmission speed-high	JdGeVa	16 4A 64 47 65 56 61 2E
115. Customize the delay time between characters	TdGeLa	16 4A 64 47 65 XX XX XX 2E

116. Scan Mode-Manual Mode	VbBeJb	16 56 62 42 65 4A 62 2E
117. Key-press timeout-unlimited	UaZcCb	16 55 61 5A 63 43 62 2E
118. Key timeout -3S	MdZcAbc	16 4D 64 5A 63 41 62 63 2E
119. Key timeout -5S	MdZcKbc	16 4D 64 5A 63 4B 62 63 2E
120. Key timeout -10S	MdZcJcc	16 4D 64 5A 63 4A 63 63 2E
121. Key timeout -15S	MdZcIdc	16 4D 64 5A 63 49 64 63 2E
122. Key timeout -20S	MdZcVaHa	16 4D 64 5A 63 56 61 48 61
123. ~ Custom key timeout	WdZcLa	16 4D 64 5A 63 XX XX XX 2E
124. Continuous reading mode	VbBeZa	16 56 62 42 65 5A 61 2E
125. Continuous mode same code delay-no delay	JdHeLa	16 4A 64 48 65 4C 61 2E
126. Continuous mode same code delay -100ms	JdHeVa	16 4A 64 48 65 56 61 2E
127. Continuous mode same code delay -200ms	JdHeFb	16 4A 64 48 65 46 62 2E
128. Continuous mode same code delay -800ms	JdHeNd	16 4A 64 48 65 4E 64 2E
129. Continuous mode same code delay -1200ms	JdHeXac	16 4A 64 48 65 58 61 63 2E
130. Continuous mode same code delay -2000ms	JdHeFbc	16 4A 64 48 65 46 62 63 2E
131. Continuous mode same code delay –No Timeout	RaHeCb	16 52 61 48 65 43 62 2E

132. ~ Customize the same barcode reading delay	TdHeLa	16 4A 64 48 65 XX XX XX 2E
133. Scan Mode-Induction Mode	VbBePa	16 56 62 42 65 50 61 2E
134. Induction mode-image stabilization time 50ms	OdCbVa	16 4F 64 43 62 56 61 2E
135. Induction mode-image stabilization time 100ms	OdCbFb	16 4F 64 43 62 46 62 2E
136. Induction mode-image stabilization time 150ms	OdCbPb	16 4F 64 43 62 50 62 2E
137. Induction mode-image stabilization time 200ms	OdCbZb	16 4F 64 43 62 5A 62 2E
138. Induction mode-image stabilization time 250ms	OdCbJc	16 4F 64 43 62 4A 63 2E
139. ~ Induction mode-custom image stabilization time	YdCbLa	16 4F- 64 43 62 XX XX XX 2E
140. Induction Mode-High Sensitivity	AcDbVa	16 41 63 44 62 56 61 2E
141. Induction Mode-Medium Sensitivity	AcDbFb	16 41 63 44 62 46 62 2E
142. Induction Mode-Low Sensitivity	AcDbPb	16 41 63 44 62 50 62 2E
143. Code ID-close	WaFbRa	16 57 61 46 62 52 61 2E
144. Code ID-open	WaFbBb	16 57 61 46 62 42 62 2E
145. AIM ID-close	QaXdQa	16 51 61 58 64 51 61 2E

146. AIM ID-open	QaXdAb	16 51 61 58 64 41 62 2E
147. ~ The first character of the custom prefix	NG	16 49 64 46 63 XX XX XX 2E
148. ~ The second character of the custom prefix	NG	16 49 64 47 63 XX XX XX 2E
149. ~ The third character of the custom prefix	NG	16 49 64 48 63 XX XX XX 2E
150. ~ The 4th character of the custom prefix	NG	16 49 64 49 63 XX XX XX 2E
151. ~ The 5th character of the custom prefix	NG	16 49 64 4A 63 XX XX XX 2E
152. ~ The 6th character of the custom prefix	NG	16 49 64 4B 63 XX XX XX 2E
153. ~ The 7th character of the custom prefix	NG	16 49 64 4C 63 XX XX XX 2E
154. ~ The 8th character of the custom prefix	NG	16 49 64 4D 63 XX XX XX 2E
155. ~ The 9th character of the custom prefix	NG	16 49 64 4E 63 XX XX XX 2E
156. ~ The 10th character of the custom prefix	NG	16 49 64 4F 63 XX XX XX 2E
157. Clear custom prefix	BeReSd	16 42 65 52 65 53 64 2E
158. ~ The first character of custom suffix	NG	16 49 64 50 63 XX XX XX 2E

