1D Barcode Scanner
Setting Manual

Revision History

Version	Description	Data
V1.0	Initial Version	2016-06-07
V1.01	Add Instructions	2016-06-16
V1.02	Increase USB fast transmit, increase the serial port command to send voice feedback, increase the serial port command to save the settings	2016-06-25
V1.03	Add hidden bar code characters	2016-07-05
V1.04	Added flash mode. Adjust some pins	2016-10-21
V1.05	Increase China Post setting barcode	2016-11-25
V1.07	Increase sound frequency and size settings	2017-03-20
V1.10	Increase sensor mode settings and increase instruction set (1500 Points Not Supported)	2017-04-05
V1.11	Adding Prefix and Suffix Setting Codes for Some Special Characters	2017-07-19
V1.12	Adding User Default Settings	2017-10-20
V1.2	Adding USB-HID Mode Settings, Part of Custom Function Description (1500 Points Not Supported)	2018-10-21
V1.21	New Sound-related Function Settings	2019-05-06

Table of Contents

Chapter1 System Settings

Introduction

The user can set the function of the barcode reader by scanning one or more setting barcodes。

Scanning Instructions

In the Trigger Mode, the scanning barcode operation steps are as follows

1. Hold down the trigger key of the barcode reader, the line of sight is activated, red red line of sight appears。

2. Align the red line of sight with the bar code center, move the bar code reader and adjust the distance between it and the bar code to find the best reading distance。

3. After hearing the successful prompt sound, and the red lighting line is extinguished, the reading is successful, and the barcode reader transmits the decoded data to the host.。

Note: During the reading process, you will find the distance between the barcode reader and the barcode within a certain range for the barcode of the same batch, and the reading success rate will be very high. This distance is the best reading distance.

Restore Defaults

All barcode readers have a factory default setting. Reading the "Restore default settings" barcode will restore all barcode reader property settings to the factory state.

You are most likely to use this bar code in the following situations：

1、Error in barcode reader settings, such as barcode not recognized.

2、You have forgotten what settings were made for the barcode reader before, and you do not want to use the previous settings。

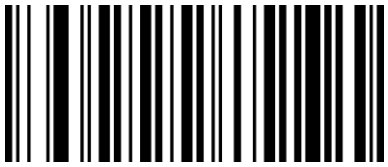
3、The bar code reader is set to use some infrequently used features and is used after completion。

000B0

Restore default settings

version

Use the scanner to scan the version number bar code, you can view the current bar coder version number information

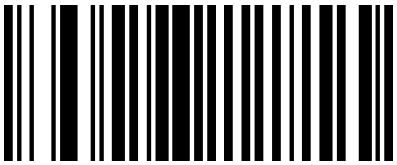


000A0

version

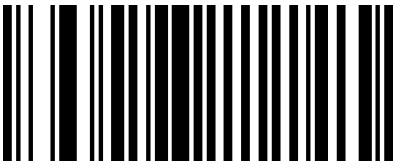
User default settings

You can customize "user default settings" according to your needs. When the user sets the corresponding settings code, it will replace the original default factory settings. Even the user configuration set before power failure will not be lost.



00000

User default settings



00001

Replace with factory default settings

Instructions:

1. Read "Open Settings Code" bar code 09990 (default is open, no scanning is required);
2. Read the bar code of the corresponding function.
3. Read the "User Default Settings" bar code 00000;
4. Read the "Replace and Restore Default Settings" bar code 00001;
5. Read the "Close Settings Code" bar code 09991.

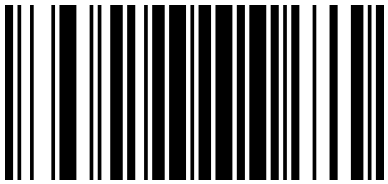
Note: When the above two barcodes are used together, you can save the current set function as the factory default value after following the above steps. Even after scanning the "Restore factory default" barcode 000B0, it will still be the current set function.

Use Settings Code

Setting codes are used as a special bar code. We can scan different settings codes to achieve different functions for scanners. CODE 128 barcode type is selected when making setting code, and the format of ^ 3 + barcode coding is used to make setting code.

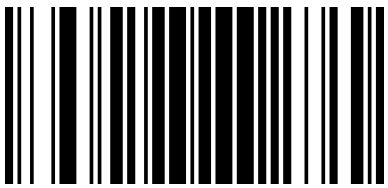
Start off setting code

The setting code can be turned off. When the barcode reader is set to “Enter Setup”, the setup function will work when the setup code is scanned. When the barcode reader is set to “Exit Setup”, the scanner engine will scan the setup code. There will be an error tone, the setting function will not work, the default is "Enter Setup".



09990

Enter Setup*

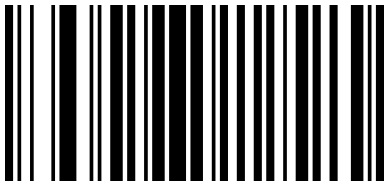


09991

Exit Setup

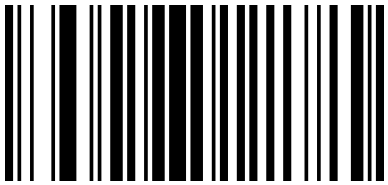
Programming Barcode Data

Programming barcode data can be transmitted to the Host. Scan the appropriate barcode below to enable or disable the transmission of programming barcode data (i.e. the characters under programming barcode) to the Host.Default is setting code not send.



02501

Transmit Programming Barcode Data



02500

Not Transmit Programming Barcode Data *

Sound settings

The scanner will have different prompt sounds in use, including boot-up sounds, scan settings sounds, and scan ordinary codes sounds. You can turn off or turn on the corresponding prompt sounds according to your needs.

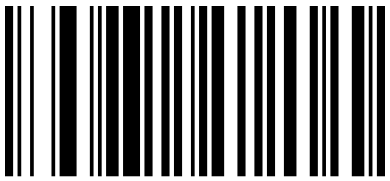
Turn on all sounds: turn on the boot sound, turn on the set code sound, turn on the ordinary code sound;

Turn off all sounds: turn off the boot sound, turn on the setup code, and turn on the normal code.

Turn off the normal code sound: turn on the boot sound, turn on the set code sound, and turn off the normal code sound.

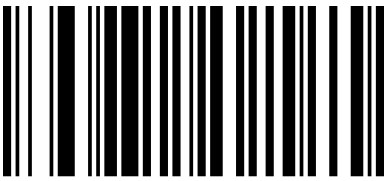
Open Settings Sound: Turn off boot-up sound, turn on Settings Sound, turn off Settings Sound.

The default is "Turn on all sounds".



014201

Turn on all sounds *



014200

Turn off all sounds

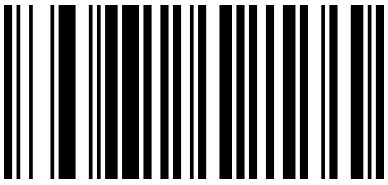
014203

Turn off the normal code sound

014207

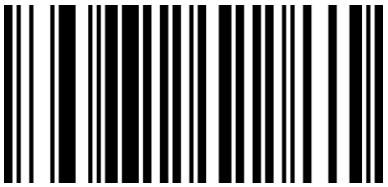
Open Settings Sound

Increased/decreased sound



014300

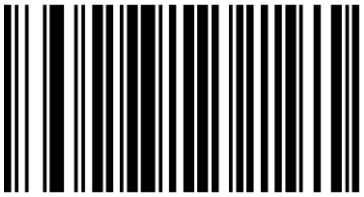
Increased sound



014301

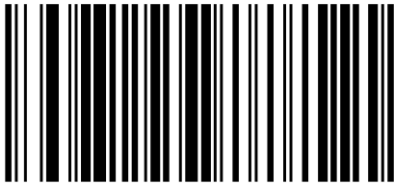
Reduced sound

Sound frequency



0145800

2.0KHZ*



0145AAA

2.7KHZ

Instructions:

Set the scanner frequency to 2730 HZ.

1. Firstly, the decimal 2730 is converted to hexadecimal value, namely AAA.

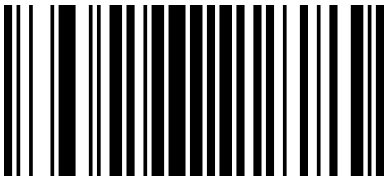
2. According to the coding rules of setting codes, the corresponding setting codes are made as [^30145AAA].

3. The settings can be completed by scanning the settings codes directly.

USB transmission speed

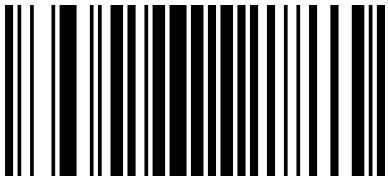
This bar coder supports adjusting data transmission speed. For some non-standard USB input used in WINDOWS devices, such as the USB interface converted by PS2, the security and integrity of data output can be reduced by properly reducing the transmission speed of the bar coder.

The default is "No USB Fast Transfer".



02301

Allow USB Fast Transfer

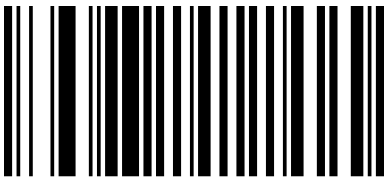


02300

No USB Fast Transfer *

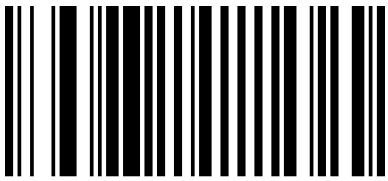
You can adjust the transmission speed of USB according to adjusting the delay between data characters. The smaller the delay, the faster the transmission speed. Conversely, the slower the transmission speed. You can customize the delay between characters according to your needs. You can set the delay time range to 0-30MS, and set the code code to ^ 3+0145+the hexadecimal value of delay/2MS.

Default is "Delay 4MS".



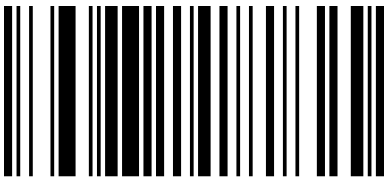
001500

No delay (fastest)



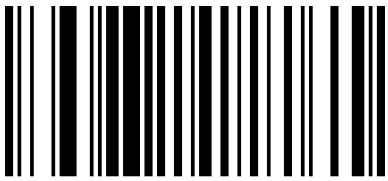
001502

Delay 4MS*



001504

Delay 8MS



001506

Delay 12MS

Instructions:

Set the inter-character delay to 24MS.

1. First, the value of delay time/2MS is 12, corresponding to the hexadecimal value of 0C.

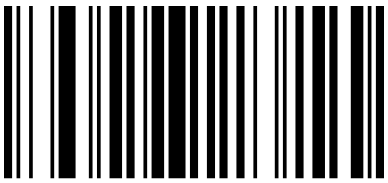
2. Set the code to ^ 300150C;

3. Making bar codes of setting codes according to the coding of setting codes;

3. The settings can be completed by scanning the settings codes directly.

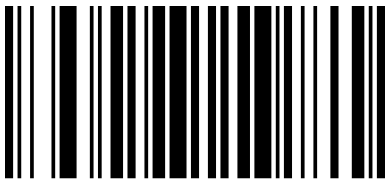
Image recognition method

The barcode reader supports the recognition of reverse-colored images (anti-white bar codes). The user can set whether or not the image needs to be reversed according to the requirements. The default is forward image recognition。



00161

Forward image recognition*



00160

Reverse image recognition

Chapter2Communication setting

Introduction

When using this barcode to communicate with different hosts, you need to set the barcode reader to the corresponding communication interface mode.

The user can set the barcode scanner function by scanning one or more settingbarcodes.

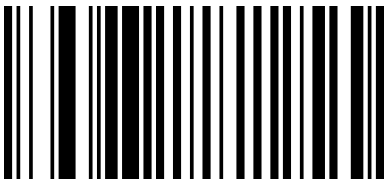
Users can choose to use USB-KBW,,TTL / RS232 serial communication interface mode.

USB interface

In the mode of USB interface, there are three kinds of communication protocols to choose. The default mode is USB-KBW, that is, USB keyboard mode, which simulates the transmission of data from USB keyboard to host computer.

USB-KBW Mode

By default, the barcode reader uses USB-KBW communication to simulate the USB keyboard input mode without installing a driver.



000602

USB-KBW*

Country/language keyboard layout selection

Different national languages correspond to the keyboard keys arrangement, symbols, etc. are different, the barcode scanner can be virtual according to the actual needs of different countries keyboard.

0005000

USA/China (English) *

0005001

Canada (French)

0005002

Netherlands (Dutch)

0005003

Spain (Spanish - International)

0005004

Argentina (Latin American)

0005005

Brazil (Portuguese)

0005006

Denmark (Danish)

0005007

United Kingdom (British English)

0005008

Italy (Italian)

0005009

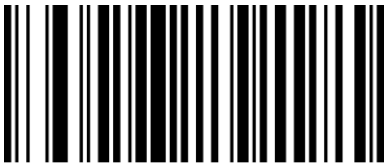
France (French)

0005010

Germany (Slang)

0005011

Norway (North Sami)



0005012

Sweden/Finland (Swedish/Finnish)

0005013

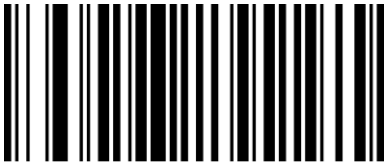
Slovak (Slovak)

0005014

Portugal (Portuguese)

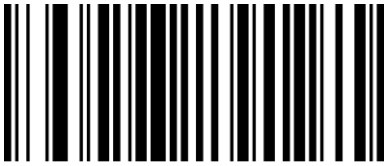
0005015

Czech Republic (Czech)



0005016

Belgium (Dutch)



0005017

Turkish-F

0005018

Turkish-Q

0005019

Poland (Polish 214)

0005020

Switzerland (German/French)

0005021

Croatian (Croatian)

0005022

Hungary (Hungarian)

0005023

Japan (Japanese)

0005024

Russia (Russian)

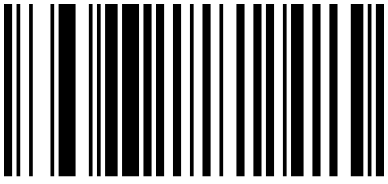
0005025

Arabic (Egypt)

TTL/RS232 mode

The serial communication interface is a common way to connect barcode and host devices and can be used to connect host devices such as PC and POS.

When using the serial communication interface of the barcode scanner, the barcode scanner and the host device must be completely matched in the configuration parameters of the serial communication protocol to ensure the accuracy of data transmit.

