



L3 User Manual

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1 System Settings

1.1 Introduction

Users can set the function of the scan engine by scanning one or more setting barcodes.



Decoding Instructions

i Manual Decoding Procedure

In manual reading mode:

1. Press and hold the trigger button of the scan engine, the lighting will be activated, and a red lighting line and a red aiming line will appear.
2. Aim the red aiming line at the center of the barcode, move the scan engine and adjust the distance between it and the barcode to find the best reading distance.
3. When the success prompt sounds and the red lighting line goes out, the reading is successful, and the scan engine transmits the decoded data to the host.

i Note

During the reading process, for the same batch of barcodes, you will find that the distance between the scan engine and the barcode is within a certain range, and the reading success rate will be high. This distance is the optimal reading distance.

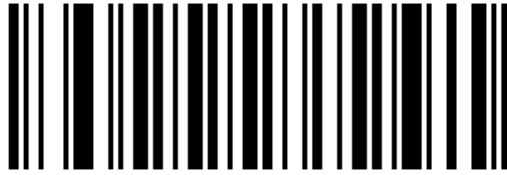
1.2 Restore Factory Defaults

i Restore Factory Defaults Notice

Scanning the “Restore Factory Settings” setting barcode will restore all properties of the scan engine to the factory default state.

Applicable Scenarios:

1. There is an error in the scan engine settings, such as the barcode cannot be read.
2. I have forgotten what settings I have made for the scan engine before, and I do not want to continue to use the previous settings.
3. Functions that are rarely used are temporarily enabled and need to be restored to the default state after use.



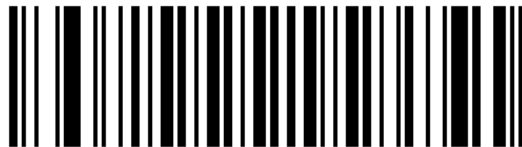
Restore Factory Defaults

1.3 View Firmware Version

Scan the following “View Firmware Version” setting barcode to view the current scan engine firmware version information.



View Firmware Version



Get Sys Para (For Internal Use Only!)

1.4 Transmit Setting Barcodes

You can set whether to send the setting barcode content to the host. After scanning the “Allow sending setting barcode” setting successfully, when scanning the setting barcode, the content of the setting barcode will be sent to the host. After scanning the “Prohibit sending setting barcode” setting successfully, when scanning the setting barcode, the content of the setting barcode will not be sent to the host. The setting barcode is not sent by default.



Enable Transmit Setting Barcodes



* Disable Transmit Setting Barcodes

1.5 USB Fast Transfer

This scan engine can set the data transmission speed of the scan engine by scanning the setting barcode. For non-standard USB input used by some Windows devices, such as the USB interface converted through PS/2, the stability and integrity of the data output can be improved by appropriately reducing the scan engine transmission speed. USB fast transmission is turned off by default and the “moderate transmission speed” mode is used.



USB High-Speed Transfer



USB Medium-Speed Transfer



* Disable USB Fast Transfer

1.6 Data Transfer Speed

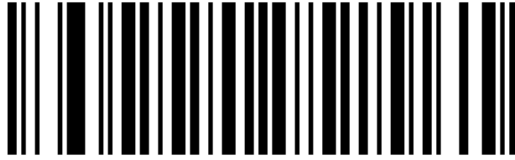
Users can further set the transfer speed of USB devices.



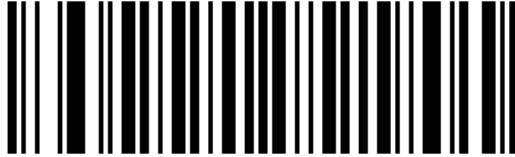
Fast Transfer Speed



* Medium Transfer Speed



Slow Transfer Speed



Slowest Transfer Speed

1.7 Beeper Settings

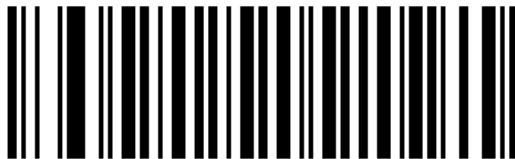
In the default state, the scan engine will emit a beep after successful reading. The user can turn the beep on or off according to needs.



* Enable Beeper



Disable Beeper



Medium Volume #



Low Volume #

1.8 Key Combination



* Disable Key Combination



Enable Key Combination



Key Combination Test Barcode: <SOH>

2 Trigger settings

2.1 reading mode

Users can set the reading mode of the scan engine according to their needs. The default state is the button trigger mode. In this mode, the scan engine starts reading after pressing the trigger button, and stops reading after successful reading or releasing the trigger button.

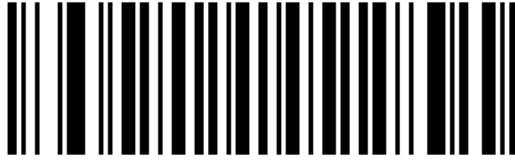


* Key Trigger

Users can also set the scan engine to automatic continuous reading mode. After the setting is successful, the red light of the scan engine is always on. When a barcode passes by, the scan engine automatically reads the barcode. The same barcode will not be read again unless it is removed and read again.

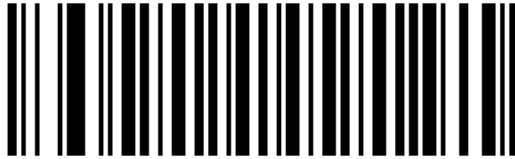


Automatic Continuous Reading



Discontinuous Reading

The user can also set the scan engine to the button delay mode. After the setting is successful, the red light of the scan engine will stay on for 3 seconds, and the light will turn off if the scan engine is not read after a timeout of 3 seconds, or the light will turn off after the reading is successful. The key timeout is

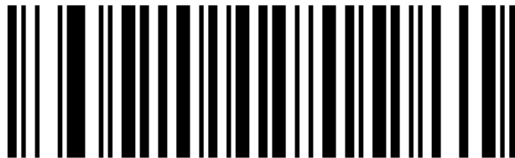


Key Delay

Key Delay Parameters

Key Timeout

When the user uses the key delay mode, the user can set the decoding timeout according to the needs. The default is 3 s and the time range is 1-9.9 s.