159. ~ The second character of custom suffix	NG	16 49 64 51 63 XX XX XX 2E
160. ~ The third character of custom suffix	NG	16 49 64 52 63 XX XX XX 2E
161. ~ The 4th character of custom suffix	NG	16 49 64 53 63 XX XX XX 2E
162. ~ The 5th character of custom suffix	NG	16 49 64 54 63 XX XX XX 2E
163. ~ The 6th character of custom suffix	NG	16 49 64 55 63 XX XX XX 2E
164. ~ The 7th character of custom suffix	NG	16 49 64 56 63 XX XX XX 2E
165. ~ The 8th character of custom suffix	NG	16 49 64 57 63 XX XX XX 2E
166. ~ The 9th character of custom suffix	NG	16 49 64 58 63 XX XX XX 2E
167. ~ The 10th character of custom suffix	NG	16 49 64 59 63 XX XX XX 2E
168. Clear custom suffix	BeReRd	16 42 65 52 65 52 64 2E
169. Turn on hiding head characters	WaQbCb	16 57 61 51 62 43 62 2E
170. Turn off hiding head characters	WaQbSa	16 57 61 51 62 53 62 2E
171. ~ Number of hidden bits in header data	YdRbLa	16 4F 64 52 62 XX XX XX 2E

172. Turn on hiding middle characters	WaQbBb	16 57 61 51 62 42 62 2E
173. Turn off the hidden middle character	WaQbRb	16 57 61 51 62 52 62 2E
174. ~ Intermediate data hiding start bit	YdSbLa	16 4F 64 53 62 XX XX XX 2E
175. ~ Hidden bits of intermediate data	YdTbLa	16 4F 64 54 62 XX XX XX 2E
176. Turn on hiding tail characters	WaQbAb	16 57 61 51 62 41 61 2E
177. Turn off hiding tail characters	WaQbQa	16 57 61 51 62 51 61 2E
178. ~ The number of hidden bits in the tail data	YdUbLa	16 4F 64 55 62 XX XX XX 2E
179. Turn on display custom characters	WaQbYb	16 57 61 51 62 59 62 2E
180. Turn off display of custom characters	WaQbOa	16 57 61 51 62 4F 61 2E
181. ~ Set the position to insert custom characters	YdFcLa	16 4F 64 46 63 XX XX XX 2E
182. ~ Insert the first character	NG	16 4F 64 56 62 XX XX XX 2E
183. ~ Insert the second character	NG	16 4F 64 57 62 XX XX XX 2E
184. ~ Insert the third character	NG	16 4F 64 58 62 XX XX XX 2E
185. ~ Insert the 4th character	NG	16 4F 64 59 62 XX XX XX 2E
186. ~ Insert the 5th character	NG	16 4F 64 5A 62 XX XX XX 2E

187. ~ Insert the 6th character	NG	16 4F 64 41 63 XX XX XX 2E
188. ~ Insert the 7th character	NG	16 4F 64 42 63 XX XX XX 2E
189. ~ Insert the 8th character	NG	16 4F 64 43 63 XX XX XX 2E
190. ~ Insert the 9th character	NG	16 4F 64 44 63 XX XX XX 2E
191. ~ Insert the 10th character	NG	16 4F 64 45 63 XX XX XX 2E
192. ~ Character to be replaced	VdEeLa	16 4C 64 45 65 XX XX XX 2E
193. ~ Replacement character	VdFeLa	16 4C 64 46 65 XX XX XX 2E
194. Start Character-None	BbKdPa	16 42 62 4B 64 50 61 2E
195. Start Character-STX	BbKdJb	16 42 62 4B 64 4A 62 2E
196. End Character-ETX	BbKdZa	16 42 62 4B 64 5A 61 2E
197. Start and end character-STX+ETX	BbKdTb	16 42 62 4B 64 54 62 2E
198. Terminator-carriage return (0x0D)	LbKdGb	16 4C 62 4B 64 47 62 2E
199. Terminator-Line Feed (0x0A)	LbKdUc	16 4C 62 4B 64 55 63 2E
200. Terminator-CR + LF (0x0D0A)	LbKdWa	16 4C 62 4B 64 57 61 2E
201. Terminator-Tab HT (0x09)	LbKdQb	16 4C 62 4B 64 51 62 2E
202. Terminator-CR CR (0x0D0D)	LbKdAc	16 4C 62 4B 64 41 63 2E
203. Terminator-CR LF CR LF (0x0D0A0D0A)	LbKdKc	16 4C 62 4B 64 4B 63 2E
204. Terminator- None	LbKdMa	16 4C 62 4B 64 4D 61 2E