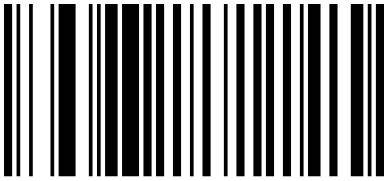


000601

TTL/RS232

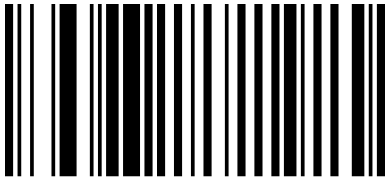
Baud rate

Baud rate is the number of bits transmitted per second for serial data communication. The baud rate used by the barcode reader and the data receiving host must be consistent to ensure the accuracy of data transmit. The bar coder supports the baud rates listed below, in bits/s.



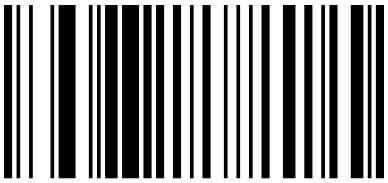
000701

600bps



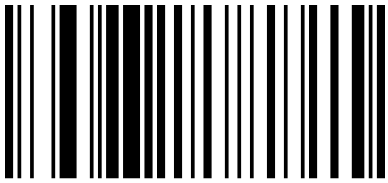
000702

1200bps



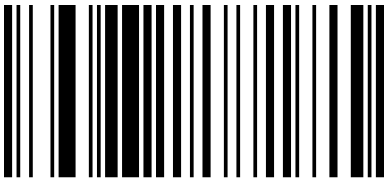
000703

2400bps



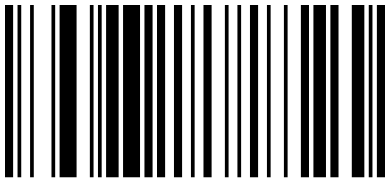
000704

4800bps



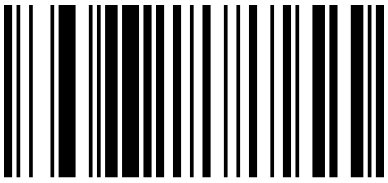
000705

9600bps*



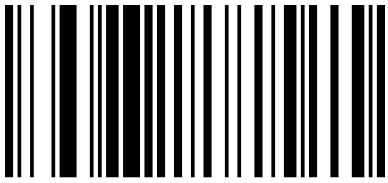
000706

19200bps



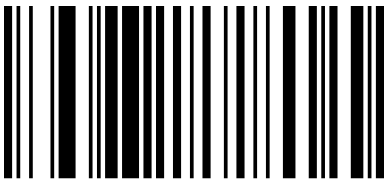
000707

38400bps



000708

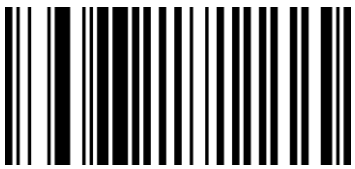
57600bps



000709

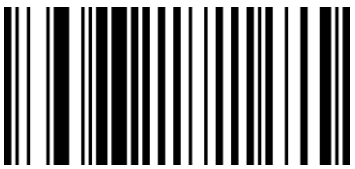
115200bps

Parity bit



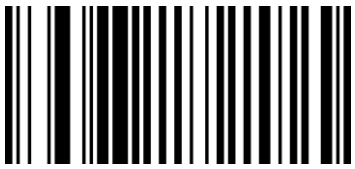
001001

Odd parity check



001002

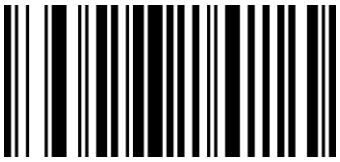
Parity check



001000

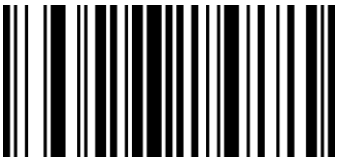
No check （NONE）*

Data bits



00080

8-bit data bits *



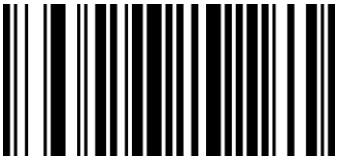
00081

7-bit data bits

Stop bit

00090

1*



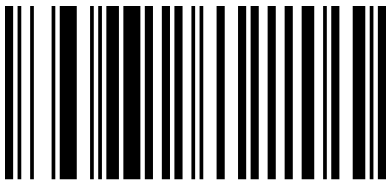
00091

2

Chapter3 Reading mode

Trigger Mode

The user can set the reading mode of the barcode reader according to the needs. The default state is the Trigger Mode. In this mode, the barcode reader starts reading after pressing the trigger button, and the barcode reader stops reading after successfully reading or unlocking the trigger button.

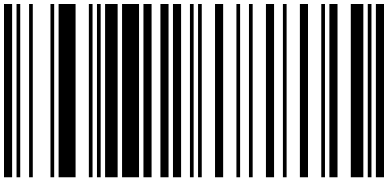


013300

Trigger Mode*

Continuous scanning mode

After the setting is completed, the red light is in a long light state. When a bar code passes through, the bar code reader automatically reads the bar code. The same barcode cannot be read repeatedly unless it is removed again.



013304

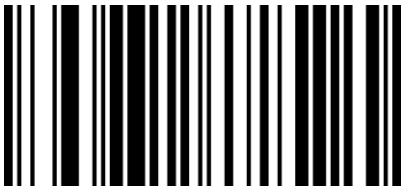
Continuous scanning mode

Flashing mode

When the settings are finished, manual trigger is needed to open the scan. The red light of the barcoder is flashing, and the barcoder begins to detect the change of the environment before the window. After reading the code, the red light is always on for 3 seconds. After 3 seconds, the unread bar code automatically flickers.

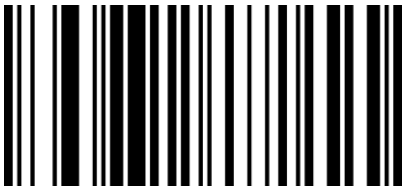
Key Open: In this state, the bar coder can be turned on or off at any time by pressing the button.

Key off: In this state, the key does not work.



013306

Flashing（Key Open）



013305

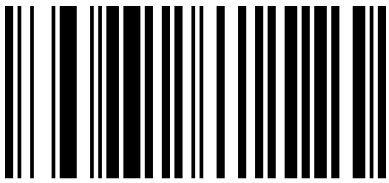
Flashing（Key OFF）

Press Key to delay single read mode

After setting up, press the trigger button, the red light of the bar coder will light up for 3 seconds, the unread code lamp will go out after 3 seconds overtime, or the back light will go out after reading the code. The button will not work before the light goes out.

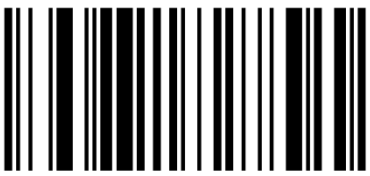
You can customize the timeout according to your needs, and set the setting code of the timeout to [^ 30235X0]

Among them, X means the time-out time is X seconds, the value is 0-F in hexadecimal system, 0 means no time-out, 1 means 1 second time-out, and so on. F means 15 seconds time-out. The default key timeout time is "3 seconds overtime".



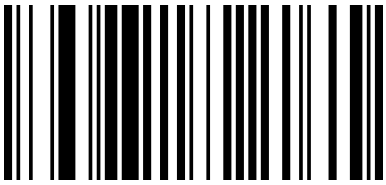
013301

Press key to delay single read mode



023510

1 second timeout



023530

3second timeout*

0235A0

10 second timeout

0235F0

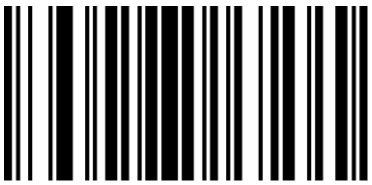
15 second timeout

Test mode

When using the test mode, we need to set the scanner as "Long Bright Read Mode 013304", and then turn on the test mode. After the setup is completed, the device enters the continuous reading state without triggering. When the code is successful, the device enters the waiting state. Once again, the code is successfully read, and it enters the waiting state again.

02571

Open Test Mode



02570

Close Test mode

You can customize the scan interval of the test mode according to the requirements, and set the interval to set the code code code to [^ 30263XX]

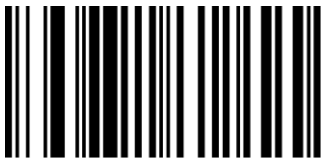
XX denotes the hexadecimal value corresponding to the interval time, expressed by 0-F, interval time = XX corresponds to the decimal value / 10, and when XX = 00, there is no interval time.

For example, the XX value is 01, the interval time is 1/10 = 0.1 seconds; the XX value is 0F, and the interval time is 15/10 = 1.5 seconds.

The default interval is "1S"

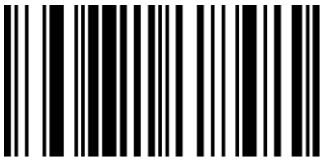
026300

No interval



026301

interval0.1S



026309

interval0.9S

02630F

interval1.5S

Chapter4 Data Editing

Introduction

After the barcode scanner is successfully decoded, the device will get a series of data, which can be numbers, English, symbols, etc. In application, we may not only need the barcode data information, or the barcode contains data information can not meet your requirement. For example, you may want to know which type of barcode you get from this string of data information or attach special data to the string data, which may not be included in the barcode data information.

Increasing these contents while making code, it is bound to increase the length of the barcode and the flexibility is not enough. It is not a good way.

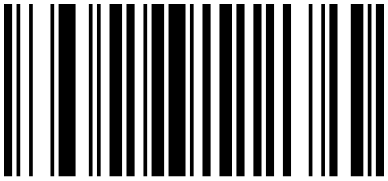
At this moment, we think of artificially adding some contents before or after the barcode data information, and these added contents can be changed in real time according to the demand, and can be selectively added or masked. This is the prefix and suffix of barcode data information.

The method of adding prefixes and suffixes , can meet the requirement and need to modify the contents of the barcode information.

Note: Data editing format: <customize prefix><barcode data><customize suffix><suffix data>

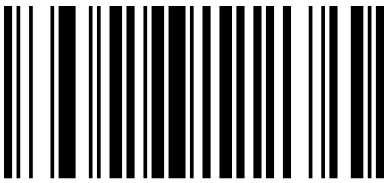
Code ID Setting

In the process of using the barcode reader, the user often needs to know the barcode type of the currently scanned barcode, and we can use the Code ID prefix to identify the barcode type. Code ID corresponds to the barcode type please refer to "**Appendix - Code ID**", by default does not send Code ID.



01401

SendCODE ID

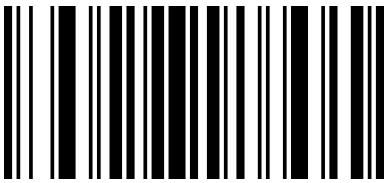


01400

Not Send Code ID*

Custom Prefix

First read "**Set Custom Prefix**", then scan the character barcode corresponding to "**Appendix - Character Table**" according to the requirements. You can complete the setup. The prefix character can add up to 32 characters.



02240

Set Custom Prefix

For example: Set the custom prefix to "VC" (hexadecimal value is 0x56/0x43):

1. Read "Startup Setup Code"

2. Read the above "Setting Custom Prefix"

3. Read the corresponding bar codes 1086 and 1067 in "Appendix - Character Table"

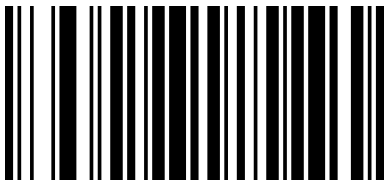
4 read "Exit to set prefix and suffix"

5. Read "Close Setup Code"

Note: After completing the above steps, if you read any bar code, the barcode reader will add a custom prefix string "VC" before the bar code data.

Clear all the prefix.

Scan “ clear all the prefix codes” barcode, user can clear all the prefix codes.

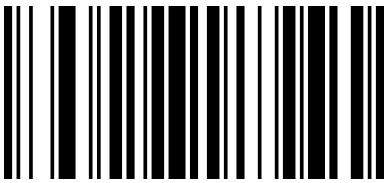


02220

clear all the prefix codes

Custom suffix

First read the "**Set custom suffix**", and then scan the character code corresponding to "Appendix - Character Table" according to requirements. You can complete the setup. The suffix character can add up to 32 characters.



02241

Set custom suffix

For example: Set the custom prefix to "VC" (hexadecimal value is 0x56/0x43):

1. Read "**Startup Setup Code**"

2. Read the above "**Set custom suffix**"

3. Read the corresponding bar codes 1086 and 1067 in "**Appendix - Character Table**"

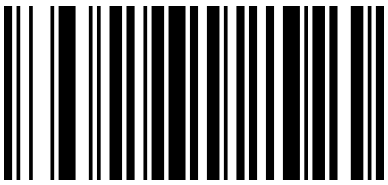
4 read "**Exit to set prefix and suffix**"

5. Read "**Close Setup Code**"

Note: After setting according to the above steps, read any bar code, the bar coder will add custom suffix string "VC" after the bar code data.

Clear all suffixes

Scan the "**Clear all suffixes**" barcode to clear all set suffix characters



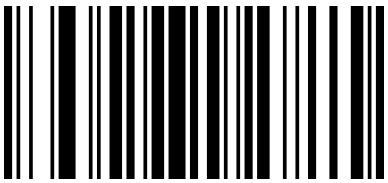
02200

Clear all suffixes

Note: Clear suffix characters do not include suffix terminators.

Exit to set prefix and suffix

After users add a custom suffix, you can scan "Exit suffix" to finish adding suffixes.



02242

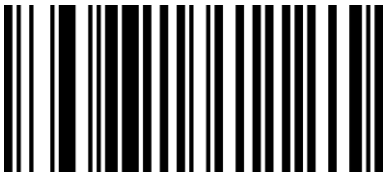
Exit to set prefix and suffix"

Hidden characters

Users can hide the bar code output barcode according to their needs. For example, for the bar code "123456", the data received by the host is "3456" when the preceding two characters are hidden. When the trailing 2-bit characters are hidden, the data received by the host is "1234".

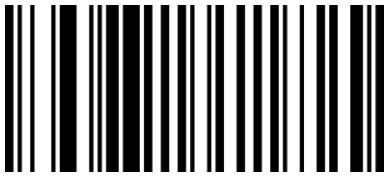
Hide the front character

The user can scan the following bar codes according to the requirements, and set the hidden front digits.