Timeout 1 S



* Timeout 3 S

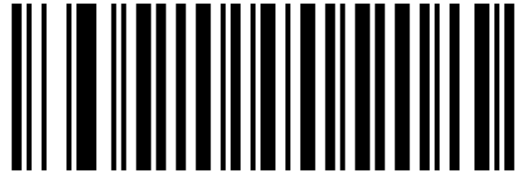


Timeout 5 S



Timeout 9.9 s

2.2 Self-sensing Settings



* Disable IR Auto-sensing



Enable IR Auto-sensing

Self-sensing Sensitivity And Interval Time Parameters

Format

0265 + sensitivity setting + interval setting

Sensitivity

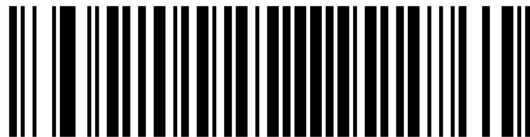
0x01 to 0xFF, the smaller the value, the higher the sensitivity.

Interval time

0x01 to 0x40.

Example

02657705 means the sensitivity is 0x77 and the interval is 0x05 (500 ms).



Self-sensing Sensitivity And Interval Time Setting Example

2.3 Inverse Color Reading Settings



Enable Inverse Color Reading

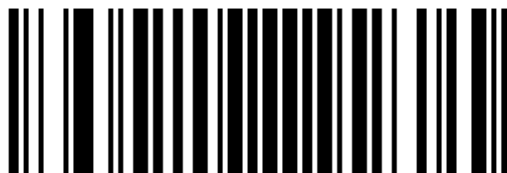


* Disable Inverse Color Reading

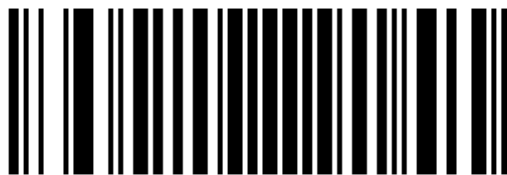


Inverse Color Reading Settings

2.4 Duplicate Code Detection Settings



* Disable Duplicate Code Detection



Enable Duplicate Code Detection



The Re-coding Interval Is 1s



The Re-code Interval Is 2s



The Re-code Interval Is 3s



The Re-coding Interval Is 5s



The Re-coding Interval Is 10s

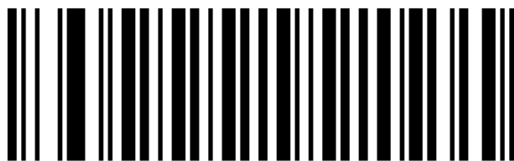
3 Communication Settings

3.1 Introduction

This scan engine can provide three interface modes: USB, USB virtual serial port, and RS232 serial communication to communicate with the host. Users can set the function of the scan engine by scanning one or more setting barcodes.

3.2 USB Communication Mode

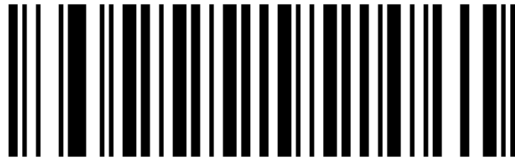
The scan engine uses USB keyboard mode output by default.



* USB Keyboard

3.3 USB virtual serial port mode

When the scan engine uses the USB communication interface, but the host application uses serial communication to receive data, you can set the scan engine to the USB virtual serial communication method. This feature requires the appropriate driver to be installed on the host machine.



USB virtualserial

Note

In the USB virtual serial port mode, the serial port parameters of the scan engine can be adaptively matched according to the serial port parameters of the host application.

3.4 RS232 Serial Port Mode

The serial port is a common way to connect the scan engine and the host device, and can be used to connect host devices such as PCs and POS machines. When the scan engine uses a serial port, the serial port parameter configuration must be completely matched between the scan engine and the host device to ensure the accuracy of the transmitted data.



RS232 Serial Port

Baud Rate

The baud rate is the symbol rate transmitted by the serial port per second. The baud rate used by the scan engine and the data receiving host must be consistent to ensure accurate data transmission. The scan engine supports the baud rates listed below, in bit/s.



600bps



1200bps



2400bps



4800bps



* 9600bps



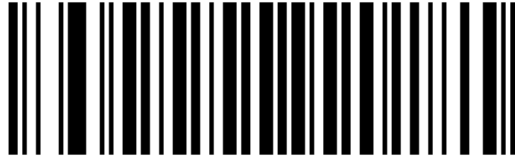
19200bps



38400bps



57600bps



115200bps

4 Keyboard Settings

4.1 Country/Language Keyboard Layout Selection

Different countries have different keyboard key layouts and symbols corresponding to languages. The scan engine can virtualize the keyboard formats of different countries according to actual needs.



* United States/China (American English)



Canada (French)



Netherlands (Dutch)



Spain (Spanish-International)



Argentina (Latin American)



Brazil(Portuguese)



Denmark (Danish)



United Kingdom (British English)



Italy (Italian)



France (French)



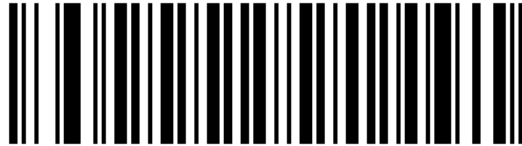
Germany (German)



Norway (Northern Sami)



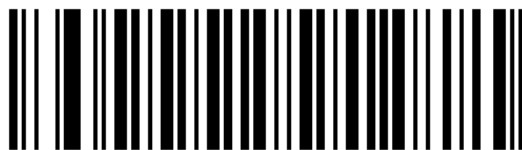
Sweden/Finland (Swedish/Finnish)



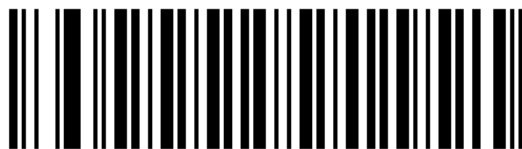
Slovakia (Slovak)



Portugal (Portuguese)



Czech Republic (Czech)



Belgium (Dutch)



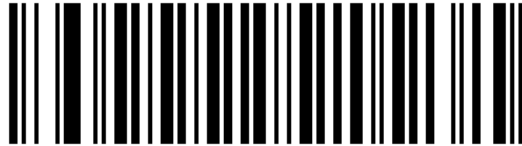
Turkish-F



Turkish-Q



Poland (Polish 214)



Switzerland (German/French)



Croatia (Croatian)



Hungary (Hungarian)



Japan (Japanese)



ALT Universal Keyboard



Thai

5 Data Editing

5.1 Introduction

After the scan engine decodes successfully, the device obtains a string of data, which can be numbers, English, symbols, etc. In practical applications, we may not only need barcode data, or the data contained in the barcode cannot meet your needs. For example, you may want to know which type of barcode the string of data obtained comes from, or append special data to this string of data, which may not be included in the barcode data.