205. Open all types of barcode	GbYaXa	16 47 62 59 61 58 61 2E
206. Close all types of barcode	GbYaHb	16 47 62 59 61 48 62 2E
207. Open all 1D barcodes	GbYaZa	16 47 62 59 61 5A 61 2E
208. Close all 1D barcodes	GbYaJb	16 47 62 59 61 4A 62 2E
209. Open all 2D barcodes	GbYaBb	16 47 62 59 61 42 62 2E
210. Close all 2D barcodes	GbYaLb	16 47 62 59 61 4C 62 2E
211. UPC-A-open	QaYaBb	16 51 61 59 61 42 62 2E
212. UPC-A-close	QaYaRa	16 51 61 59 61 52 61 2E
213. UPC-A-send check character	QaTdCb	16 51 61 54 64 43 62 2E
214. UPC-A-do not send check character	QaTdSa	16 51 61 54 64 53 61 2E
215. UPC-A-open 2 additional digits	QaIbCb	16 51 61 49 62 43 62 2E
216. UPC-A-close 2 additional digits	QaIbSa	16 51 61 49 62 53 61 2E
217. UPC-A-open 5 additional digits	QaIbBb	16 51 61 49 62 42 62 2E
218. UPC-A-close 5 additional digits	QaIbRa	16 51 61 49 62 52 61 2E
219. UPC-A- Mandatory to include additional bits	QaIbYa	16 51 61 49 62 59 61 2E
220. UPC-A- It is not mandatory to include additional bits	QaIbOa	16 51 61 49 62 4F 61 2E

221. UPC-A-Turn on extra bit separator	QaIbXa	16 51 61 49 62 58 61 2E
222. UPC-A-Turn off extra bit separator	QaIbNa	16 51 61 49 62 4E 61 2E
223. UPC-A-send system character	QaTdWa	16 51 61 54 64 57 61 2E
224. UPC-A-do not send system character	QaTdMa	16 51 61 54 64 4D 61 2E
225. UPC-A-convert to EAN-13	QaTdVa	16 51 61 54 64 5A 61 2E
226. UPC-A-do not convert to EAN-13	QaTdLa	16 51 61 54 64 50 61 2E
227. UPC-E0-open	QaYaVa	16 51 61 59 61 56 61 2E
228. UPC-E0-close	QaYaLa	16 51 61 59 61 4C 61 2E
229. UPC-E1-open	WaYaVa	16 57 61 59 61 56 61 2E
230. UPC-E1-close	WaYaLa	16 57 61 59 61 4C 61 2E
231. UPC-E-send check character	QaTdBb	16 51 61 54 64 42 62 2E
232. UPC-E-do not send check character	QaTdRa	16 51 61 54 64 52 61 2E
233. UPC-E-open 2 additional digits	QaIbCb	16 51 61 49 62 43 62 2E
234. UPC-E-close 2 additional digits	QaIbSa	16 51 61 49 62 53 61 2E
235. UPC-E-open 5 additional digits	QaIbBb	16 51 61 49 62 42 62 2E

236. UPC-E-close 5 additional digits	QaIbRa	16 51 61 49 62 52 61 2E
237. UPC-E- Mandatory to include additional bits	QaIbYa	16 51 61 49 62 59 61 2E
238. UPC-E- it is not mandatory to include additional bits	QaIbOa	16 51 61 49 62 4F 61 2E
239. UPC-E- Turn on extra bit separator	QaIbXa	16 53 61 41 65 58 61 2E
240. UPC-E- Turn off extra bit separator	QaIbNa	16 53 61 41 65 4E 61 2E
241. UPC-E-send system character	QaTdYa	16 51 61 54 64 59 61 2E
242. UPC-E-do not send system character	QaTdOa	16 51 61 54 64 4F 61 2E
243. UPC-E-convert to UPC-A	QaTdAb	16 51 61 54 64 41 62 2E
244. UPC-E-do not convert to UPC-A	QaTdQa	16 51 61 54 64 51 61 2E
245. EAN/JAN-8-open	QaYaZa	16 51 61 59 61 5A 61 2E
246. EAN/JAN-8-close	QaYaPa	16 51 61 59 61 50 61 2E
247. EAN/JAN-8-send check character	QaXdVa	16 51 61 58 64 56 61 2E
248. EAN/JAN-8-do not send check character	QaXdLa	16 51 61 58 64 4C 61 2E
249. EAN/JAN-8-open 2 additional digits	QaIbCb	16 51 61 49 62 43 62 2E