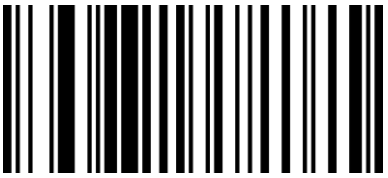
023401

Hide the front 1 character



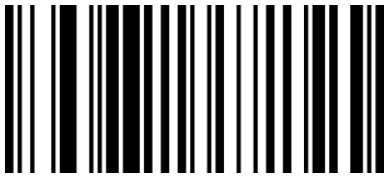
023402

Hide the front 2 characters



023403

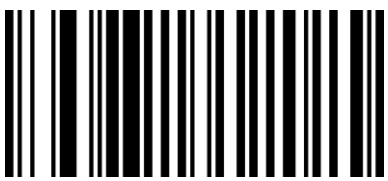
Hide the front 3 characters



023405

Hide the front 5 characters

Unhide the front character

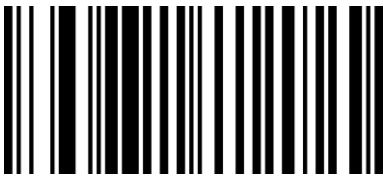


023400

Unhide leading characters

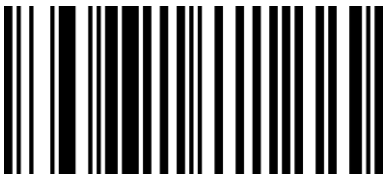
Hide the Postposition character

Users can scan the following bar codes according to their needs and set the corresponding number of digits to be hidden.



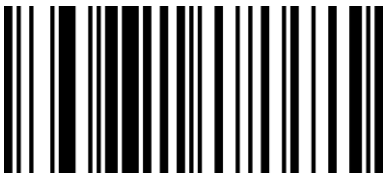
023301

Hide the Postposition 1 character



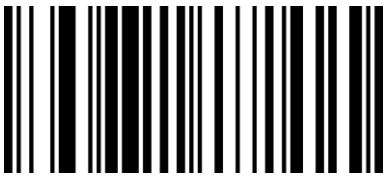
023302

Hide the Postposition 2 characters



023303

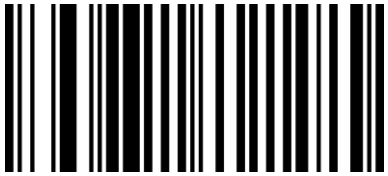
Hide the Postposition 3 characters



023305

Hide the Postposition 5 characters

Unhide the Postposition character



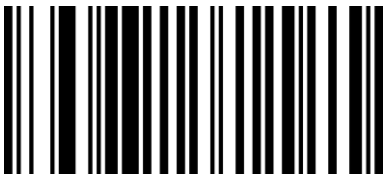
023300

Unhide the Postposition character

Hide intermediate characters

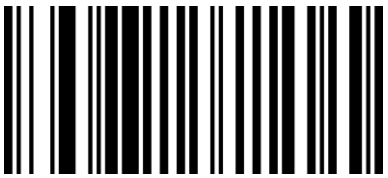
Users can scan the following bar codes according to their needs and set the hidden middle digits. The setup procedure consists of two steps. First, the beginning of the character is scanned for the Mth bit, and then the middle N-bit character is hidden by scanning. For example, for the barcode "12345678", set the two characters "56" to be hidden, first scan the first 4 characters, then scan to hide the middle 2 characters, and the host receives the data as "123478"

The Mth character starts to set the bar code



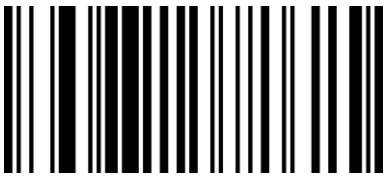
024001

from first character start



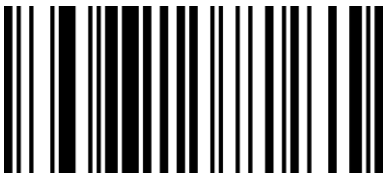
024002

from second character start



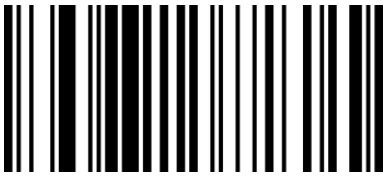
024003

from third character start



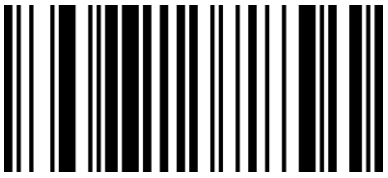
024004

from fourth character start



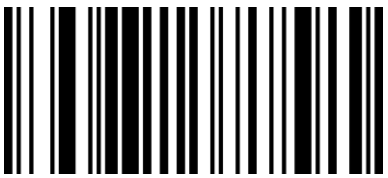
024005

from fifth character start



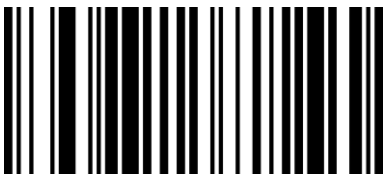
024006

from sixth character start



024007

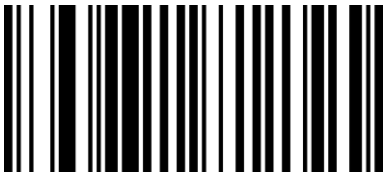
from seventh character start



024008

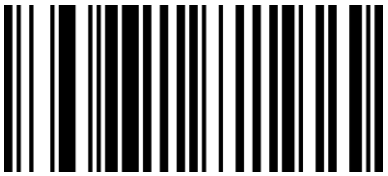
from eighth character start

Hide intermediate N-bit characters



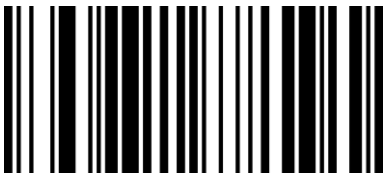
023901

Hide intermediate 1 characters



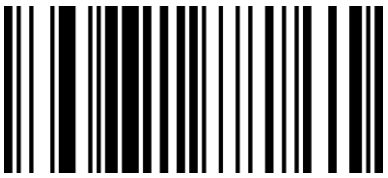
023902

Hide intermediate 2 characters



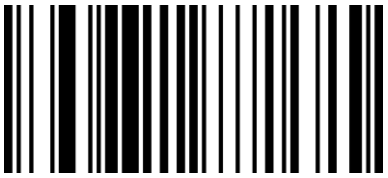
023903

Hide intermediate 3 characters



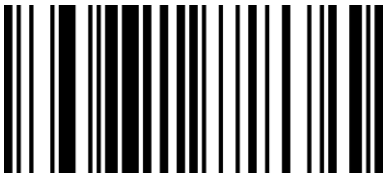
023904

Hide intermediate 4 characters



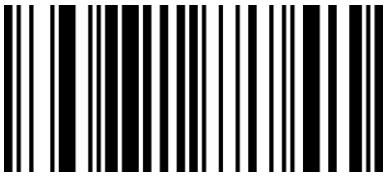
023905

Hide intermediate 5 characters



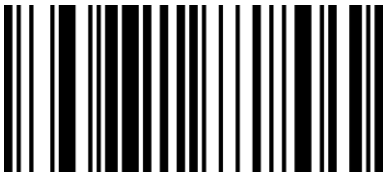
023906

Hide intermediate 6 characters



023907

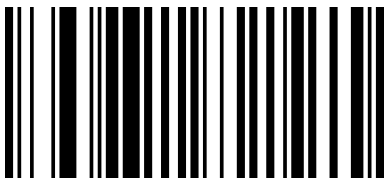
Hide intermediate 7 characters



023908

Hide intermediate 8 characters

Unhide the middle character

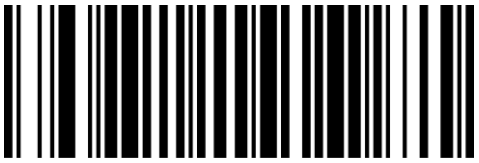


023900

Unhide the middle character

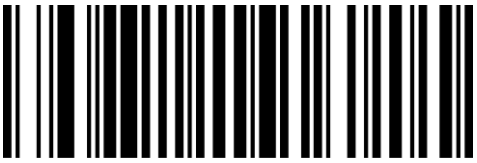
Suffix setting

The end character is used to mark the end of a complete data message. The suffix of end character must be the last content of a data transmit, then there will be no additional data. Difference between suffix of end character and customized suffix is that the contents and decoding information of the customized suffix , prefix and other contents can be formatted, but suffix of end character can’ t make it.



0212@0D

Add CR*

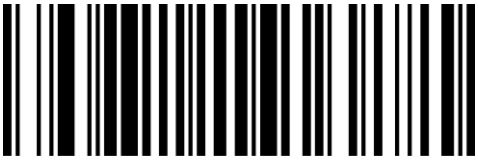


0212@0A

Add LF

0213@0D0A

Add CR+LF



0212@09

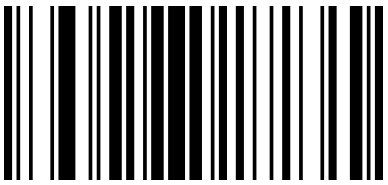
Add Tab

0210@

None

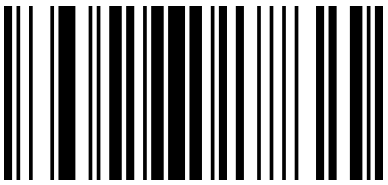
Character conversion

By setting the character conversion function of the barcode scanner, the upper case and lower case conversions of the English letters of the barcode output data can be performed. For example, if the content of the barcode is aBC123, set the barcode to "all in lower case" and the data obtained by the host will be "abc123". The default is Normal output.



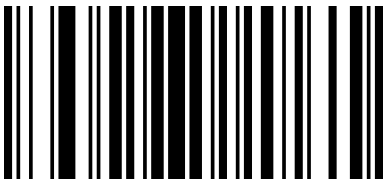
02510

Normal (No Change) *



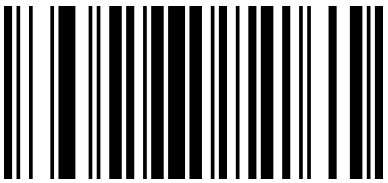
02511

Upper (Capitalize)



02512

Lower (All lowercase)



02513

Inverse (Case inversion)

Note: This parameter is only valid in standard keyboard input mode and keyboard emulation input control character mode.

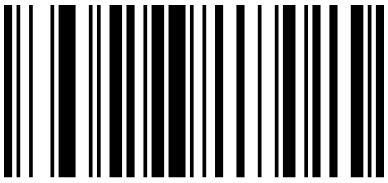
Chapter5. Bar Code Parameter Settings

Introduction

Each type of barcode has its own unique properties,Through the setting code of this chapter, you can adjust the barcode reader to adapt to these property changes.The fewer types of barcodes that are enabled to enable reading,The faster the barcode reads.You can disable barcode scanners from reading barcode types that will not be used, to improve the performance of the barcode scanner.

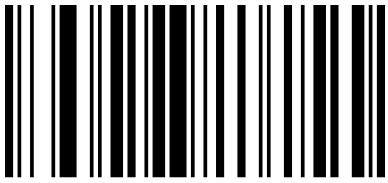
UPC-A

Enable/DisableUPC-A



000341

Eanble UPC-A*

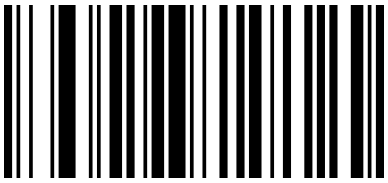


000340

Disable UPC-A

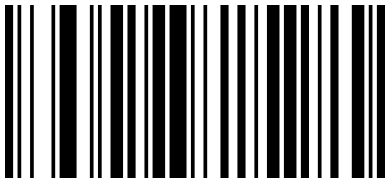
Transmit Check Digit

UPC-A Barcode data is fixed at 13 characters,Number 13 is the parity bit,used to verify the correctness of all 13 characters, The default is to transmit the check digit.



00421

Transmit checkDigit *



00420

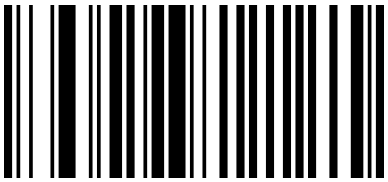
Do not transmit check Digit

Whether to read additional bits

Additional bits refer to 2 or 5 digit barcodes added after the normal barcode, As shown below, the left blue line box is an ordinary bar code, the right side of the red box is an additional bit. the default is to turn off extra bits.

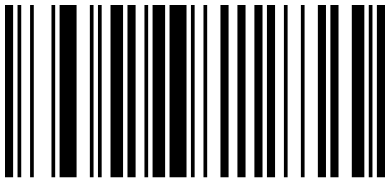
System character

UPC-A The country code of the barcode is the prefix character, this character is not normally displayed in human-readable characters below the bar code, “0” representative USA.The first character in the human-readable character is a system character.Default does not send country characters，transmit system character.



00400

Transmit system character *

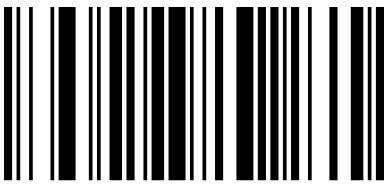


00401

Do notTransmit system character

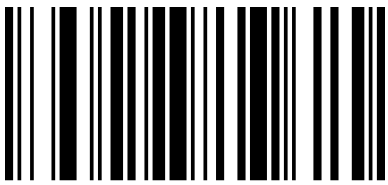
Extended settings

UPC-A barcode type supports extended settings, after opening extensions,barcode information expanded to 13 bits, add "0" in front of ,and the type is converted to EAN-13，the default is not extended.



00391

Barcode information extension，and the type is converted to EAN-13

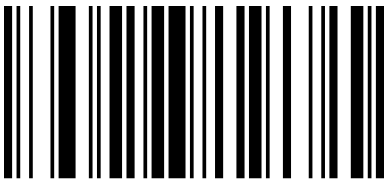


00390

Barcode information does not expand *

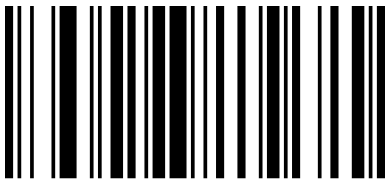
UPC-E

Enable/Disable UPC-E



00351

Enable UPC-E*

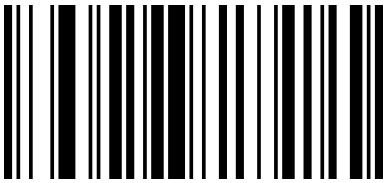


00350

DisableUPC-E

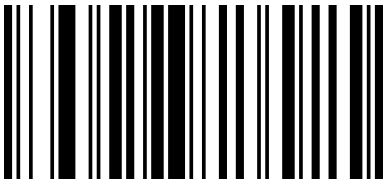
Transmit Check Digit

UPC-E Barcode data is fixed at 8 characters，bit 8 is the parity bit，used to verify the correctness of all 8 characters,the default is to transmit the check digit.