Adding these contents when making codes will inevitably increase the length of the barcode and lack flexibility, which is not an advocated approach. At this time, we thought of artificially adding some content in front or behind the barcode data, and these added contents can be changed in real time according to needs, and you can choose to add or block them. This is the suffix and suffix of the barcode data. The method of adding suffixes and suffixes meets the needs without modifying the content of the barcode information.

Note

Data editing format:

5.2 Terminator settings

During the use of the scan engine, users can add corresponding terminators to the scan engine according to their needs.



* Add Carriage Return CR



TAB



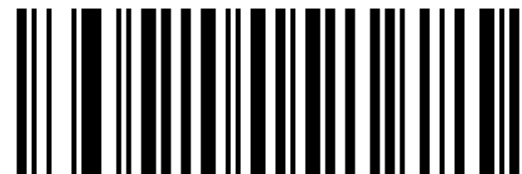
* Add Newline LF



Add CRLF



Enter 2 Times



Terminator None

5.3 Code ID Settings

In the process of using the scan engine, users often need to know the symbology of the currently decode barcode. We can use the Code ID prefix to identify the barcode type. For the symbology corresponding to Code ID, please refer to [Code ID and Symbology Reference Table](#). Code ID is hidden by default.



* None



Enable Barcode ID (Prefix)



Enable Barcode ID (Suffix)

5.4 Custom Suffix

Users can add prefix and suffix settings to the output data of the scan engine according to their needs. For example, when adding the prefix character “VC” to the barcode “123”, the output data received by the host is “VC123”. When the suffix character “DE” is added, the output data received by the host is “123DE”.

Prefix And Suffix Setting Barcode

Add Prefix

Scan Order

Scan “Add Prefix” first, and then scan the character setting barcodes in *ASCII Code Table* in sequence. Prefix characters can be added up to 32 characters.

To use the add prefix setting, first scan the “add prefix” setting barcode, and then scan the setting barcode corresponding to the corresponding characters in *ASCII Code Table* as required. The setup is now complete. Prefix characters can be added up to 32 characters.



Add Prefix



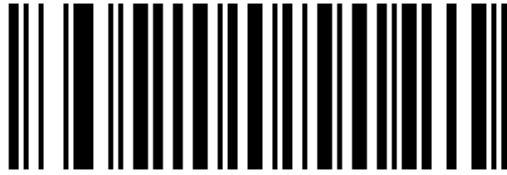
Clear All Prefixes

Add Suffix

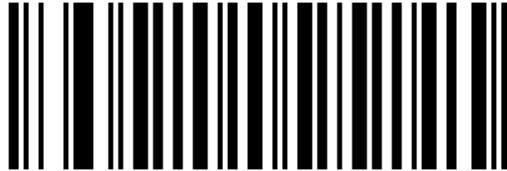
Scan Order

Scan “Add Suffix” first, and then scan the character setting barcodes in *ASCII Code Table* in order. Suffix characters can be added up to 32 characters.

To use the add suffix setting, first scan the “Add suffix” setting barcode, and then scan the setting barcode corresponding to the corresponding characters in *ASCII Code Table* as required. The setup is now complete. Suffix characters can be added up to 32 characters.



Add Suffix



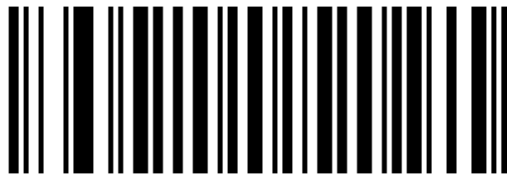
Clear All Suffixes

Note

Clear suffix characters do not include the suffix terminator.

Exit Prefix And Suffix Settings

When the user is using the process of adding suffix and suffix settings, and after scanning “Add prefix” or “Add suffix” but does not want to add suffix and suffix settings for the time being, he can scan the “Exit Add suffix and suffix” mode. Then do other things.



Exit Adding Prefix And Suffix

5.5 Hidden Characters

Users can hide the output data of the scan engine according to their needs. For example, for the barcode “123456” , when setting to hide the leading 2 characters, the output data received by the host is “3456” . When hiding the trailing 2 characters, the output data received by the host is “1234” .

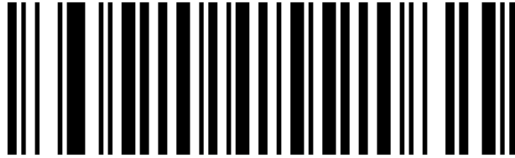
Hide Characters Before And After

Hide Prefixed Characters

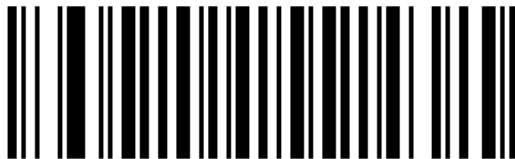
Users can scan the following barcodes according to their needs and set the corresponding number of leading characters to be hidden.



Hide Leading 1 Character



Hide The First 2 Characters



Hide The First 3 Characters



Hide First 5 Characters

Unhide Leading Characters



Unhide Leading Characters

Hide Trailing Characters

Users can scan the following barcodes according to their needs and set the corresponding digits to hide the following characters.



Hide Trailing 1 Character



Hide Trailing 2 Characters

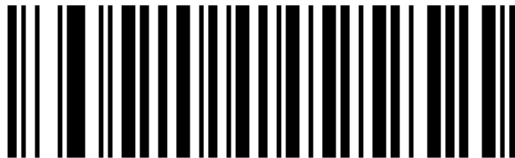


Hide Trailing 3 Characters



Hide Trailing 5 Characters

Unhide Trailing Characters



Unhide Trailing Characters

Hide Middle Characters

Hide Middle Characters

Users can scan the following setting barcode according to their needs to hide the corresponding middle characters.

i Hide Intermediate Character Setting Logic

Scan the starting digit setting barcode first, and then scan the hidden digit setting barcode.