250. EAN/JAN-8-close2 additional digits	QaIbSa	16 51 61 49 62 53 61 2E
251. EAN/JAN-8-open 5 additional digits	QaIbBb	16 51 61 49 62 42 62 2E
252. EAN/JAN-8-close 5 additional digits	QaIbRa	16 51 61 49 62 52 61 2E
253. EAN/JAN-8 Mandatory to include additional bits	QaIbYa	16 51 61 49 62 59 61 2E
254. EAN/JAN-8 it is not mandatory to include additional bits	QaIbOa	16 51 61 49 62 4F 61 2E
255. EAN/JAN-8 Turn on extra bit separator	QaIbXa	16 51 61 49 62 58 61 2E
256. EAN/JAN-8 Turn off extra bit separator	QaIbNa	16 51 61 49 62 4E 61 2E
257. EAN/JAN-8-convert to EAN-13	QaTdXa	16 51 61 54 64 58 61 2E
258. EAN/JAN-8-it is not convert to EAN-13	QaTdNa	16 51 61 54 64 4E 61 2E
259. EAN/JAN -13-open	QaYaWa	16 51 61 59 61 57 61 2E
260. EAN/JAN -13-close	QaYaMa	16 51 61 59 61 4D 61 2E
261. EAN/JAN-13-send check character	QaXdXa	16 51 61 58 64 58 61 2E
262. EAN/JAN-13-do not send check character	QaXdNa	16 51 61 58 64 4E 61 2E

263. EAN/JAN-13-open 2 additional digits	QaIbCb	16 51 61 49 62 43 62 2E
264. EAN/JAN-13-close 2 additional digits	QaIbSa	16 51 61 49 62 53 61 2E
265. EAN/JAN-13-open 5 additional digits	QaIbBb	16 51 61 49 62 42 62 2E
266. EAN/JAN-13-close 5 additional digits	QaIbRa	16 51 61 49 62 52 61 2E
267. EAN/JAN-13 Mandatory to include additional bits	QaIbYa	16 51 61 49 62 59 61 2E
268. EAN/JAN-13 it is not mandatory to include additional bits	QaIbOa	16 51 61 49 62 4F 61 2E
269. EAN/JAN-13 Turn on extra bit separator	QaIbXa	16 51 61 49 62 58 61 2E
270. EAN/JAN-13 Turn off extra bit separator	QaIbNa	16 51 61 49 62 4E 61 2E
271. EAN/JAN -13-open ISBN conversion	QaJbCb	16 51 61 4A 62 43 62 2E
272. EAN/JAN -13-close ISBN conversion	QaJbSa	16 51 61 4A 62 53 61 2E
273. Send ISBN check character	QaJbAb	16 51 61 4A 62 41 62 2E
274. Donjot send ISBN check character	QaJbQa	16 51 61 4A 62 51 61 2E

275. EAN/JAN -13-open ISSN conversion	RaVcCb	16 52 61 56 63 43 62 2E
276. EAN/JAN -13-close ISSN conversion	RaVcSa	16 52 61 56 63 53 61 2E
277. ISSN-open	QaTdXa	16 51 61 54 64 58 61 2E
278. ISSN –close	QaTdNa	16 51 61 54 64 4E 61 2E
279. ISSN send check character	RaVcAb	16 52 61 56 63 41 62 2E
280. ISSN do not send check character	RaVcQa	16 52 61 56 63 51 61 2E
281. Code 128-open	QaXaYa	16 51 61 58 61 59 61 2E
282. Code 128-close	QaXaOa	16 51 61 58 61 4F 61 2E
283. ~Code 128-minimum length	XdIbLa	16 4E 64 49 62 XX XX XX 2E
284. ~Code 128-maximum length	XdJbLa	16 4E 64 4A 62 XX XX XX 2E
285. GS1-128-open	RaYcVa	16 52 61 59 63 56 61 2E
286. GS1-128-close	RaYcLa	16 52 61 59 63 4C 61 2E
287. ~GS1-128-minimum length	XdKbLa	16 4E 64 4B 62 XX XX XX 2E
288. ~GS1-128-maximum length	XdLbLa	16 4E 64 4C 62 XX XX XX 2E
289. ISBT 128-turn on connection	TaCeCb	16 54 61 43 65 43 62 2E
290. ISBT 128-turn off connection	TaCeSa	16 54 61 43 65 53 61 2E
291. Code 39-open	QaXaWa	16 51 61 58 61 57 61 2E
292. Code 39-close	QaXaMa	16 51 61 58 61 4D 61 2E