00441

Transmit check Digit *



00440

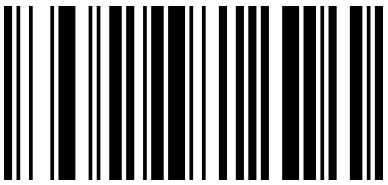
Do not Transmit check Digit

Whether to read additional bits

Additional bits refer to 2 or 5 digit barcodes added after the normal barcode, As shown below, the left blue line box is an ordinary bar code, the right side of the red box is an additional bit. the default is to turn off extra bits.

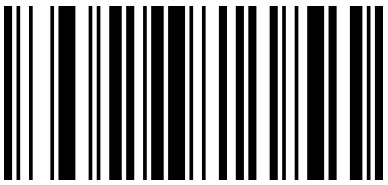
System character

UPC-E the system code of the barcode is the prefix character, default delivery system character.



00430

Transmit system character *

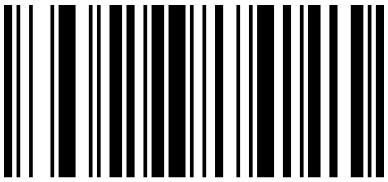


00431

Do not transmit system character

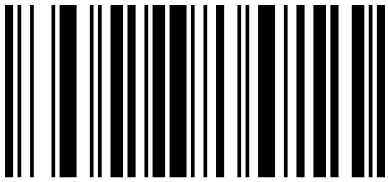
Extended settings

UPC-E barcode type supports extended settings, after opening extensions, Barcode information expanded to 13 bits, and the type is converted to UPC-A, the default is not extended.



00381

Barcode information is expanded, and the type is converted to UPC-A

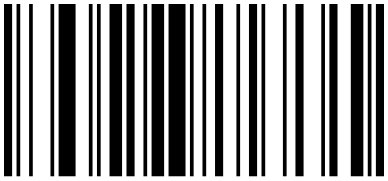


00380

Do not expand barcode information *

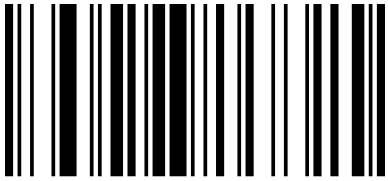
EAN-8

Enable/Disable EAN-8



00371

Enable EAN-8*

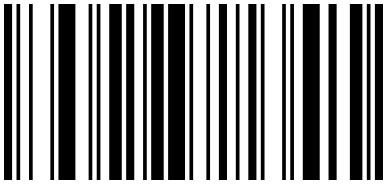


00370

Disable EAN-8

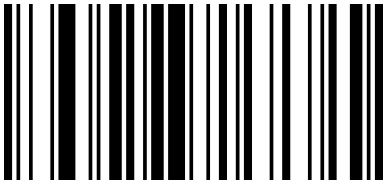
Transmit Check Digit

EAN-8 barcode data is fixed at 8 characters, Bit 8 is the parity bit, used to verify the correctness of all 8 characters，the default is to transmit the check digit.



00571

Transmit check Digit *



00570

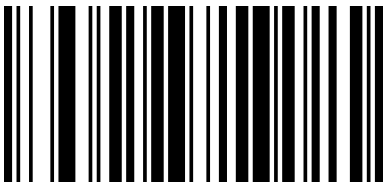
Do not Transmit check Digit

Whether to read additional bits

Additional bits refer to 2 or 5 digit barcodes added after the normal barcode, as shown below，The left blue line box is an ordinary bar code，the right side of the red box is an additional bit. the default is to turn off extra bits.

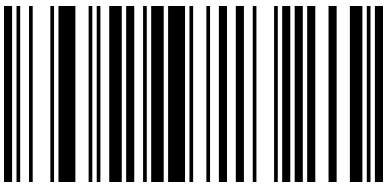
System character

EAN-8 barcode system code is a prefix character，default Not Transmit system character.



00560

Transmit System character*

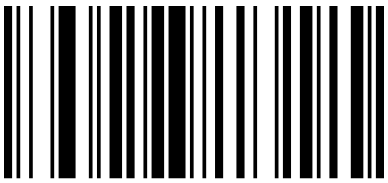


00561

Not Transmit System Character

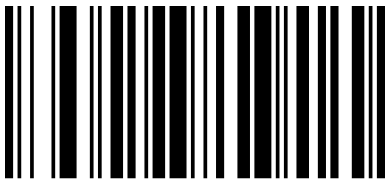
EAN-13

Enable/Disable EAN-13



00361

Enable EAN-13*

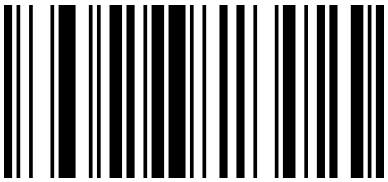


00360

DisableEAN-13

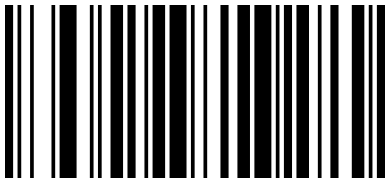
Transmit Check Digit

EAN-13 barcode data is fixed at 13 characters, Bit 13 is the parity bit，used to verify the correctness of all 13 characters，the default is to transmit check digit.



00461

Transmit Check Digit *



00460

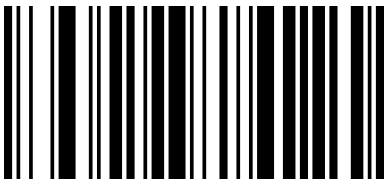
Do not transmit check Digit

Whether to read additional bits

Additional bits refer to 2 or 5 digit barcodes added after the normal barcode，as shown below, the left blue box is an ordinary bar code, and the right red box is an extra bit. The default is to turn off extra bits.

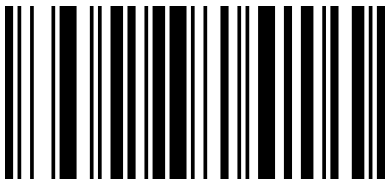
Extended settings

EAN-13 barcode type supports extended settings, Can be set to expand EAN-13 code to ISBN or ISSN barcode. The default is not extended.



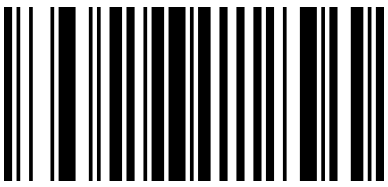
00481

Expanded to ISBN



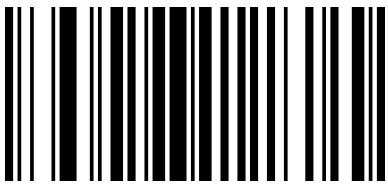
00480

Do not expand to ISBN*



01501

Expanded to ISSN

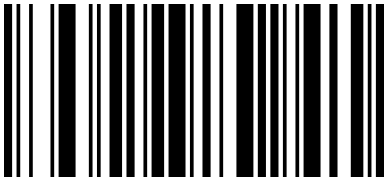


01500

Do not expand to ISSN*

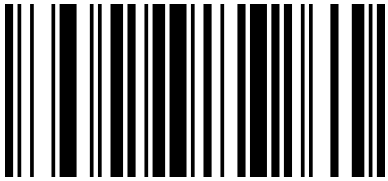
Code 128

Enable/Disable Code 128



00691

Enable Code 128*

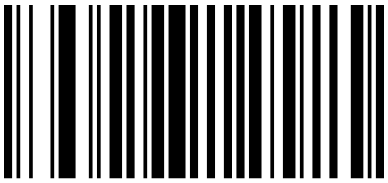


00690

DisableCode 128

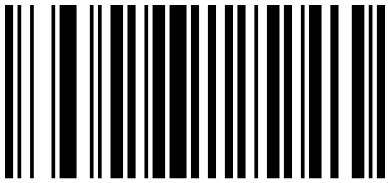
Code 39

Enable/Disable Code 39



00221

Enable Code 39*

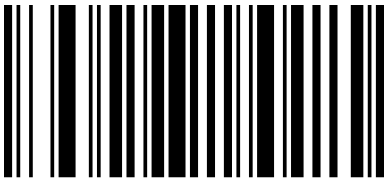


00220

DisableCode 39

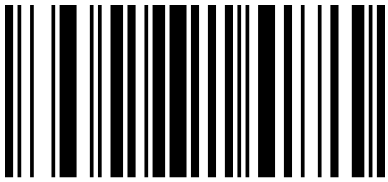
Transmit Start/Stop Character

A character "*" as a start and stop character before and after the Code 39 barcode data，you can set whether the start and stop characters are transmitted together with the barcode data after the reading is successful.



00281

Transmit Start/Stop Character



00280

Do not Transmit Start/Stop Character*

Check Bit Settings

Code 39 barcode data is not mandatory to contain a check bit, if there is a check bit, it is the last character of the data. Check bits are values calculated from all data to verify the correctness of the data. You can turn on or off the check as required and set whether to send the check bits.

The default is "Close MOD43 Check" and "No Transfer Check".

00251

Transfer check

00250

No transmission check *

00241

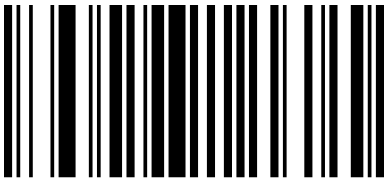
Open MOD43 Check

00240

Close MOD43 Check *

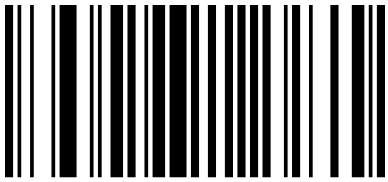
Enable/Disable Code 39 Full ASCII

Code 39data can include all ASCII characters, but the barcode reader only reads some ASCII characters by default，by setting, you can turn on the function of reading full ASCII characters，default Enable all ASCII characters.



00231

Enable Code 39 Full ASCII*



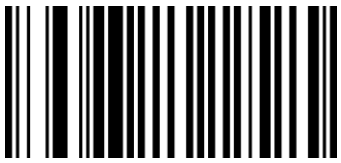
00230

Disable Code 39 Full ASCII*

Setting Code 39 Minimum Read Length

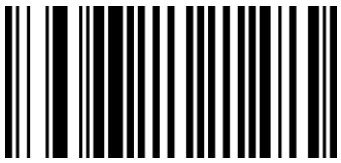
You can customize the minimum reading length from Code 39 to your needs. Set the code code to [^ 3 + 0032XX], support 1-15 bits, corresponding to the hexadecimal value of 01-0F, 01 means the minimum length of 1.

Default is "Minimum Read Length 2" "



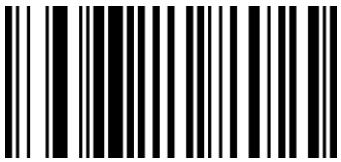
003201

The minimum reading length is 1



003202

The minimum reading length is 2*



003203

The minimum reading length is 3

Code 32

Enable/Disable Code 32

01951

Enable Code 32

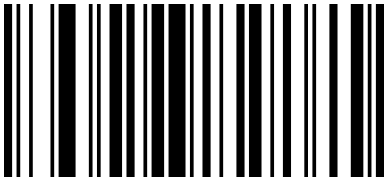
01950

Disable Code 32*

Note: Opening Code32 has an effect on Code39.

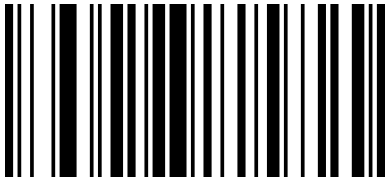
Code 93

Enable/Disable Code 93



00621

Enable Code 93*

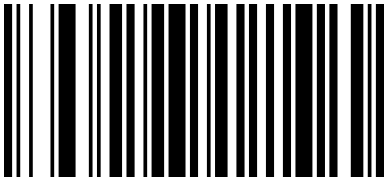


00620

DisableCode 93

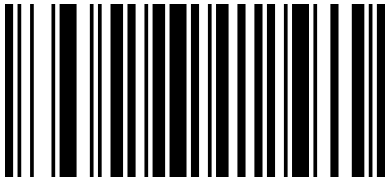
Check Digit Verification

Code 93barcode data does not include check digits, if there is a check digit，is the last 2 characters of the data.the check digit is a calculated value based on all data，used to verify that the data is correct.



01901

Transmit Check Digit After Verification

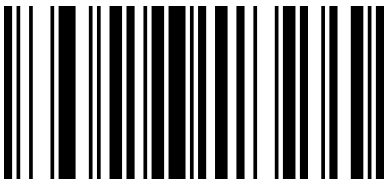


01900

Do Not Transmit Check Digit After Verification *

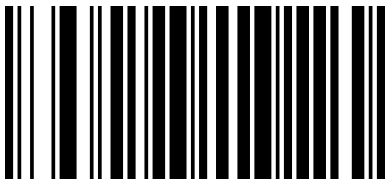
Code 11

Enable/Disable Code 11



01261

Enable Code 11*

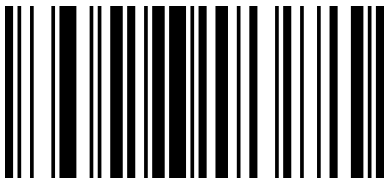


01260

DisableCode 11

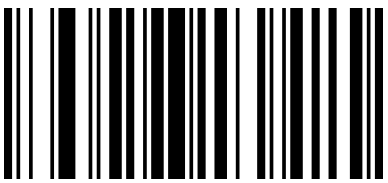
Check Digit Verification

Code 11Barcode data does not necessarily include check bits, if there is a check digit，it can be the last 1 or 2 characters of the data.The check digit is a value calculated from all data to verify that the data is correct.



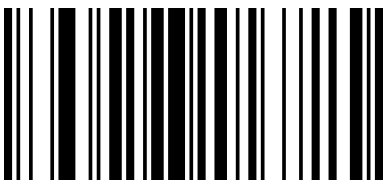
01272

CCheck*



01273

CK Check



01271

Automatic CK Check

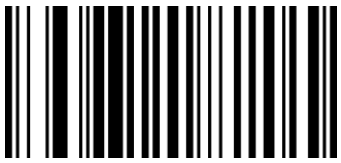
Setting Code 11 Minimum Read Length

You can customize the minimum reading length from Code11 codes according to your requirements. Set the code code to [^ 3 + 0128XX], support 1-15 bits, corresponding to the hexadecimal value of 01-0F, 01 means the minimum length of 1.