Example: When hiding the two characters “56” in the barcode “12345678”, scan the 4th character first, and then scan to hide the middle 2 characters. The output data received by the host is “123478”.

Start Bit Setting Barcode

i First Step

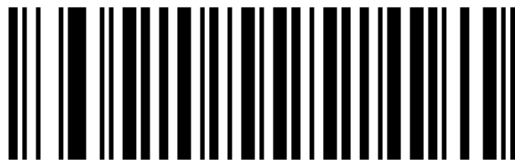
Scan a starting bit setting barcode to specify the hiding starting from the Mth character.



Starting From Character 1



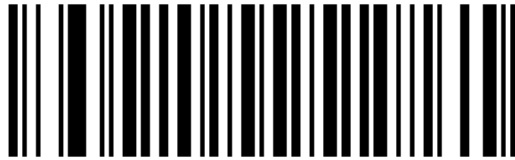
Starting From Character 2



Starting From Character 3



Starting From Character 4



Starting From The 5th Character



Starting From Character 6



Starting From Character 7



Starting From Character 8

The last two digits are hexadecimal numbers.

Hide Middle N Characters

Step 2

Scan a hidden number setting barcode to specify N characters to be hidden starting from the starting bit.



Hide Middle 1 Character



Hide Middle 2 Characters



Hide Middle 3 Characters



Hide Middle 4 Characters



Hide The Middle 5 Characters



Hide Middle 6 Characters



Hide Middle 7 Characters



Hide Middle 8 Characters

Unhide Middle Characters

Unset

If you need to cancel the middle character hiding setting, scan the following setting barcode.



Unhide Middle Characters

6 Character Settings

6.1 Case Conversion

By setting the case conversion function of the scan engine, the English letters in the data output by the scan engine can be converted from upper to lower case. For example, when the barcode content is aBC123, set the scan engine to “all lowercase”, and the output data received by the host will be “abc123”. Conversion is disabled by default.



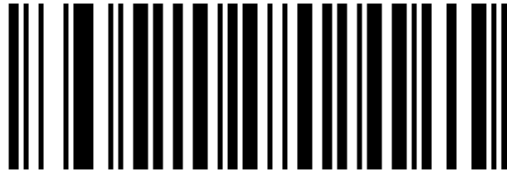
* Disable Conversion



All In Uppercase



All Lowercase



Convert Between Upper And Lower Case

7 Barcode Settings

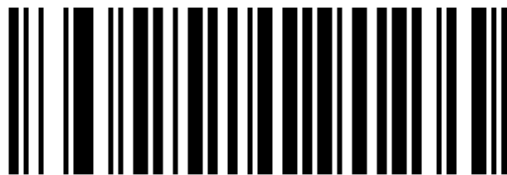
7.1 Setup Instructions

Each symbology has its own unique attributes. Through the code setting in this chapter, the scan engine can be adjusted to adapt to these attribute changes. The fewer symbologies with “Allow Reading” enabled, the faster the scan engine will read. You can disable the scan engine from reading unused symbologies to improve the performance of the scan engine.

7.2 EAN/UPC Encoding Settings

EAN-8

Enable/disable



* Enable EAN-8



Disable EAN-8

Check Digit Transmission

The EAN-8 barcode data is fixed to 8 characters, and the 8th bit is the check digit, which is used to verify the correctness of all 8 characters. The default is to send the check digit, and the user can choose to send or not send the check digit.



* Send Check Digit



No Check Digit Sent

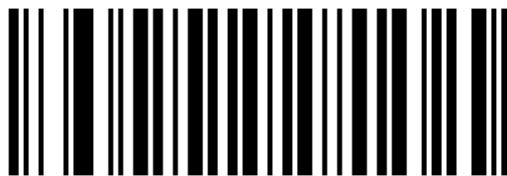


EAN-8 Hide Leading Characters



* EAN-8 Does Not Hide Leading Characters

Additional Code Reading



Enable 2-digit Add-on Code



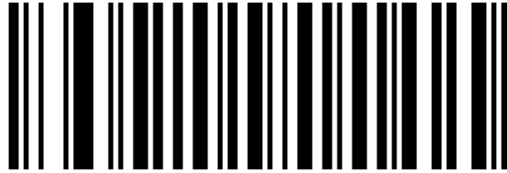
Enable 5-digit Add-on Code



Enable 2-digit And 5-digit Add-on Codes



* Disable Additional Codes



Force Additional Code To Be Enabled

EAN-13

Enable/disable



* Enable EAN-13



Disable EAN-13

Verify Multiple Times



Enable UPC/EAN Multi-validation



* Disable UPC/EAN Multiple Authentication



*UPC/EAN Security Level 0



UPC/EAN Security Level 1

Check Digit Transmission

The EAN-13 barcode data is fixed at 13 characters, and the 13th digit is the check digit, which is used to verify the correctness of all 8 characters. The default is to send the check digit, and the user can choose to send or not send the check digit.

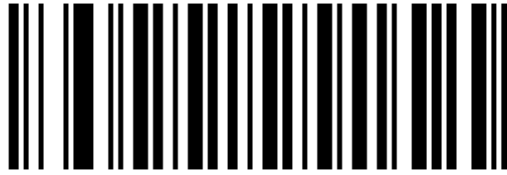


* Send Check Digit

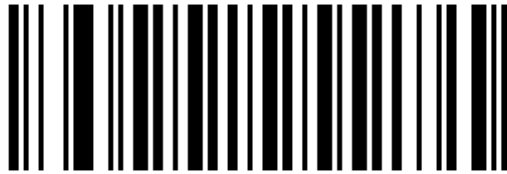


No Check Digit Sent

Leading Character Transmission



* EAN-13 Send Leading Character



EAN-13 Does Not Send Leading Characters

Additional Code Reading



Enable 2-digit Add-on Code



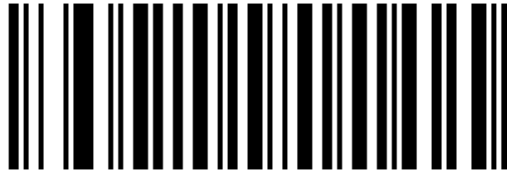
Enable 5-digit Add-on Code



Enable 2-digit And 5-digit Add-on Codes



* Disable Additional Codes



Force Additional Code To Be Enabled

EAN-13 Convert to ISBN

ISBN is a book code, and 13-digit data is normally output. When EAN-13 to ISBN is enabled, the output is a 10-digit ISBN code. Conversion is disabled by default.