293. Code 39-open Mode43 check	QaYaYa	16 51 61 59 61 59 61 2E
294. Code 39-close check	QaYaOa	16 51 61 59 61 4F 61 2E
295. Code 39-send check character	QaVdAb	16 51 61 56 64 41 62 2E
296. Code 39-do not send check character	QaVdQa	16 51 61 56 64 51 61 2E
297. Code 39-send start and end characters	QaVdVa	16 51 61 56 64 56 61 2E
298. Code 39-do not sned start and end character	QaVdLa	16 51 61 56 64 4C 61 2E
299. Code 39-open FullASCII	QaYaCb	16 51 61 59 61 43 62 2E
300. Code 39-close FullASCII	QaYaSa	16 51 61 59 61 53 61 2E
301. ~Code 39-minimum length	XdMbLa	16 4E 64 4D 62 XX XX XX 2E
302. ~Code 39-maximum length	XdNbLa	16 4E 64 4E 62 XX XX XX 2E
303. Code 32 –open	QaYaAb	16 51 61 59 61 41 62 2E
304. Code 32 –close	QaYaQa	16 51 61 59 61 51 61 2E
305. Code 32 –Turn on verification transmission	WaYaWa	16 57 61 59 61 57 61 2E
306. Code 32 - Turn off verification transmission	WaYaMa	16 57 61 59 61 4D 61 2E
307. Code 32-add A before the barcode	QaVdXA	16 51 61 56 64 58 61 2E
308. Code 32-do not add A before the barcode	QaVdNa	16 51 61 56 64 4E 61 2E

309. Open Code 32 failure reading	QaZaCb	16 51 61 5A 61 43 62 2E
310. Close Code 32 failure reading	QaZaSa	16 51 61 5A 61 53 61 2E
311. Code 93-open	QaXaXa	16 51 61 58 61 58 61 2E
312. Code 93-close	QaXaNa	16 51 61 58 61 4E 61 2E
313. ~Code 93-minimum length	XdEcLa	16 4E 64 45 63 XX XX XX 2E
314. ~Code 93-maximum length	XdFcLa	16 4E 64 46 63 XX XX XX 2E
315. Code 11-open	QaWaYa	16 51 61 57 61 59 61 2E
316. Code 11-close	QaWaOa	16 51 61 57 61 4F 61 2E
317. Code 11-1 check character	QaYdQa	16 51 61 59 64 51 61 2E
318. Code 11-2 check characters	QaYdAb	16 51 61 59 64 41 62 2E
319. Code 11-send check character	QaVdYa	16 51 61 56 64 59 61 2E
320. Code 11-do not sned check character	QaVdOa	16 51 61 56 64 4F 61 2E
321. ~Code 11-minimum length	XdObLa	16 4E 64 4F 62 XX XX XX 2E
322. ~Code 11-maximum length	XdPbLa	16 4E 64 50 62 XX XX XX 2E
323. Codabar-open	QaXaZa	16 51 61 58 61 5A 61 2E
324. Codabar-close	QaXaPa	16 51 61 58 61 50 61 2E
325. Codabar-no check	QaAbLa	16 51 61 41 62 4C 61 2E
326. Codabar-Mod 16 check	QaAbVa	16 51 61 41 62 56 61 2E
327. Codabar-send check character	QaYdBb	16 51 61 59 64 42 62 2E
328. Codabar-do not send check	QaYdRa	16 51 61 59 64 52 61 2E