Default to "Minimum Read Length 4" “

012801

The minimum reading length is 1

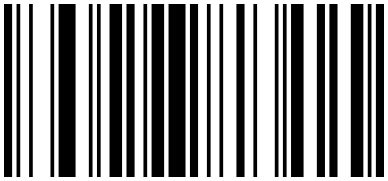


012804

The minimum reading length is 4*

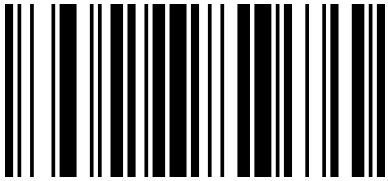
Interleaved 2 of 5

Enable/Disable Interleaved 2 of 5



00961

Enable Interleaved 2 of 5*



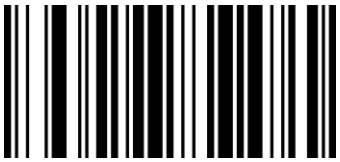
00960

DisableInterleaved 2 of 5

Check Bit Settings

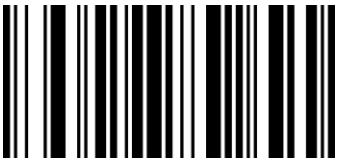
Interleaved 2 of 5 bar code data is not mandatory to contain check bits. If there are check bits, it is the last character of the data. Check bits are values calculated from all data to verify the correctness of the data. You can turn on or off the check as required and set whether to send the check bits.

The default is "Turn off Interleaved 2 of 5 checks" and "Do not send Interleaved 2 of 5 checks".



00251

Transfer Interleaved 2 of 5 Check

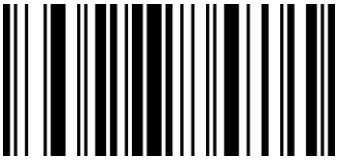


00250

Do not transmit Interleaved 2 of 5 checks *

00241

Open Interleaved 2 of 5 Check



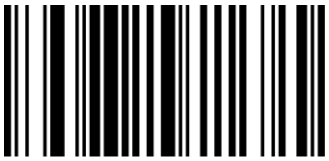
00240

Close Interleaved 2 of 5 Check *

Setting Interleaved 2 of 5 Minimum Read Length

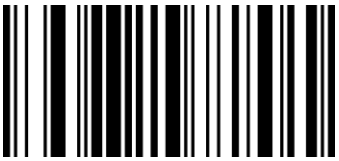
You can customize the minimum reading length from Interleaved 2 of 5 codes according to your requirements. Set the code code to [^ 3 + 0097XX], support 2-14 bits, corresponding to the hexadecimal value of 02-0E, 02 means the minimum length of 2 (Interleaved 2 of 5 digits can only be even digits).

Default to "Minimum Read Length is 4" “



009702

Minimum Read Length is 2

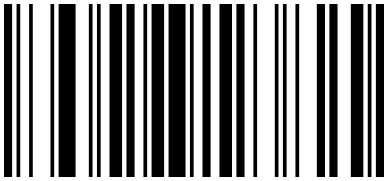


009704

Minimum Read Length is 4*

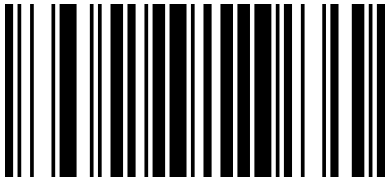
Matrix 2 of 5

Enable/Disable Matrix 2 of 5



01461

Enable Matrix 2 of 5*



01460

DisableMatrix 2 of 5

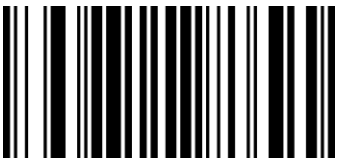
Setting Matrix 2 of 5 Minimum Read Length

You can customize the minimum reading length from Matrix 2 of 5 codes according to your requirements. Set the code to [^ 3 + 0148XX], support 1-15 bits, corresponding to the hexadecimal value of 01-0F, 01 represents the minimum length of 1

Default to "Minimum Read Length 3".

014801

Minimum Read Length is 1

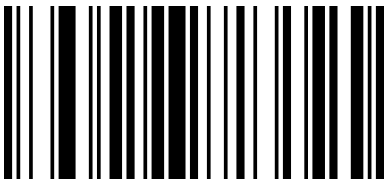


014803

Minimum Read Length is 3*

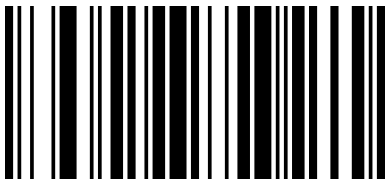
Industrial 2 of 5

Enable/Disable Industrial 2 of 5



01061

Enable Industrial 2 of 5*



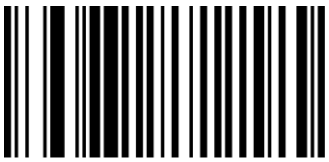
01060

DisableIndustrial 2 of 5

Setting Minimum Read Length for Industrial 2 of 5

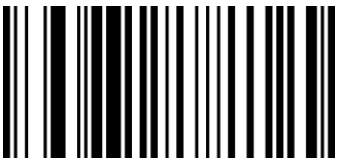
You can customize the minimum reading length from Industrial 2 of 5 codes according to your requirements. Set the code code to [^ 3 + 0107XX], support 1-15 bits, corresponding to the hexadecimal value of 01-0F, 01 represents the minimum length of 1

Default to "Minimum Read Length 3"



010701

The minimum reading length is 1

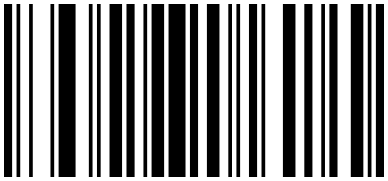


010703

The minimum reading length is 3*

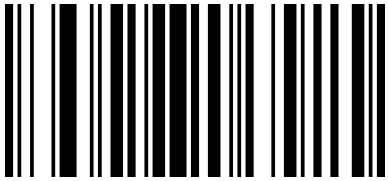
Standard 2 of 5(IATA)

Enable/Disable Standard 2 of 5



01871

Enable Standard 2 of 5*



01870

DisableStandard 2 of 5

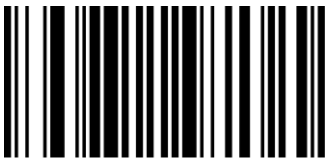
Setting Standard 2 of 5 Minimum Read Length

You can customize the minimum reading length from Standard 2 of 5 codes according to your requirements. Set the code to [^ 3 + 0189XX], support 1-15 bits, corresponding to the hexadecimal value of 01-0F, 01 represents the minimum length of 1

Default to "Minimum Read Length 4" “

018901

The minimum reading length is 1

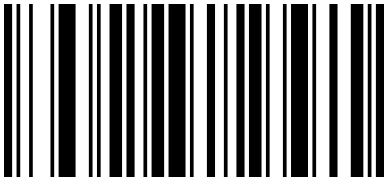


018904

The minimum reading length is 4*

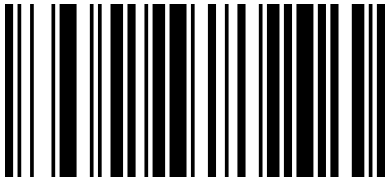
Codabar (NW-7)

Enable/Disable Codabar



00851

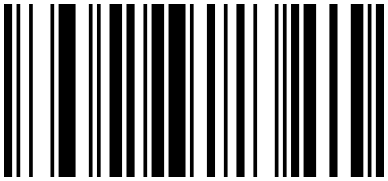
Enable Codabar*



00850

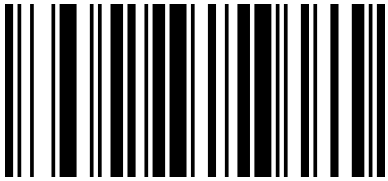
DisableCodabar

Transmit Start/Stop Character



00861

Transmit Start/Stop Character



00860

Do not Transmit Start/Stop Character*

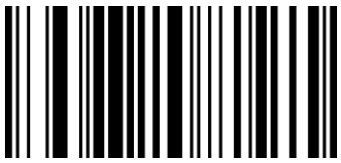
Setting Codabar Minimum Read Length

You can customize the minimum reading length from Codabar code according to your requirements. Set the code code to [^ 3 + 0187XX], support 1-15 bits, corresponding to the hexadecimal value of 01-0F, 01 represents the minimum length of 1

Default to "Minimum Read Length 4" “

018701

The minimum reading length is 1

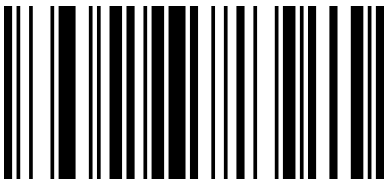


018704

The minimum reading length is4*

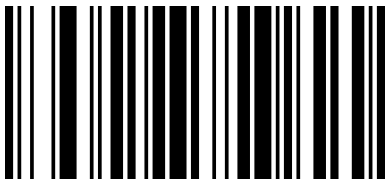
Plessey

Enable/Disable Plessey



01161

Enable Plessey



01160

DisablePlessey*

Set Plessey Minimum Read Length

You can customize the minimum reading length from Plessey code according to your requirements. Set the code code to [^ 3 + 0119XX], support 1-15 bits, corresponding to the hexadecimal value of 01-0F, 01 represents the minimum length of 1

Default to "Minimum Read Length is 4".

011901

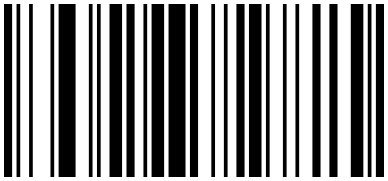
Minimum Read Length is 1

011904

Minimum Read Length is 4*

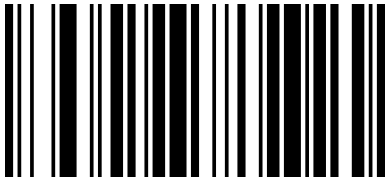
MSI Plessey

Enable/Disable MSI Plessey



01151

Enable MSI Plessey



01150

DisableMSI Plessey*

Setting MSI Plessey Minimum Read Length

You can customize the minimum reading length from MSI Plessey code according to your requirements. Set the code to [^ 3 + 0118XX], support 1-15 bits, corresponding to the hexadecimal value of 01-0F, 01 represents the minimum length of 1

Default to "Minimum Read Length is 4" “

011801

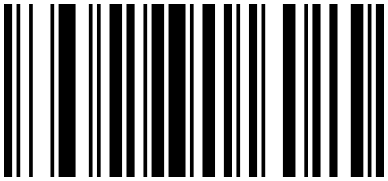
Minimum Read Length is 1

011804

Minimum Read Length is 4*

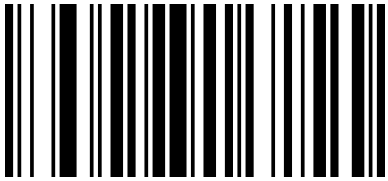
GS1 DataBar Limited (RSS Limited)

Enable/Disable RSS Limited



01771

Enable RSS Limited



01770

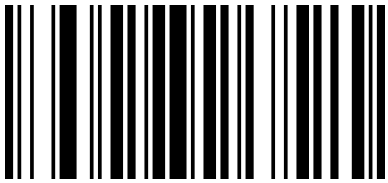
DisableRSS Limited*

GS1 DataBar Omnidirectional (RSS Omnidirectional)

Enable/Disable RSS Omnidirectional

01671

Enable RSS Omnidirectional

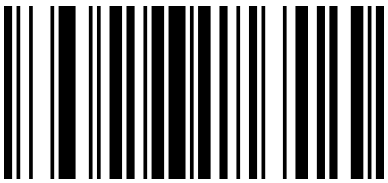


01670

DisableRSS Omnidirectional*

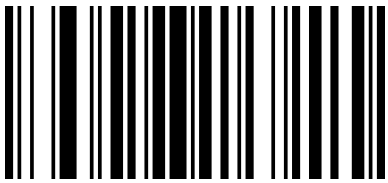
China Post (Datalogic 2of 5)

Enable/Disable China Post



01571

Enable China Post

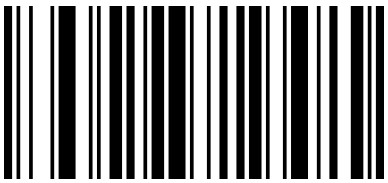


01570

DisableChina Post*

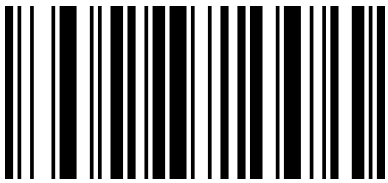
Add-on Code

Users can do additional setting by scanning following UPC/EAN/JAN code



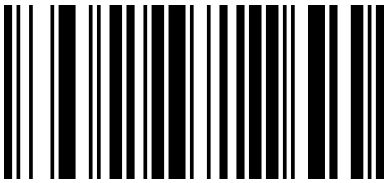
00551

Enable 2-Digit add-on Code



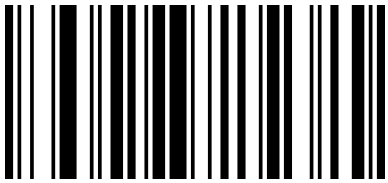
00552

Enable5-Digit add-on Code



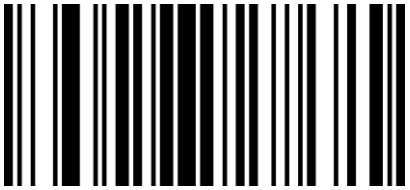
00553

Enable 2-Digit or 5-Digit add-on Code



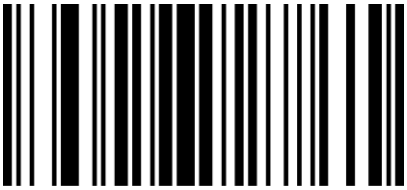
00550

Disable Add-on Code*



02611

Add-on Code Required



02610

Add-on Code Not Required

Chapter6Serial Communication Instruction

Instruction

When using the serial port mode, the barcode reader can control the barcode scanner to send commands or set related functions by sending relevant instructions.

Serial instruction is fixed to 16 bytes in one frame（16bytes，1byte=8bit）.