Enable EAN-13 To ISBN



* Disable EAN-13 To ISBN

EAN-13 Convert to ISSN

ISSN is a magazine code, which normally outputs 13-digit data. When EAN-13 to ISBN is enabled, the output is a 10-digit ISSN code. Conversion is disabled by default.



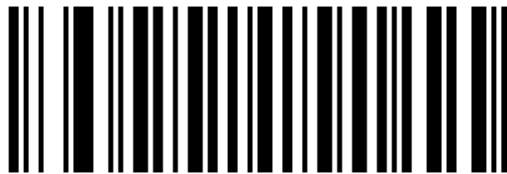
Enable EAN-13 To ISSN



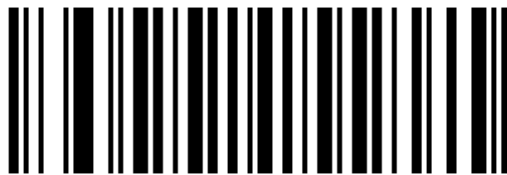
Disable EAN-13 To ISSN

UPC-A

Enable/disable



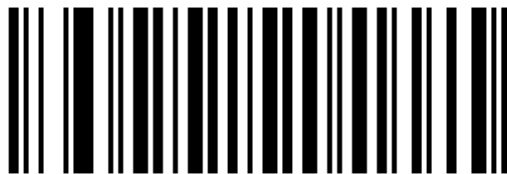
* Enable UPC-A



Disable UPC-A

Check Digit Transmission

The UPC-A barcode data is fixed to 12 characters, and the 12th digit is the check digit, which is used to verify the correctness of all 12 characters. The default is to send the check digit, and the user can choose to send or not send the check digit.



* Send Check Digit



No Check Digit Sent

Leading Character Transmission



UPC-A Hides Leading Characters



UPC-A Does Not Hide Leading Characters

Additional Code Reading



Enable 2-digit Add-on Code



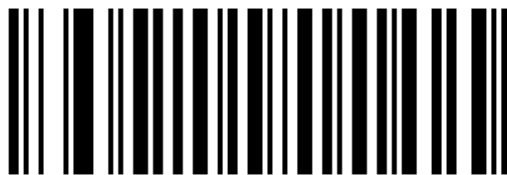
Enable 5-digit Add-on Code



Enable 2-digit And 5-digit Add-on Codes



* Disable Additional Codes



Force Additional Code To Be Enabled

UPC-A To EAN-13

Users can set whether they need to convert UPC-A to EAN-13 output according to their needs. The default is not to convert.



Enable UPC-A To EAN-13



* Disable UPC-A To EAN-13

UPC-E

Enable/disable



* Enable UPC-E



Disable UPC-E

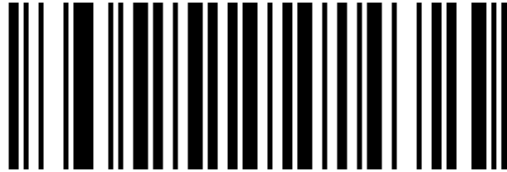
Additional Code Reading



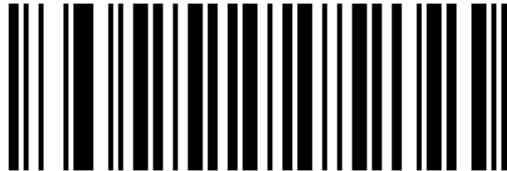
Enable 2-digit Add-on Code



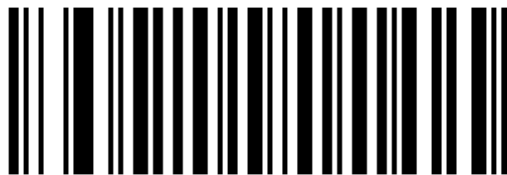
Enable 5-digit Add-on Code



Enable 2-digit And 5-digit Add-on Codes



* Disable Additional Codes



Force Additional Code To Be Enabled

UPC-E To UPC-A

Users can set whether they need to convert UPC-E to UPC-A output according to their needs. The default is not to convert.



Enable UPC-E To UPC-A

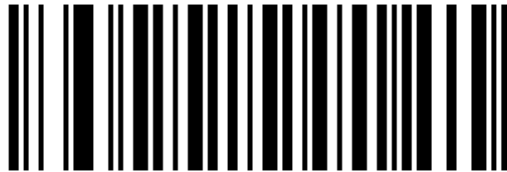


* Disable UPC-E To UPC-A

Check Digit Transmission



UPC-E Does Not Send Check Digits



UPC-E Sends Check Digit

7.3 Commonly Used 1D Code Settings

Codabar (Cudabarcodes)

Enable/disable



* Enable Codabar

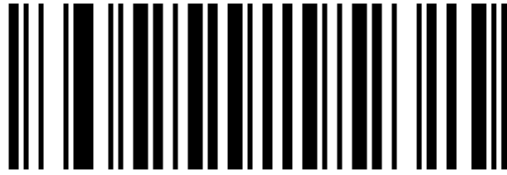


Disable Codabar

Start And End Character Transmission



Enable Codabar Start And End Characters



* Disable Codabar Start And End Characters



Set Codabar Minimum Length 4

Parameter Format

0087hh

hh

Two hexadecimal digits used to set the Codabar minimum length.

Code 11

Enable/disable



* Enable Code 11



Disable Code 11

Parameter Format

0128hh

hh

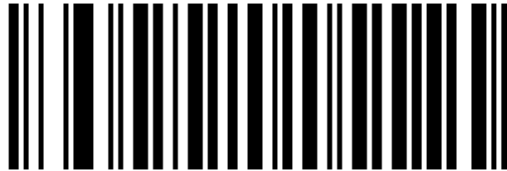
Two hexadecimal numbers used to set the Code 11 minimum length.