character		
329. Codabar-send start and end characters	QaVdCb	16 51 61 56 64 43 62 2E
330. Codabar-do not sned start and end characters	QaVdSa	16 51 61 56 64 53 61 2E
331. Codabar- ABCD/ABCD	WaMbSa	16 57 61 4D 62 53 61 2E
332. Codabar- ABCD/TN*E	WaMbCb	16 57 61 4D 62 43 62 2E
333. ~Codabar –minimum length	XdGcLa	16 4E 64 47 63 XX XX XX 2E
334. ~Codabar –maximum length	XdHcLa	16 4E 64 48 63 XX XX XX 2E
335. Interleaved 2 of 5-open	QaXaAb	16 51 61 58 61 41 62 2E
336. Interleaved 2 of 5-close	QaXaQa	16 51 61 58 61 51 61 2E
337. Interleaved 2 of 5-close check	QaZaLa	16 51 61 5A 61 4C 61 2E
338. Interleaved 2 of 5-open Mod10 check	QaZaVa	16 51 61 5A 61 56 61 2E
339. Interleaved 2 of 5-send Mod 10 check	QaVdZa	16 51 61 56 64 5A 61 2E
340. Interleaved 2 of 5-do not send Mod 10 check	QaVdPa	16 51 61 56 64 50 61 2E
341. ~Interleaved 2 of 5 –minimum length	QaXaAb	16 4E 64 53 62 XX XX XX 2E
342. ~Interleaved 2 of 5 –maximum length	QaXaQa	16 4E 64 54 62 XX XX XX 2E
343. Matrix 2 of 5-open	QaWaAb	16 51 61 57 61 41 62 2E

344. Matrix 2 of 5-close	QaWaQa	16 51 61 57 61 51 61 2E
345. Matrix 2 of 5-open check	AbBbBb	16 41 62 42 62 42 62 2E
346. Matrix 2 of 5-close check	AbBbRa	16 41 62 42 62 52 61 2E
347. Matrix 2 of 5-open check , do not send check character	AbBbLb	16 41 62 42 62 4C 62 2E
348. ~Matrix 2 of 5 –minimum length	XdYbLa	16 4E 64 59 62 XX XX XX 2E
349. ~Matrix 2 of 5 –maximum length	XdZbLa	16 4E 64 5A 62 XX XX XX 2E
350. Industrial 2 of 5-open	QaXaVa	16 51 61 58 61 56 61 2E
351. Industrial 2 of 5-close	QaXaLaQ	16 51 61 58 61 4C 61 2E
352. ~Industrial 2 of 5 –minimum length	XdUbLa	16 4E 64 55 62 XX XX XX 2E
353. ~Industrial 2 of 5 –maximum length	XdVbLa	16 4E 64 56 62 XX XX XX 2E
354. Standard 2 of 5-open	QaWaZa	16 51 61 57 61 5A 61 2E
355. Standard 2 of 5-close	QaWaPa	16 51 61 57 61 50 61 2E
356. ~Standard 2 of 5 –minimum length	XdWbLa	16 4E 64 57 62 XX XX XX 2E
357. ~Standard 2 of 5 –maximum length	XdXbLa	16 4E 64 58 62 XX XX XX 2E
358. MSI-open	QaYaXa	16 51 61 59 61 58 61 2E
359. MSI-close	QaYaNa	16 51 61 59 61 4E 61 2E

360. MSI-no check	AbDbPa	16 41 62 44 62 50 61 2E
361. MSI 1 Mod 10 check character	AbDbJb	16 41 62 44 62 4A 62 2E
362. MSI 2 Mod 10 check characters	AbDbTb	16 41 62 44 62 54 62 2E
363. MSI- Mod 11/10 check	AbDbZa	16 41 62 44 62 5A 61 2E
364. MSI-send check character	QaVdWa	16 51 61 56 64 57 61 2E
365. MSI-do not send check character	QaVdMa	16 51 61 56 64 4D 61 2E
366. ~MSI –minimum length	XdCcLa	16 4E 64 43 63 XX XX XX 2E
367. ~MSI –maximum length	XdDcLa	16 4E 64 44 63 XX XX XX 2E
368. Telepen-open	QaWaCb	16 51 61 57 61 43 62 2E
369. Telepen –close	QaWaSa	16 51 61 57 61 53 61 2E
370. Telepen-nimber type	QaWaBb	16 51 61 57 61 42 61 2E
371. Telepen-letter type	QaWaRa	16 51 61 57 61 52 62 2E
372. ~Telepen –minimum length	XdQbLa	16 4E 64 51 62 XX XX XX 2E
373. ~Telepen –maximum length	XdRbLa	16 4E 64 52 62 XX XX XX 2E
374. Telepen-open	QaWaCb	16 51 61 57 61 43 62 2E
375. Telepen –close	QaWaSa	16 51 61 57 61 53 61 2E
376. Febraban-open (ITF25)	WaNbVa	16 57 61 4E 62 56 61 2E
377. Febraban –close (ITF25)	WaNbLa	16 57 61 4E 62 4C 61 2E
378. Febraban-open (Code128)	WaNbWa	16 57 61 4E 62 57 61 2E