Frame format structure

Serial port instruction one frame format is as follows：

STX+CMD+DA0+DA1+DA2+DA3+DA4+DA5+DA6+……+DA10+DA11+ETX+SUM

To ensure data accuracy, the last byte of a frame of data (16 bytes) is the checksum, assuming that the first 15 bytes are a, and then SUM = 256 - (a & 0xFF).

Among them：

STX=0x02;　　ETX=0x03　（STX and ETX values are ASCII hexadecimal defined values.）

CMD represents a control or setup instruction.

Instruction Parsing

When CMD=0x01, it indicates a control instruction.

DA0=0x01, control the barcode reader switch command, can control the barcode reader to open or close the decoding function.

DA1=0x00, Controlling the Barcode Off (Decoding Off)

DA1=0x01, control the barcode reader on (open decoding, no timeout, no highlighting until decoding is complete, until the decoding is completed.)

DA1=0x02, control the barcode reader on (open decode, timeout)

DA2~DA3, timeout in 1ms (format 0xDA3 0xDA2) When CMD = 0x02, indicates setting instruction.

When CMD=0x02, it represents the setting instruction

DA0, the setting code is valid byte length +1 (if display version number setting code is 000A0, length is 5, DA0=6)

DA1, fixed to 0x82

DA2~DA11, setting code content (set bar code encoding), DA2 start insufficient bit complement 0x00

Instruction save

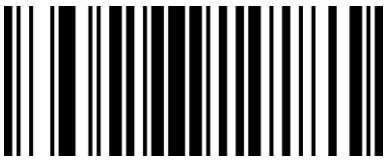
When the user sends a set barcode reader parameter using an instruction, after sending the setup instruction, an instruction to save the parameter needs to be sent to save the current parameter. (Open and close instructions do not need to be saved)

STX	CMD	DA0	DA1	DA2	DA3	DA4~DA10	DA11	ETX	SUM
02H	01H	03H	AAH	55H	00H	00H~00H	00H	03H	F8H

Save parameter instructions：02 01 03 AA 55 00 00 00 00 00 00 00 00 00 03 F8

Instruction Feedback Setting

After the setup response is turned on (scan code 02421, or serial port send command is enabled), if the setup command is executed successfully, it will respond with a response character ACK (ASCII code 0x06). If it can't be executed successfully, it will answer a NAK (ASCII code) 0x15.



02421

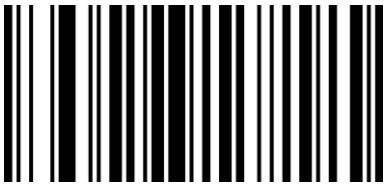
Enable response

02420

Disable response*

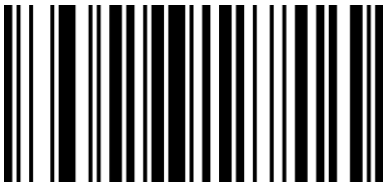
Sound Feedback Settings

When the audio feedback is turned on (scan code 01411, or serial port command is enabled), if the setup command is successfully executed, the buzzer will sound, and the instruction execution sound feedback is turned off by default.



01411

Turn on feedback sound



01410

Turn off feedback sound *

Trigger instruction

Turn on scan：02 01 01 02 B8 0B 00 00 00 00 00 00 00 00 03 34

Turn off scan：02 01 01 00 00 00 00 00 00 00 00 00 00 00 03 F9

Case Analysis

Close decoding

CMD=0x01, DA0=0x01, DA1=0x00, DA2~DA11=0x00,

a=(0)*16+(2+1+1+3)*1=7=0x07

SUM=256-(0x07&FF)=256-(111&11111111)=256-7=249=0xF9

STX	CMD	DA0	DA1	DA2	DA3	DA4~DA10	DA11	ETX	SUM
02H	01H	01H	00H	00H	00H	00H~00H	00H	03H	F9H

Hexadecimal instructions：02 01 01 00 00 00 00 00 00 00 00 00 00 00 03 F9

Turn on decode timeout 3 seconds

CMD=0x01, DA0=0x01, DA1=0x02, DA2=B8，DA3=0B，DA4~DA11=0x00,

Time out 3S=3000MS=0x0BB8

a=(B)*16+(2+1+1+2+8+B+3)*1=204=0xCC

SUM=256-(0xCC&FF)=256-(11001100&11111111)=256-204=52=0x34

STX	CMD	DA0	DA1	DA2	DA3	DA4~DA10	DA11	ETX	SUM
02H	01H	01H	02H	B8H	0BH	00~00H	00H	03H	34H

Hexadecimal instructions：02 01 01 02 B8 0B 00 00 00 00 00 00 00 00 03 34

Set the baud rate115200

Set instruction code：000709

CMD=0x02, DA0=0x07, DA1=0x82,

DA2~DA7=000709=0x30,0x30,0x30,0x30,0x37,0x30,0x39

a=(8+3+3+3+3+3+3)*16+(2+2+7+2+9+5+3)*1=448=0x1c0

SUM=256-(0x1c0&FF)=256-(111000000&11111111)=256-192=64=0x40

STX	CMD	DA0	DA1	DA2	DA3	DA4	DA5	DA6	DA7	DA8~DA11	ETX	SUM
02H	02H	07H	82H	30H	30H	30H	37H	39H	35H	00H~00H	03H	40H

Hexadecimal instructions：02 02 07 82 30 30 30 37 30 39 00 00 00 00 03 40

Add carriage return line feed

Set instruction code: 0213@\r\n

CMD=0x02, DA0=0x08, DA1=0x82,

DA2~DA8=0213@\r\n =0x30,0x32,0x31,0x33,0x40,0x0D,0x0A

a=(8+3+3+3+3+4)*16+(2+2+8+2+2+1+3+13+10+3)*1=430=0x1ae=256-(0x1ae&0xFF)=

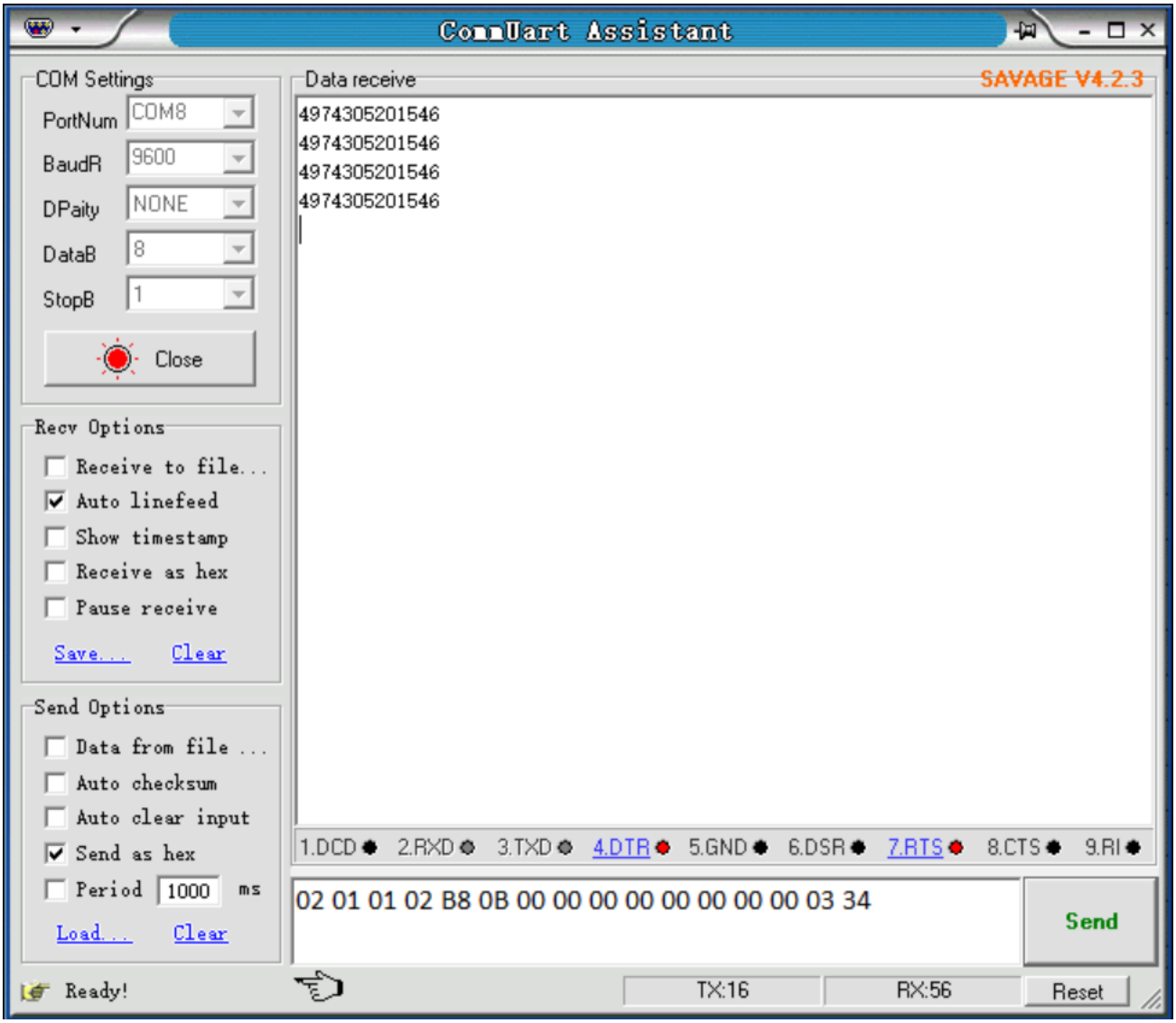
256-(110101110&11111111)=256-(10101110)=256-174=82=0x52

STX	CMD	DA0	DA1	DA2	DA3	DA4	DA5	DA6	DA7	DA8	DA9~DA11	ETX	SUM
02H	02H	08H	82H	30H	32H	31H	33H	40H	0DH	0AH	00H~00H	03H	52H

Hexadecimal instructions： ：02 02 08 82 30 32 31 33 40 0D 0A 00 00 00 03 52

Instruction sending example

Send a hexadecimal command to control the scan. Use the instruction to open the decode timeout for 3 seconds to confirm the serial port protocol setting. Enter the corresponding command in the command sending input box.



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

Chapter7Appendix

Appendix - Default Settings Sheet

Parameter name	Default setting	Instruction Remark
Comprehensive settings		
Setting code function	ON	Default on
Send setup code	OFF	Default off
Sound Settings	Open	Open All Sounds
Sound frequency	2.0KHZ	
USB Fast pass	OFF	
Character delay	4MS	
Image recognition method	Forward image recognition	
Communication settings		
Interface mode	USB-KBW	
Keyboard mode	American English	
Baud rate	9600	
Serial port verification	No check	
Data bits	8	
Stop bit	1	
Reading mode		
Reading mode	Manual reading	
Key Delay Single Reading Timeout	3S	
Interval time of continuous reading mode	1S	
Data editing		
Send Code ID	OFF	
Send a custom prefix	OFF	
Send a custom suffix	OFF	
End of transmit suffix	ON	Allow, Enter

Character conversion	OFF	Normal
Barcode parameter settings		
UPC-A		
Enable	ON	
Transmit Check Digit	ON	
Enable 2-Digit add-on Code	OFF	
Enable 5-Digit add-on Code	OFF	
2-Digit Add-on Code Required	OFF	
5-Digit Add-on Code Required	OFF	
Transfer system character	ON	
Barcode information expanded to EAN-13	OFF	
UPC-E		
Enable	ON	
Transmit Check Digit	ON	
Enable 2-Digit add-on Code	OFF	
Enable 5-Digit add-on Code	OFF	
2-Digit Add-on Code Required	OFF	
5-Digit Add-on Code Required	OFF	
Transfer system character	ON	
Expanded to UPC-A	OFF	
When expanding, the type is converted to UPC-A	OFF	
EAN-8		
Enable	ON	
Transmit Check Digit	ON	
Enable 2-Digit add-on Code	OFF	

Enable 5-Digit add-on Code	OFF
2-Digit Add-on Code Required	OFF
5-Digit Add-on Code Required	OFF
Transfer system character	ON
EAN-13	
Enable	ON
Transmit Check Digit	ON
Enable 2-Digit add-on Code	OFF
Enable 5-Digit add-on Code	OFF
2-Digit Add-on Code Required	OFF
5-Digit Add-on Code Required	OFF
Expand to ISBN	OFF
Code 128	
Enable	ON
Transmit Check Digit	OFF
Code 39	
Enable	ON
Transmit Start/Stop Character	OFF
Enable Code 39 Full ASCII	ON
Code 93	
Enable	ON
Transmit Check Digit	OFF
Code 11	
Enable	ON
Check	ON
Transmit Check Digit	C 校验

Interleaved 2 of 5	
Enable	ON
Matrix 2 of 5	
Enable	ON
Industrial 2 of 5	
Enable	ON
Standard 2 of 5	
Enable	ON
Codabar	
Enable	ON
Transmit Start/Stop Character	OFF
Plessey	
Enable	OFF
MSI Plessey	
Enable	OFF
RSS Limited	
Enable	OFF
RSS Omnidirectional	
Enable	OFF
China Post	
Enable	OFF
Add-on Code	
Enable add-on Code	OFF
Add-on Code Required	OFF

Appendix-Code ID

No.	Barcode type	Code ID Code	Barcode type code (Suffix use)
1	All Barcode	@	00
2	CODE 128	a	01
3	EAN 8	c	03
4	EAN 13	d	04
5	UPC-A	e	05
6	UPC-E	f	06
7	CODE 93	i	09
8	GS1 Omnidirectional	j	0A
9	GS1 Limited	k	0B
10	CODE 39	m	0D
11	Interleaved 2 of 5	n	0E
12	Industrial 2 of 5	o	0F
13	Standard 2 of 5	p	10
14	Matrix 2 of 5	q	11
15	China Post	r	12
16	MSI	s	13
17	Plessey	t	14
18	Code 11	u	15
19	Codabar	v	16

Appendix - Instruction Set

1. Function	instructions	Hexadecimal instructions
2. Turn on scanning without timeout	NA	02 01 01 01 00 00 00 00 00 00 00 00 00 03 F8
3. Turn on scanning timeout 3 seconds	NA	02 01 01 02 B8 0B 00 00 00 00 00 00 00 00 03 34
4. Turn on scanning timeout 10 seconds	NA	02 01 01 02 10 27 00 00 00 00 00 00 00 00 03 C0
5. Close the scan	NA	02 01 01 00 00 00 00 00 00 00 00 00 00 03 F9
6. Command saving	NA	02 01 03 AA 55 00 00 00 00 00 00 00 00 00 03 F8
7. Restore default settings	000B0	02 02 06 82 30 30 30 42 30 00 00 00 00 00 03 6F
8. Check the software version	000A0	02 02 06 82 30 30 30 41 30 00 00 00 00 00 03 70
9. User default settings	00000	02 02 06 82 30 30 30 30 30 00 00 00 00 00 03 81
10. Replace factory default settings	00001	02 02 06 82 30 30 30 30 31 00 00 00 00 00 03 80
11. Enter Setup	09990	02 02 06 82 30 39 39 39 30 00 00 00 00 00 03 66