Code 39

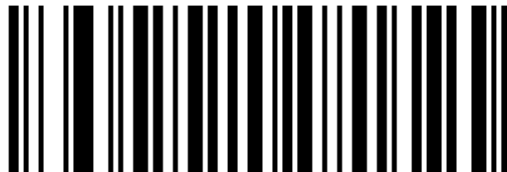
Enable/disable



* Enable Code 39



Disable Code 39



Check Digit Transmission

Verification Settings



Disable Code 39 Verification



Enable Code 39 MOD43 Verification

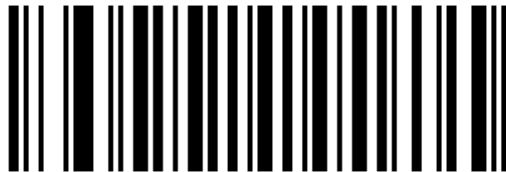


* Disable Code 39 MOD43 check

Verify Multiple Times



* Disable Code 39 Multiple Verifications



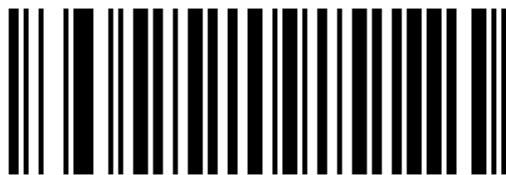
Enable Code 39 Multiple Verification

Start And End Character Transmission

There is a character “*” before and after the Code 39 barcode data as the start and end characters. You can set whether to transmit the start and end characters together with the barcode data after successful reading.



Enable Code 39 Start And End Characters



* Disable Code 39 Start And End Characters

Full ASCII Support

The encoding method of Code 39 can include the representation of all ASCII characters. Through settings, the scan engine can support barcodes containing the full ASCII character set.

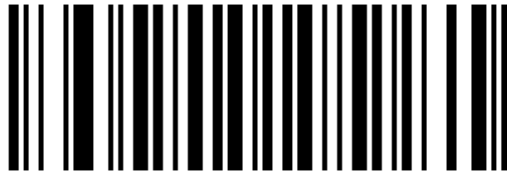


* Enable Full ASCII Support

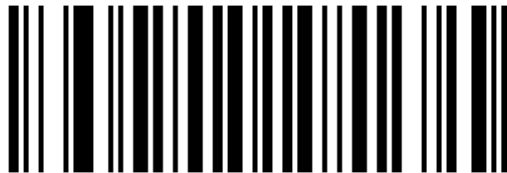


Disable Full ASCII Support

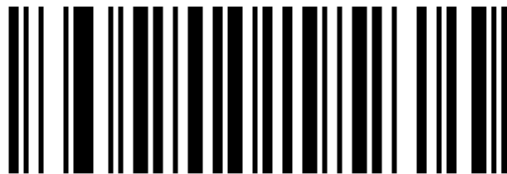
Code 32 Settings



* Disable Code 32



Enable Code 32



* Disable Code 32 Prefix A

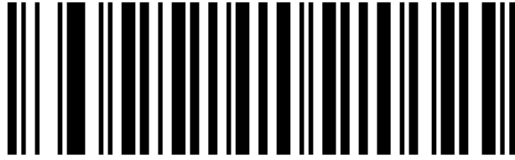


Enable Code 32 Prefix A

Code 39 length setting



Set The Minimum Length Of Code 39 To 1



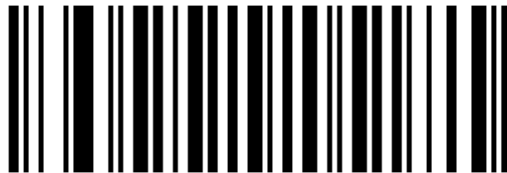
* Set the minimum length of Code 39 to 2

Code 93

Enable/disable



* Enable Code 93



Disable Code 93

Verify Multiple Times



Enable Code 93 Multiple Verification



* Disable Code 93 Multiple Verifications

Code 128

Enable/disable

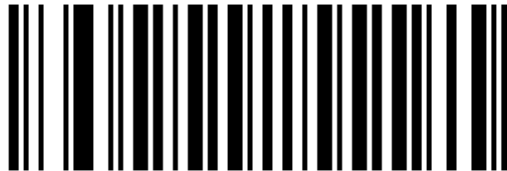


* Enable Code 128

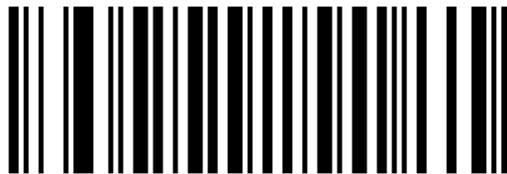


Disable Code 128

Verify Multiple Times



* Disable Code 128 Multiple Verifications



Enable Code 128 Multiple Verifications

Brazilian Banking Model



Enable Brazilian Banking Mode (Code 128)

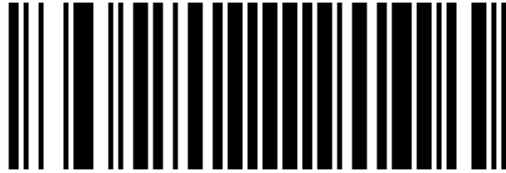


Disable Brazilian Banking Mode (Code 128)

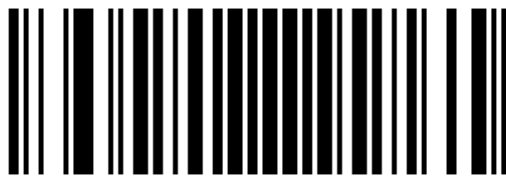
7.4 GS1 DataBar Encoding Settings

GS1 DataBar Limited (RSS Limited)

Enable/disable



Enable RSS Limited



* Disable RSS Limited

GS1 DataBar Omnidirectional (RSS Omnidirectional)

Enable/disable



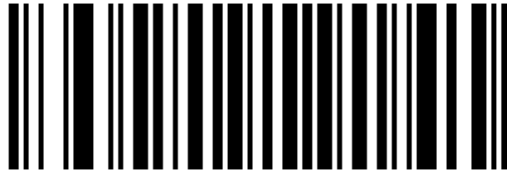
Enable RSS Omnidirectional



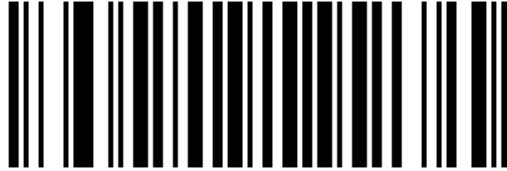
* Disable RSS Omnidirectional

GS1 DataBar Expanded (RSS Expanded)