379. Febraban –close (Code128)	WaNbMa	16 57 61 4E 62 4D 61 2E
380. Febraban-open check	WaNbXa	16 57 61 4E 62 58 61 2E
381. Febraban-close check	WaNbNa	16 57 61 4E 62 4E 61 2E
382. GS1 DataBar 14-open	QaAbYa	16 51 61 41 62 59 61 2E
383. GS1 DataBar 14-close	QaAbOa	16 51 61 41 62 4F 61 2E
384. GS1 DataBar Limited-open	QaAbZa	16 51 61 41 62 5A 61 2E
385. GS1 DataBar Limited-close	QaAbPa	16 51 61 41 62 50 61 2E
386. GS1 DataBar Expanded-open	QaAbZa	16 51 61 41 62 41 62 2E
387. GS1 DataBar Expanded-close	QaAbPaQ	16 51 61 41 62 51 61 2E
388. ~GS1 DataBarExpanded-minimum length	XdIcLa	16 4E 64 49 63 XX XX XX 2E
389. GS1 DataBarExpanded-maximum length	XdJcLa	16 4E 64 4A 63 XX XX XX 2E
390. QR Code-open	QaCbXa	16 51 61 43 62 58 61 2E
391. QR Code-close	QaCbNa	16 51 61 43 62 4E 61 2E
392. QR Code-normal only	QaCbOa	16 51 61 43 62 4F 61 2E
393. QR Code-normal + reverse	AbCbYa	16 51 61 43 62 59 61 2E
394. ~QR Code-minimum length (low byte)	XdYdLa	16 4E 64 59 64 XX XX XX 2E
395. ~QR Code-minimum length (high byte)	XdZdLa	16 4E 64 5A 64 XX XX XX 2E

396. ~QR Code-maximum length (low byte)	XdAeLa	16 4E 64 41 65 XX XX XX 2E
397. ~QR Code-maximum length (high byte)	XdBeLa	16 4E 64 42 65 XX XX XX 2E
398. Micro QR Code-open	QaCbAb	16 51 61 43 62 41 62 2E
399. Micro QR Code-close	QaCbQa	16 51 61 43 62 51 61 2E
400. Micro QR Code-normal only	QaCbRa	16 51 61 43 62 52 61 2E
401. Micro QR Code-normal + reverse	QaCbBb	16 51 61 43 62 42 62 2E
402. Data Matrix-open	QaBbYa	16 51 61 42 62 59 61 2E
403. Data Matrix-close	QaBbOa	16 51 61 42 62 4F 61 2E
404. Data Matrix- Allow reading rectangular codes	QaBbWa	16 51 61 42 62 57 61 2E
405. Data Matrix- prohibit reading rectangular codes	QaBbMa	16 51 61 42 62 4D 61 2E
406.		
407. Data Matrix –normal only	QaBbNa	16 51 61 42 62 4E 61 2E
408. Data Matrix –normal + reverse	QaBbXa	16 51 61 42 62 58 61 2E
409. ~Data Matrix –minimum length (low byte)	XdUdLa	16 4E 64 55 64 XX XX XX 2E
410. ~Data Matrix –minimum length (high byte)	XdVdLa	16 4E 64 56 64 XX XX XX 2E

411. ~Data Matrix –maximum length (low byte)	XdWdLa	16 4E 64 57 64 XX XX XX 2E
412. ~Data Matrix –maximum length (high byte)	XdXdLa	16 4E 64 58 64 XX XX XX 2E
413. PDF 417-open	QaWaVa	16 51 61 57 61 56 61 2E
414. PDF 417-close	QaWaLa	16 51 61 57 61 4C 61 2E
415. ~PDF 417 –minimum length (low byte)	XdGdLa	16 4E 64 47 64 XX XX XX 2E
416. ~PDF 417 –minimum length (high byte)	XdHdLa	16 4E 64 48 64 XX XX XX 2E
417. ~PDF 417 –maximum length (low byte)	XdIdLa	16 4E 64 49 64 XX XX XX 2E
418. ~PDF 417 –maximum length (high byte)	XdJdLa	16 4E 64 4A 64 XX XX XX 2E
419. Micro PDF 417-open	QaAbCb	16 51 61 41 62 43 62 2E
420. Micro PDF 417-close	QaAbSa	16 51 61 41 62 53 61 2E
421. ~Micro PDF 417 –minimum length (low byte)	XdKdLa	16 4E 64 4B 64 XX XX XX 2E
422. ~Micro PDF 417 –minimum length (high byte)	XdLdLa	16 4E 64 4C 64 XX XX XX 2E
423. ~Micro PDF 417 –maximum length (low byte)	XdMdLa	16 4E 64 4D 64 XX XX XX 2E
424. ~Micro PDF 417 –maximum length (high byte)	XdNdLa	16 4E 64 4E 64 XX XX XX 2E