12. Exit Setup	09991	02 02 06 82 30 39 39 39 31 00 00 00 00 00 03 65
13. Transmit Programming Barcode Data	02501	02 02 06 82 30 32 35 30 31 00 00 00 00 00 03 79
14. Not Transmit Programming Barcode Data ent	02500	02 02 06 82 30 32 35 30 30 00 00 00 00 00 03 7A
15. Turn on all sounds	014201	02 02 07 82 30 31 34 32 30 31 00 00 00 00 03 48
16. Turn off all sounds	014200	02 02 07 82 30 31 34 32 30 30 00 00 00 00 03 49
17. Turn Off Ordinary Code Sound	014203	02 02 07 82 30 31 34 32 30 33 00 00 00 00 03 46
18. Open Settings Sound	014207	02 02 07 82 30 31 34 32 30 37 00 00 00 00 03 42
19. Voice increase	014300	02 02 07 82 30 31 34 33 30 30 00 00 00 00 03 48
20. Voice reduction	014301	02 02 07 82 30 31 34 33 30 31 00 00 00 00 03 47
21. Sound frequency 2.0KHZ	0145800	02 02 08 82 30 31 34 35 38 30 30 00 00 00 03 0D
22. Sound frequency 2.7KHZ	0145AAA	02 02 08 82 30 31 34 35 41 41 41 00 00 00 03 E2

23. Allow USB Fast Transfer	02301	02 02 06 82 30 32 33 30 31 00 00 00 00 00 03 7B
24. Ban USB Fast Transfer	02300	02 02 06 82 30 32 33 30 30 00 00 00 00 00 03 7C
25. Fast transmission speed (no delay)	001500	02 02 07 82 30 30 31 35 30 30 00 00 00 00 03 4A
26. Moderate transmission speed (delay 4MS)	001502	02 02 07 82 30 30 31 35 30 32 00 00 00 00 03 48
27. Slow transmission speed (delay 6MS)	001504	02 02 07 82 30 30 31 35 30 34 00 00 00 00 03 46
28. Slow transmission speed (delay 12MS)	001506	02 02 07 82 30 30 31 35 30 36 00 00 00 00 03 44
29. Normal Image Recognition	00161	02 02 06 82 30 30 31 36 31 00 00 00 00 00 03 79
30. Image Reverse Recognition	00160	02 02 06 82 30 30 31 36 30 00 00 00 00 00 03 7A
31. USB-KBW	000602	02 02 07 82 30 30 30 36 30 32 00 00 00 00 03 48
32. TTL/RS232	000601	02 02 07 82 30 30 30 36 30 31 00 00 00 00 03 49
33. 波特率 600bps	000701	02 02 07 82 30 30 30 37 30 31 00 00 00 00 03 48

34. 波特率 1200bps	000702	02 02 07 82 30 30 30 37 30 32 00 00 00 00 03 47
35. baud rate 2400bps	000703	02 02 07 82 30 30 30 37 30 33 00 00 00 00 03 46
36. baud rate 4800bps	000704	02 02 07 82 30 30 30 37 30 34 00 00 00 00 03 45
37. baud rate 9600bps	000705	02 02 07 82 30 30 30 37 30 35 00 00 00 00 03 44
38. baud rate 19200bps	000706	02 02 07 82 30 30 30 37 30 36 00 00 00 00 03 43
39. baud rate 38400bps	000707	02 02 07 82 30 30 30 37 30 37 00 00 00 00 03 42
40. baud rate 57600bps	000708	02 02 07 82 30 30 30 37 30 38 00 00 00 00 03 41
41. baud rate 115200bps	000709	02 02 07 82 30 30 30 37 30 39 00 00 00 00 03 40
42. Odd parity check	001001	02 02 07 82 30 30 31 30 30 31 00 00 00 00 03 4E
43. Parity check	001002	02 02 07 82 30 30 31 30 30 32 00 00 00 00 03 4D
44. No check	001000	02 02 07 82 30 30 31 30 30 30 00 00 00 00 03 4F

45. 8-bit data bits	00080	02 02 06 82 30 30 30 38 30 00 00 00 00 00 03 79
46. 7-bit data bits	00081	02 02 06 82 30 30 30 38 31 00 00 00 00 00 03 78
47. Stop bit 1	00090	02 02 06 82 30 30 30 39 30 00 00 00 00 00 03 78
48. Stop bit 2	00091	02 02 06 82 30 30 30 39 31 00 00 00 00 00 03 77
49. Trigger Mode Mode	013300	02 02 07 82 30 31 33 33 30 30 00 00 00 00 03 49
50. Continuous scanning mode	013304	02 02 07 82 30 31 33 33 30 34 00 00 00 00 03 45
51. Flashing mode (key on)	013306	02 02 07 82 30 31 33 33 30 36 00 00 00 00 03 43
52. Flashing mode (Key off)	013305	02 02 07 82 30 31 33 33 30 35 00 00 00 00 03 44
53. Key delay single read mode	013301	02 02 07 82 30 31 33 33 30 31 00 00 00 00 03 48
54. 1 second timeout	023510	02 02 07 82 30 32 33 35 31 30 00 00 00 00 03 45
55. 3 second timeout	023530	02 02 07 82 30 32 33 35 33 30 00 00 00 00 03 43

56. 10 second timeout	0235A0	02 02 07 82 30 32 33 35 41 30 00 00 00 00 03 35
57. 15 second timeout	0235F0	02 02 07 82 30 32 33 35 46 30 00 00 00 00 03 30
58. Open Test Mode	02571	02 02 06 82 30 32 35 37 31 00 00 00 00 00 03 72
59. Close Test Mode	02570	02 02 06 82 30 32 35 37 30 00 00 00 00 00 03 73
60. No interval	026300	02 02 07 82 30 32 36 33 30 30 00 00 00 00 03 45
61. interval 0.1S	026301	02 02 07 82 30 32 36 33 30 31 00 00 00 00 03 44
62. interval 0.9S	026309	02 02 07 82 30 32 36 33 30 39 00 00 00 00 03 3C
63. interval1.5S	02630F	02 02 07 82 30 32 36 33 30 46 00 00 00 00 03 2F
64. Transfer CODE ID	01401	02 02 06 82 30 31 34 30 31 00 00 00 00 00 03 7B
65. Transfer CODE ID	01400	02 02 06 82 30 31 34 30 30 00 00 00 00 00 03 7C
66. Add a custom prefix	0223XX	XX Hexadecimal code that corresponds to the "Appendix - Character Table"

		character，add one at a time，can add up. Example： add the character A (0x41), set the code to 022341，The instruction is：02 02 07 82 30 32 32 33 34 31 00 00 00 00 03 44
67. Clear all prefixes	02220	02 02 06 82 30 32 32 32 30 00 00 00 00 00 03 7B
68. Add a custom suffix	0221XX	XX is the hexadecimal code of the "Appendix - Character Table" corresponding character ,each time you add one, you can add it cumulatively. Example：Add the character B (0x42), the setting code is 022142, and the instruction is：02 02 07 82 30 32 32 31 34 32 00 00 00 00 03 45
69. Clear all suffixes	02200	02 02 06 82 30 32 32 30 30 00 00 00 00 00 03 7D
70. Hide the leading 1 character	023401	02 02 07 82 30 32 33 34 30 31 00 00 00 00 03 46
71. Hide the leading 2 characters	023402	02 02 07 82 30 32 33 34 30 32 00 00 00 00 03 45
72. Hide the leading 3 characters	023403	02 02 07 82 30 32 33 34 30 33 00 00 00

		00 03 44
73. Hide the leading 5 characters	023405	02 02 07 82 30 32 33 34 30 33 00 00 00 00 03 44
74. Unhide leading characters	023400	02 02 07 82 30 32 33 34 30 30 00 00 00 00 03 47
75. Hide the one-bit character	023301	02 02 07 82 30 32 33 33 30 31 00 00 00 00 03 47
76. Hide the last 2 characters	023302	02 02 07 82 30 32 33 33 30 32 00 00 00 00 03 46
77. Hides the last 3 characters	023303	02 02 07 82 30 32 33 33 30 33 00 00 00 00 03 45
78. Hide the last 5 characters	023305	02 02 07 82 30 32 33 33 30 35 00 00 00 00 03 43
79. Unhide the trailing characters	023300	02 02 07 82 30 32 33 33 30 30 00 00 00 00 03 48
80. Hiding the middle of the first character begins	024001	02 02 07 82 30 32 34 30 30 31 00 00 00 00 03 49
81. Hiding the middle of the second character starts	024002	02 02 07 82 30 32 34 30 30 32 00 00 00 00 03 48
82. Hiding the middle of the third character starts	024003	02 02 07 82 30 32 34 30 30 33 00 00 00 00 03 47
83. Hiding the middle of the 4th	024004	02 02 07 82 30 32 34 30 30 34 00 00 00

character starts		00 03 46
84. Hiding the middle of the 5th character starts	024005	02 02 07 82 30 32 34 30 30 35 00 00 00 00 03 45
85. Hiding the middle of the 6th character starts	024006	02 02 07 82 30 32 34 30 30 36 00 00 00 00 03 44
86. Hiding the middle of the 7th character starts	024007	02 02 07 82 30 32 34 30 30 37 00 00 00 00 03 43
87. Hiding the middle of the8th character starts	024008	02 02 07 82 30 32 34 30 30 38 00 00 00 00 03 42
88. Hide the middle 1 character	023901	02 02 07 82 30 32 33 39 30 31 00 00 00 00 03 41
89. Hide the middle 2 characters	023902	02 02 07 82 30 32 33 39 30 32 00 00 00 00 03 40
90. Hide the middle 3 characters	023903	02 02 07 82 30 32 33 39 30 33 00 00 00 00 03 3F
91. Hide the middle 4 characters	023904	02 02 07 82 30 32 33 39 30 34 00 00 00 00 03 3E
92. Hide the middle 5 characters	023905	02 02 07 82 30 32 33 39 30 35 00 00 00 00 03 3D
93. Hide the middle 6 characters	023906	02 02 07 82 30 32 33 39 30 36 00 00 00 00 03 3C
94. Hide the middle 7 characters	023907	02 02 07 82 30 32 33 39 30 37 00 00 00

		00 03 3B
95. Hide the middle 8 characters	023908	02 02 07 82 30 32 33 39 30 38 00 00 00 00 03 3A
96. Unhide the middle character	023300	02 02 07 82 30 32 33 39 30 30 00 00 00 00 03 42
97. Add Enter	0212@«CR»	02 02 07 82 30 32 31 32 40 0D 00 00 00 00 03 5E
98. Add LF	0212@«LF»	02 02 07 82 30 32 31 32 40 0A 00 00 00 00 03 61
99. Add CR+LF	0213@«CR»«LF»	02 02 08 82 30 32 31 33 40 0D 0A 00 00 00 03 52
100. Add Tab	0122@«HT»	02 02 07 82 30 32 31 32 40 09 00 00 00 00 03 62
101. None	0210@	02 02 06 82 30 32 31 30 40 00 00 00 00 00 03 6E
102. Character conversion -Normal	02510	02 02 06 82 30 32 35 31 30 00 00 00 00 00 03 79
103. Character conversion -Upper	02511	02 02 06 82 30 32 35 31 31 00 00 00 00 00 03 78
104. Character conversion -Lower	02512	02 02 06 82 30 32 35 31 32 00 00 00 00 00 03 77
105. Character	02513	02 02 06 82 30 32 35 31 33 00 00 00 00

conversion-Inverse		00 03 76
106. Enable UPC-A	000341	02 02 07 82 30 30 30 33 34 31 00 00 00 00 03 48
107. Disable UPC-A	000340	02 02 07 82 30 30 30 33 34 30 00 00 00 00 03 49
108. UPC-A Transmit Check Digit	00421	02 02 06 82 30 30 34 32 31 00 00 00 00 00 03 7A
109. UPC-A Do not Transmit Check Digit	00420	02 02 06 82 30 30 34 32 30 00 00 00 00 00 03 7B
110. UPC-A Transfer system character	00400	02 02 06 82 30 30 34 30 30 00 00 00 00 00 03 7D
111. UPC-A Do not send system character	00401	02 02 06 82 30 30 34 30 31 00 00 00 00 00 03 7C
112. UPC-A Barcode information extension	00391	02 02 06 82 30 30 33 39 31 00 00 00 00 00 03 74
113. UPC-A Barcode information does not expand	00390	02 02 06 82 30 30 33 39 30 00 00 00 00 00 03 75
114. Enable UPC-E	00351	02 02 06 82 30 30 33 35 31 00 00 00 00 00 03 78
115. Disable UPC-E	00350	02 02 06 82 30 30 33 35 30 00 00 00 00 00 03 79
116. UPC-E Transmit Check	00441	02 02 06 82 30 30 34 34 31 00 00 00 00

Digit		00 03 78
117. UPC-E Do not Transmit Check Digit	00440	02 02 06 82 30 30 34 34 30 00 00 00 00 00 03 79
118. UPC-E Transfer system character	00430	02 02 06 82 30 30 34 33 30 00 00 00 00 00 03 7A
119. UPC-E Do not send system characters	00431	02 02 06 82 30 30 34 33 31 00 00 00 00 00 03 79
120. UPC-E Bar code information extension	00381	02 02 06 82 30 30 33 38 31 00 00 00 00 00 03 75
121. UPC-E Barcode information does not expand	00380	02 02 06 82 30 30 33 38 30 00 00 00 00 00 03 76
122. Enable EAN-8	00371	02 02 06 82 30 30 33 37 31 00 00 00 00 00 03 76
123. Disable EAN-8	00370	02 02 06 82 30 30 33 37 30 00 00 00 00 00 03 77
124. EAN-8 Transmit Check Digit	00571	02 02 06 82 30 30 35 37 31 00 00 00 00 00 03 74
125. EAN-8Do not Transmit Check Digit	00570	02 02 06 82 30 30 35 37 30 00 00 00 00 00 03 75
126. EAN-8 Transmit System character	00560	02 02 06 82 30 30 35 36 30 00 00 00 00 00 03 76
127. EAN-8 Do not Transmit	00561	02 02 06 82 30 30 35 36 31 00 00 00 00