Enable/disable



Enable GS1 DataBar Expanded



* Disable GS1 DataBar Expanded

7.5 2 Of 5 Types Of Code Settings

Interleaved 2 of 5 (interleaved 25 yards)

Enable/disable



* Enable Interleaved 25-code



Disable Crossover 25 Codes

Verify Multiple Times



* Disable cross-25 Code Multiple Verification



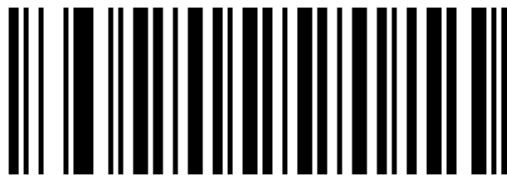
Enable cross-25 Multi-pass Verification

Length Setting

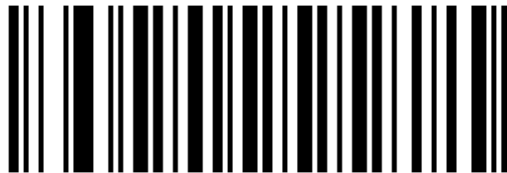


Set Cross 25 Yard Minimum Length 4

Brazilian Banking Model



Enable Banking Mode



Disable Banking Mode

Industrial 2 of 5 (Industrial 25 yards)

Enable/disable

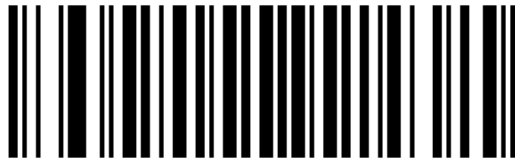


* Enable Industrial 25 Code



Disable Industrial 25 Code

Length Setting



Set Industrial 25 Yard Minimum Length 3

Matrix 2 of 5 (matrix 25 codes)

Enable/disable



Enable Matrix 25 Codes



* Disable Matrix 25 Codes

Length Setting



Set Matrix 25 Code Minimum Length 2

7.6 Other 1D Code Settings

China Post

Enable/disable



* Disable China Post Code



Enable China Post Code

MSI

Enable/disable



Enable MSI Code



* Disable MSI Code

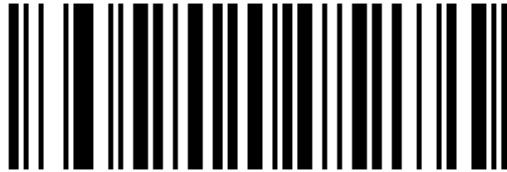


* Do Not Transmit MSI Check Code

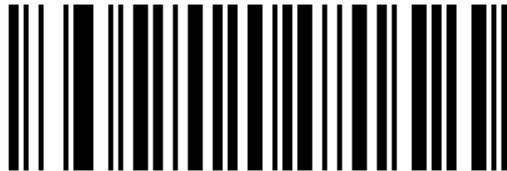


Transmit MSI check code

Verify Multiple Times



* Disable MSI Multiple Verification



Enable MSI Multiple Verification

Length Setting



Set MSI Minimum Length 3

Plessey/Telepen Enable/disable



Enable Plessey Code



* Disable Plessey Code

Length Setting



Set Plessey/Telepen minimum length 3

8 Appendix

8.1 Code ID and Symbology Reference Table

No.	Code ID	Barcode Type ID (for Prefix/Suffix)	Symbology
1		00/01	All Symbologies
2	A	02	Code 128
3	C	03	EAN-8
4	D	04	EAN-13
5	D	05	ISBN
6	E	06	UPC-A
7	F	07	UPC-E
8	I	08	Code 93
9	J	09	GS1 Omnidirectional
10	K	10	GS1 Limited
11	L	11	GS1 Expanded
12	M	12	Code 39
13	N	13	Interleaved 2 of 5
14	O	14	Industrial 2 Of 5
15	P	15	China Post
16	Q	16	Matrix 2 of 5
17	S	17	MSI
18	T	18	Plessey
19	t	19	Telepen
20	U	20	Code 11
21	V	21	Codabar

8.2 ASCII Code Table



SOH(01)



STX(02)



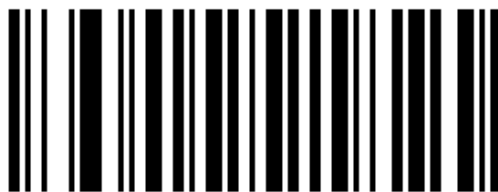
ETX(03)



EOT(04)



ENQ(05)



ACK(06)



BEL(07)



Backspace(08)



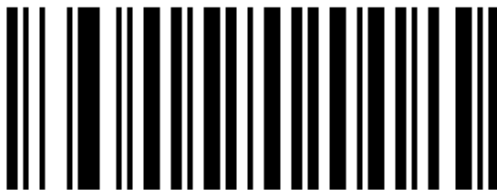
HT (09)



LF(0A)



VT(0B)



FF(0C)



CR(0D)



SO(0E)



SI(0F)



DEL(10)



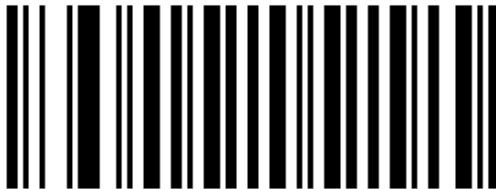
DC1(11)



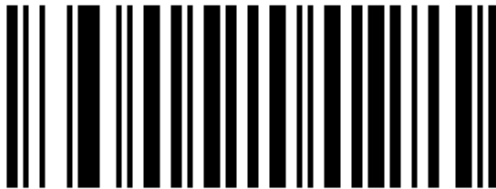
DC2(12)



DC3(13)



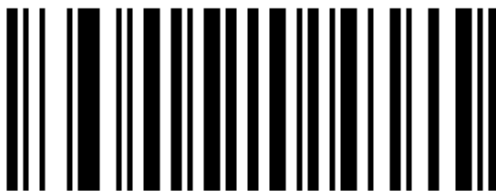
DC4(14)



NAK(15)