425. MaxiCode-open	QaCbZa	16 51 61 43 62 5A 61 2E
426. MaxiCode-close	QaCbPa	16 51 61 43 62 50 61 2E
427. ~MaxiCode –minimum length	XdSdLa	16 4E 64 53 64 XX XX XX 2E
428. ~MaxiCode –maximum length	XdTdLa	16 4E 64 54 64 XX XX XX 2E
429. Aztec –open	QaCbVa	16 51 61 43 62 56 61 2E
430. Aztec-close	QaCbLa	16 51 61 43 62 4C 61 2E
431. Aztec –normal only	QaCbMa	16 51 61 43 62 4D 61 2E
432. Aztec –normal + reverse	QaCbWa	16 51 61 43 62 57 61 2E
433. ~Aztec –minimum length (low byte)	XdOdLa	16 4E 64 4F 64 XX XX XX 2E
434. ~Aztec –minimum length (high byte)	XdPdLa	16 4E 64 50 64 XX XX XX 2E
435. ~Aztec –maximum length (low byte)	XdQdLa	16 4E 64 51 64 XX XX XX 2E
436. ~Aztec –maximum length (high byte)	XdRdLa	16 4E 64 52 64 XX XX XX 2E
437. HanXin-open	SaRdWa	16 53 61 52 64 57 61 2E
438. HanXin-close	SaRdMa	16 53 61 52 64 4D 61 2E
439. ~HanXin –minimum length (low byte)	XdCeLa	16 4E 64 43 65 XX XX XX 2E
440. ~HanXin –minimum length (high byte)	XdDeLa	16 4E 64 44 65 XX XX XX 2E

441. ~HanXin –maximum length (low byte)	XdEeLa	16 4E 64 45 65 XX XX XX 2E
442. ~HanXin –maximum length (high byte)	XdFeLa	16 4E 64 46 65 XX XX XX 2E
443. China Post-open	QaZaBb	16 51 61 5A 61 42 62 2E
444. China Post-close	QaZaRa	16 51 61 5A 61 52 61 2E
445. ~China Post –minimum length	XdOcLa	16 4E 64 4F 63 XX XX XX 2E
446. ~China Post –maximum length	XdPcLa	16 4E 64 50 63 XX XX XX 2E
447. GS1 Composte Code-open	RaUcBb	16 52 61 55 63 42 62 2E
448. GS1 Composte Code-close	RaUcRa	16 52 61 55 63 5261 2E
449. ~GS1 Composte Code –minimum length (low byte)	XdKcLa	16 4E 64 4B 63 XX XX XX 2E
450. ~GS1 Composte Code –minimum length (high byte)	XdLcLa	16 4E 64 4C 63 XX XX XX 2E
451. ~GS1 Composte Code –maximum length (low byte)	XdMcLa	16 4E 64 4D 63 XX XX XX 2E
452. ~GS1 Composte Code –maximum length (high byte)	XdNcLa	16 4E 64 4E 63 XX XX XX 2E
453. Enter/Exit data code setting mode	BeReGe	16 42 65 52 65 47 65 2E
454. Restart	BeReBd	16 42 65 52 65 42 64 2E

Appendix-Specification of Variable Parameter Instructions

Take minimum number 10 and maximum number 30 of Code 128 as an example.

XXXX XX in the instruction represents the ASCII code of the specific value of the variable parameter, which is fixed to 3 values.

Therefore, the ASCII code value corresponding to 10 is 30 31 30, and the ASCII code value corresponding to 30 is 30 33 30.

Finally, the instructions that need to be set correspond to --

Code128 minimum number	16 4E 64 49 62 30 31 30 2E
Code 128 maximum number	16 4E 64 4A 62 30 33 30 2E