System character		00 03 75
128. Enable EAN-13	00361	02 02 06 82 30 30 33 36 31 00 00 00 00 00 03 77
129. Disable EAN-13	00360	02 02 06 82 30 30 33 3630 00 00 00 00 00 03 78
130. EAN-13 Transmit Check Digit	00461	02 02 06 82 30 30 34 36 31 00 00 00 00 00 03 76
131. EAN-13 Do not transmit Check Digit	00460	02 02 06 82 30 30 34 36 30 00 00 00 00 00 03 77
132. EAN-13 Extended to ISBN	00481	02 02 06 82 30 30 34 38 31 00 00 00 00 00 03 74
133. EAN-13 Do not Extended to ISBN	00480	02 02 06 82 30 30 34 38 30 00 00 00 00 00 03 75
134. EAN-13 Extendedto ISSN	01501	02 02 06 82 30 31 35 30 31 00 00 00 00 00 03 7A
135. EAN-13 Do not Extendedto ISSN	01500	02 02 06 82 30 31 35 30 30 00 00 00 00 00 03 7B
136. Enable Code 128	00691	02 02 06 82 30 30 36 39 31 00 00 00 00 00 03 71
137. Disable Code 128	00690	02 02 06 82 30 30 36 39 30 00 00 00 00 00 03 72
138. Enable Code 39	00221	02 02 06 82 30 30 32 32 31 00 00 00 00

		00 03 7C
139. Disable Code 39	00220	02 02 06 82 30 30 32 32 30 00 00 00 00 00 03 7D
140. Code 39 Transmit Start/Stop Character	00281	02 02 06 82 30 30 32 38 31 00 00 00 00 00 03 76
141. Code 39 Do not Transmit Start/Stop Character	00280	02 02 06 82 30 30 32 38 30 00 00 00 00 00 03 77
142. Code 39 Transfer check	00251	02 02 06 82 30 30 32 35 31 00 00 00 00 00 03 79
143. Code 39 No transmission check	00250	02 02 06 82 30 30 32 35 30 00 00 00 00 00 03 7A
144. Code 39 Open MOD43 Check	00241	02 02 06 82 30 30 32 34 31 00 00 00 00 00 03 7A
145. Code 39 Close MOD43 Check	00240	02 02 06 82 30 30 32 34 30 00 00 00 00 00 03 7B
146. Code 39 Enable Code 39 Full ASCII	00231	02 02 06 82 30 30 32 33 31 00 00 00 00 00 03 7B
147. Code 39 Disable Code 39 Full ASCII	00230	02 02 06 82 30 30 32 33 30 00 00 00 00 00 03 7C
148. Code 39The minimum reading length is 1	003201	02 02 07 82 30 30 33 32 30 31 00 00 00 00 03 4A
149. Code 39 The minimum	003202	02 02 07 82 30 30 33 32 30 32 00 00 00

reading length is 2		00 03 49
150. Code 39 The minimum reading length is 3	003203	02 02 07 82 30 30 33 32 30 33 00 00 00 00 03 48
151. Enable Code 32	01951	02 02 06 82 30 31 39 35 31 00 00 00 00 00 03 71
152. Disable Code 32	01950	02 02 06 82 30 31 39 35 30 00 00 00 00 00 03 72
153. Enable Code 93	00621	02 02 06 82 30 30 36 32 31 00 00 00 00 00 03 78
154. Disable Code 93	00620	02 02 06 82 30 30 36 32 30 00 00 00 00 00 03 79
155. Code 93 Transmit check Digit	01901	02 02 06 82 30 31 39 30 31 00 00 00 00 00 03 76
156. Code 93 Transmit check Digit	01900	02 02 06 82 30 31 39 30 30 00 00 00 00 00 03 77
157. Enable Code 11	01261	02 02 06 82 30 31 32 36 31 00 00 00 00 00 03 77
158. DisableCode 11	01260	02 02 06 82 30 31 32 36 30 00 00 00 00 00 03 78
159. Code 11 CCheck	01272	02 02 06 82 30 31 32 37 32 00 00 00 00 00 03 75
160. Code 11 CKCheck	01273	02 02 06 82 30 31 32 37 33 00 00 00 00

		00 03 74
161. Code 11 automatic CKCheck	01271	02 02 06 82 30 31 32 37 31 00 00 00 00 00 03 76
162. Code 11 The minimum reading length is1	012801	02 02 07 82 30 31 32 38 30 31 00 00 00 00 03 44
163. Code 11 The minimum reading length is 4	012804	02 02 07 82 30 31 32 38 30 34 00 00 00 00 03 41
164. Enable Interleaved 2 of 5	00961	02 02 06 82 30 30 39 36 31 00 00 00 00 00 03 71
165. Disable Interleaved 2 of 5	00960	02 02 06 82 30 30 39 36 30 00 00 00 00 00 03 72
166. Transfer Interleaved 2 of 5 Check	00251	02 02 06 82 30 30 32 35 31 00 00 00 00 00 03 79
167. Do not transmit Interleaved 2 of 5 checks	00250	02 02 06 82 30 30 32 35 30 00 00 00 00 00 03 7A
168. Open Interleaved 2 of 5 Check	00241	02 02 06 82 30 30 32 34 31 00 00 00 00 00 03 7A
169. Close Interleaved 2 of 5 Check	00240	02 02 06 82 30 30 32 34 30 00 00 00 00 00 03 7B
170. Interleaved 2 of 5 Minimum Read Length is 1	009702	02 02 07 82 30 30 39 37 30 32 00 00 00 00 03 3E
171. Interleaved 2 of	009704	02 02 07 82 30 30 39 37 30 34 00 00 00

5Minimum Read Length is 4		00 03 3C
172. Enable Matrix 2 of 5	01461	02 02 06 82 30 31 34 36 31 00 00 00 00 00 03 75
173. DisableMatrix 2 of 5	01460	02 02 06 82 30 31 34 36 30 00 00 00 00 00 03 76
174. Matrix 2 of 5 Minimum Read Length is 1	014801	02 02 07 82 30 31 34 38 30 31 00 00 00 00 03 42
175. Matrix 2 of 5 Minimum Read Length is 3	014803	02 02 08 82 30 31 34 38 30 31 33 00 00 00 03 0E
176. Enable Industrial 2 of 5	01061	02 02 06 82 30 31 30 36 31 00 00 00 00 00 03 79
177. Disable Industrial 2 of 5	01060	02 02 06 82 30 31 30 36 30 00 00 00 00 00 03 7A
178. Industrial 2 of 5 Minimum Read Length is 1	010701	02 02 07 82 30 31 30 37 30 31 00 00 00 00 03 47
179. Industrial 2 of 5 Minimum Read Length is 3	010703	02 02 07 82 30 31 30 37 30 33 00 00 00 00 03 45
180. Enable Standard 2 of 5	01871	02 02 06 82 30 31 38 37 31 00 00 00 00 00 03 70
181. Disable Standard 2 of 5	01870	02 02 06 82 30 31 38 37 30 00 00 00 00 00 03 71
182. Standard 2 of 5 Minimum	018901	02 02 07 82 30 31 38 39 30 31 00 00 00

Read Length is 1		00 03 3D
183. Standard 2 of 5 Minimum Read Length is 3	018904	02 02 07 82 30 31 38 39 30 34 00 00 00 00 03 3A
184. Enable Codabar	00851	02 02 06 82 30 30 38 35 31 00 00 00 00 00 03 73
185. Disable Codabar	00850	02 02 06 82 30 30 38 35 30 00 00 00 00 00 03 74
186. Codabar Transmit Start/Stop Character	00861	02 02 06 82 30 30 38 36 31 00 00 00 00 00 03 72
187. Codabar Do not Transmit Start/Stop Character	00860	02 02 06 82 30 30 38 36 30 00 00 00 00 00 03 73
188. Codabar The minimum reading length is 1	018701	02 02 07 82 30 31 38 37 30 31 00 00 00 00 03 3F
189. Codabar The minimum reading length is4	018704	02 02 07 82 30 31 38 37 30 34 00 00 00 00 03 3C
190. Enable Plessey	01161	02 02 06 82 30 31 31 36 31 00 00 00 00 00 03 78
191. Disable Plessey	01160	02 02 06 82 30 31 31 36 30 00 00 00 00 00 03 79
192. Plessey The minimum reading length is 1	011901	02 02 07 82 30 31 31 39 30 31 00 00 00 00 03 44
193. Plessey The minimum	011904	02 02 07 82 30 31 31 39 30 34 00 00 00

reading length is 4		00 03 41
194. Enable MSI Plessey	01151	02 02 06 82 30 31 31 35 31 00 00 00 00 00 03 79
195. Disable MSI Plessey	01150	02 02 06 82 30 31 31 35 30 00 00 00 00 00 03 7A
196. MSIPlessey The minimum reading length is 1	011801	02 02 07 82 30 31 31 38 30 31 00 00 00 00 03 45
197. MSI Plessey The minimum reading length is 4	011804	02 02 07 82 30 31 31 38 30 34 00 00 00 00 03 42
198. Enable RSS Limited	01771	02 02 06 82 30 31 37 37 31 00 00 00 00 00 03 71
199. Disable RSS Limited	01770	02 02 06 82 30 31 37 37 30 00 00 00 00 00 03 72
200. Enable RSS Omni	01671	02 02 06 82 30 31 36 37 31 00 00 00 00 00 03 72
201. Disable RSS Omni	01670	02 02 06 82 30 31 36 37 30 00 00 00 00 00 03 73
202. Enable China Post	01571	02 02 06 82 30 31 35 37 31 00 00 00 00 00 03 73
203. Disable China Post	01570	02 02 06 82 30 31 35 37 30 00 00 00 00 00 03 74
204. Enable 2-Digit add-on	00551	02 02 06 82 30 30 35 35 31 00 00 00 00

Code		00 03 76
205. Enable5-Digit add-on Code	00552	02 02 06 82 30 30 35 35 32 00 00 00 00 00 03 75
206. Enable 2-Digit or 5-Digit add-on Code	00553	02 02 06 82 30 30 35 35 33 00 00 00 00 00 03 74
207. Disable Add-on Code	00550	02 02 06 82 30 30 35 3530 00 00 00 00 00 03 77
208. Add-on Code Required	02611	02 02 06 82 30 32 36 31 31 00 00 00 00 00 03 77
209. Add-on Code Not Required	02610	02 02 06 82 30 32 36 31 30 00 00 00 00 00 03 78
210. Enable response	02421	02 02 06 82 30 32 34 32 31 00 00 00 00 00 03 78
211. Disable response	02420	02 02 06 82 30 32 34 32 30 00 00 00 00 00 03 79
212. Turn on feedback sound	01411	02 02 06 82 30 31 34 31 31 00 00 00 00 00 03 7A
213. Turn off feedback sound	01410	02 02 06 82 30 31 34 31 30 00 00 00 00 00 03 7B

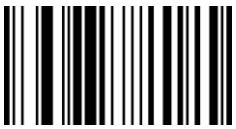
Appendix - Character Table (for adding suffixes)

1001

SOH (01)

1002

STX (02)



1003

ETX (03)

1004

EOT (04)

1005

ENQ (05)

1006

ACK (06)

1007

BEL (07)

1008

Backspace (08)

1009

HT (09)

1010

LF (0A)

1011

VT (0B)

1012

FF (0C)

1013

CR (0D)

1014

SO (0E)

1015

SI (0F)

1016

DEL (10)

1017

DC1 (11)

1018

DC2 (12)

1019

DC3 (13)

1020

DC4 (14)

1021

NAK (15)

1022

SYN (16)

1023

ETB (17)

1024

CAN (18)

1025

EM (19)

1026

SUB (1A)

1027

ESC (1B)

1028

FS (1C)

1029

GS (1D)

1030

RS (1E)

1031

US (1F)

1032

Space (20)

1033

! (21)

1034

“ (22)

1035

(23)

1036

$ (24)

1037

% (25)

1038

& (26)

1039

‘ (27)

1040

((28)

1041

) (29)

1042

* (2A)

1043

+ (2B)

1044

, (2C)

1045

- (2D)

1046

. (2E)

1047

/ (2F)

1048

0 (30)

1049

1 (31)

1050

2 (32)

1051

3 (33)

1052

4 (34)

1053

5 (35)

1054

6 (36)

1055

7 (37)

1056

8 (38)

1057

9 (39)

1058

: (3A)

1059

; (3B)

1060

< (3C)

1061

= (3D)

1062

> (3E)

1063

? (3F)

1064

@ (40)

1065

A (41)

1066

B (42)

1067

C (43)

1068

D (44)

1069

E (45)

1070

F (46)

1071

G (47)

1072

H (48)

1073

I (49)

1074

J (4A)

1075

K (4B)

1076

L (4C)

1077

M (4D)

1078

N (4E)

1079

O (4F)

1080

P (50)

1081

Q (51)

1082

R (52)

1083

S (53)

1084

T (54)

1085

U (55)

1086

V (56)

1087

W (57)

1088

X (58)

1089

Y (59)

1090

Z (5A)

1091

[(5B)

1092

\ (5C)

1093

] (5D)

1094

^ (5E)

1095

_ (5F)

1096

` (60)

1097

a (61)

1098

b (62)

1099

c (63)

1100

d (64)

1101

e (65)

1102

f (66)

1103

g (67)

1104

h (68)

1105

i (69)

1106

j (6A)

107

k (6B)

1108

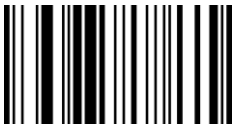
l (6C)

1109

m (6D)

1110

n (6E)



1111

o (6F)

1112

p (70)

1113

q (71)

1114

r (72)

1115

s (73)

1116

t (74)

1117

u (75)

1118

v (76)

1119

w (77)

1120

x (78)

1121

y (79)

1122

z (7A)

1123

{ (7B)

1124

| (7C)

1125

} (7D)

1126

~ (7E)

1127

Delete (7F)

1128

F1

1129

F2

1130

F3

1131

F4

1132

F5

1133

F6

1134

F7

1135

F8

1136

F9

1137

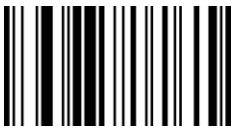
F10

1138

F11

1139

F12



1140

Insert

1141

Home

1142

Page up

1143

Delete

1144

END

1145

Page arrow

1146

Right arrow

1147

Left arrow

1148

Down arrow

1149

Up arrow

Appendix - ASCII code table

Hexadecimal	ASCII value	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) XON)
12	18	DC2 (Device Control 2)

13	19	DC3 (XOFF) (Device Control 3) (XOFF)
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)