SYN(16)



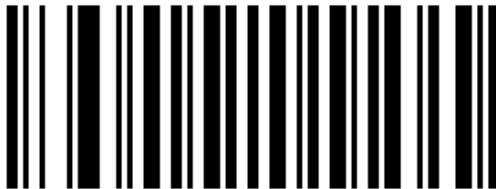
ETB(17)



CAN(18)



EM(19)



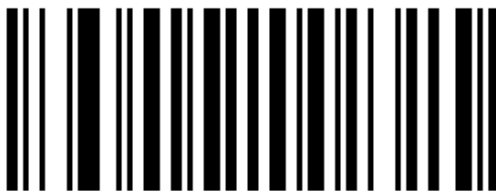
SUB(1A)



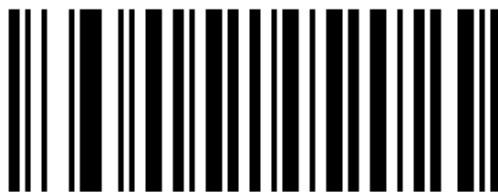
ESC(1B)



FS(1C)



GS(1D)



RS(1E)



US(1F)



Space(20)



!(twenty One)



“(twenty two)



(twenty Three)



$\$(24)$



(25)



(26)



$'(27)$



$((28)$



$)(29)$



$\backslash^* (2A)$



$+(2B)$



$,(2C)$



$-(2D)$



$.(2E)$



$/ (2F)$



0(30)



1(31)



2(32)



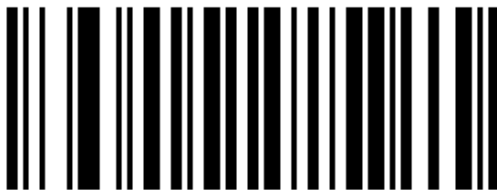
3(33)



4(34)



5(35)



6(36)



7(37)



8(38)



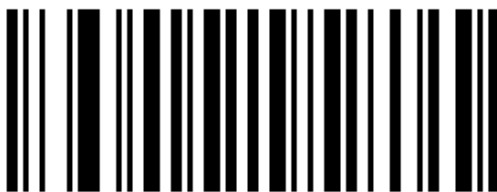
9(39)



:(3A)



;(3B)



<(3C)



=(3D)



>(3E)



?(3F)



@(40)



A(41)



B(42)



C(43)



D(44)



E(45)



F(46)



G(47)



H(48)



I(49)



J(4A)



K(4B)



L(4C)



M(4D)



N(4E)



O(4F)



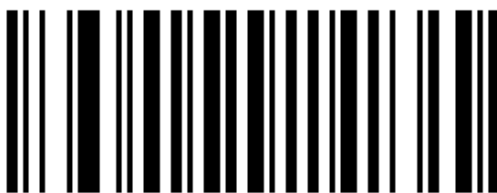
P(50)



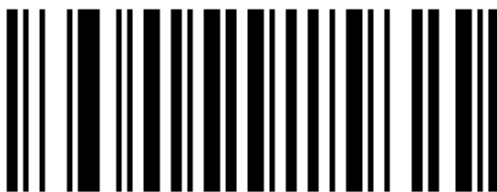
Q(51)



R(52)



S(53)



T(54)



U(55)



V(56)



W(57)



X(58)



Y(59)



Z(5A)



[(5B)



(5C)



](5D)



^{(5E)



_{(5F)



`(60)



a(61)



b(62)



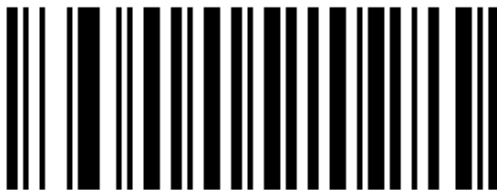
c(63)



d(64)



e(65)



f(66)



g(67)



h(68)



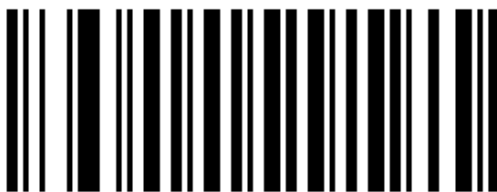
i(69)



j(6A)



107k(6B)



l(6C)



m(6D)



n(6E)



o(6F)



p(70)



q(71)



r(72)



s(73)



t(74)



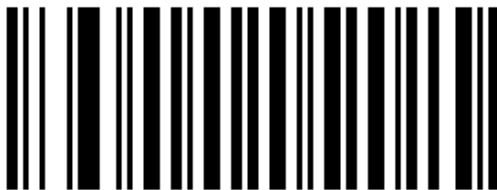
u(75)



v(76)



w(77)



x(78)



y(79)



z(7A)



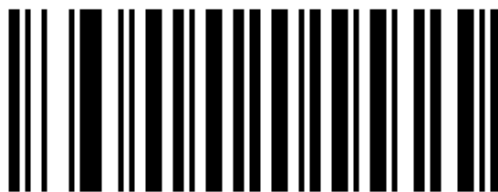
{(7B)



l(7C)



}(7D)



~(7E)



Delete(7F)

8.3 Function Key Table



F1(80)



F2(81)



F3(82)



F4(83)



F5(84)



F6(85)



F7(86)



F8(87)



F9(88)



F10(89)



F11(8A)



F12(8B)



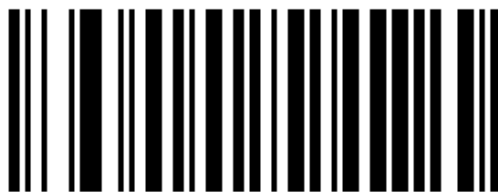
Insert(8C)



Home(8D)



Page UP(8E)



Delete(8F)



End(90)



Page Down(91)



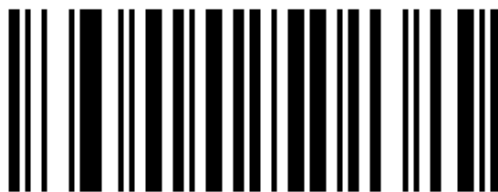
Right arrow(92)



Left arrow(93)



Down arrow(94)



Up arrow(95)



Print Screen(96)



Left Ctrl(97)



Left Shift(98)



Left ALT(99)



Right ALT(9A)