2D Wired Barcode Scanner

Setting Manual (High Version)

Disclaimer

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

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

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

Our company has the final right to interpret this statement.

Version

Version	Description	Date
V1.0	Initial version	2017-09-21
V1.1	Add custom setting	2017-12-15
V1.2	Add Chinese output and invoice output	2018-03-25
V1.3	Add character escape and virtual keyboard	2019-06-16
V1.36	Add GS control cahracter replacing	2019-10-25
V1.4	Merge serial port instructions	2020-02-16
V1.41	Add the instruction to obtain the status of the barcode, and the description of the error return value	2020-04-20
V1.42	Add QR Code setting	2020-05-10
V1.43	Add the decoding interval setting with different barcodes	2020-07-10
V1.44	Modify the centrol mode setup code	2020-07-30
V1.45	Add UPC leading character setting	2020-10-15
V1.46	Add GS1 composite setting	2020-11-15
V1.47	Add data output format	2020-12-31
V1.48	Add reading length instruction	2021-02-25
V1.49	Modify appendix table	2021-03-11

Content

Chapter 1 Comprehensive Settings

Introduction

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

Setup code

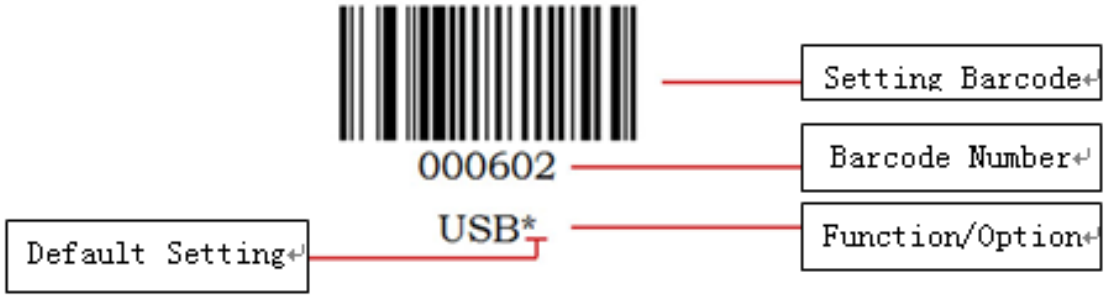
The scanner can set the corresponding function by reading the setup codes. In the following chapters, we will introduce the corresponding setting options and functions in detail and provide the corresponding setup codes.

Setting Instruction

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

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

Setup code Identification



Procedure:

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

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

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

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

Note:

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

Setup code Function

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

On*

Off

Factory Default

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

Factory default

Instruction:

You could use this barcode in the following situations:

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

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

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

Version

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

Version

User Default Setting

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

Save user default settings

Clear user default settings

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

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

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

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

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

Sound Settings

Power-on Sound


BEPPWR1

On*


BEPPWR0

Off

Sound of Scanning Normal Barcode


BEPBEP1

On*


BEPBEP0

Off

Duration of Scanning Normal Barcode Sound


BEPBIP1

Short*


BEPBIP0

Long

Frequency of Sound

Low frequency

Medium frequency

High frequency*

Volume of Sound

Low

High*

Warning of Error Scanning

Low frequency*

Medium frequency

High frequency

Data Format

Data Output Format


KBDENC0

*English/Latin-1


KBDENC1

GBK（Notepad，Excel, etc)


KBDENC2

Unicode（WORD，QQ, etc)

Japanese System（Notepad，Excel, etc)

UTF-8（Notepad，Excel, etc)

Invoive Function

On

Off*

Invoice mode

Special invoice mode*

Nomal invoice mode

Image Recognition Settings

Image Inversion (Reverse White) Setting

Normal barcode: dark barcode with light background

Inverted barcode: light barcode with dark background

Normal Only*

Inverse Only

Normal + Inverse

Central Area

Full area*

Centrol area

QR URL Code

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

On

Off

Chapter 2 Communication Settings

Introduction

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

USB Keyboard Interface

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

USB-KBW*

National Keyboard Layout

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


KBDCTY0

American/Chinese（American English）*


KBDCTY66

Greek


KBDCTY11

Netherlands（Dutch）


KBDCTY10

Spain（Spanish Language）


KBDCTY51

Spanish（latin America）


KBDCTY16

Brazil（Portuguese）


KBDCTY56

Italy（Italian 142）


KBDCTY7

England（British English）


KBDCTY5

Italy（Italian）


KBDCTY3

France（French）


KBDCTY4

Germany（German）


KBDCTY2

Finland（Finnish）


KBDCTY23

Sweden（Swedish）


KBDCTY99

Arabic(101)


KBDCTY13

Portugal（Portuguese）


KBDCTY38

Czech Republic（Czech）


KBDCTY1

Belgium（French）


KBDCTY27

Turkish-F


KBDCTY24

Turkish-Q


KBDCTY57

Poland（Polish214）


KBDCTY58

Polish (Programmers)


KBDCTY73

Irish


KBDCTY67

Russia（Russian MS）


KBDCTY28

Japan（Japanese）


KBDCTY68

Russia（Russian Typewriter）

Virtual Keyboard

Mode 1: The characters between 0x20 ~ 0xFF are output using virtual keyboard which is not supported under the current keyboard layout, and the characters between 0x00 ~ 0x1F are output according to the definition of control characters (see Appendix-Control Character Set)

Mode 2: All characters between 0x20 ~ 0xFF are output by virtual keyboard, and characters between 0x00 ~ 0x1F are output according to the definition of control characters (see Appendix-Control Character Set)

Mode 3: All characters used between 0x00 ~ 0xFF are output by virtual keyboard (see appendix-ASCII code table)

Disable virtual keyboard*

Enable virtual keyboard（mode 1）

Enable virtual keyboard（mode 2）

Enable virtual keyboard（mode 3）

Operating System under Virtual Keyboard Mode

WINDOWS*

MAC OS

LINUX

GS Replacement

GS control characters usually cannot be displayed normally in USB mode. We can output the bar code with GS characters to the receiving device by replacing characters.


GSCH0

*Do not replace


GSCH1

Replace with Ç


GSCH2

Replace with |


GSCH3

Replace with ^]


GSCH4

Replace with]


GSCH5

Replace with <GS>

Note: When replacing with the output character "Ç", you must scan "Enable Virtual keyboard" (mode 1) or (mode 2) or (mode 3) first.

Control Character Escape


KBDCAS1

Enable control character escape


KBDCAS0

Disable control character escape*

Case Conversion

The English letters of the scanner output data can be case-converted with setting the character case conversion function of the scanner.

For example: If the barcode information is aBC123, set the scanner to "All Lower-Case", and the data obtained by the host will be "abc123". The default is Normal output.

Normal*

Upper（All Capital）

Lower（All Lower-Case）

Inverse（Reverse Case）

Note:

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

USB Transmission Speed

Slow*

Normal

Fast

Custom USB Transmission Speed

You can adjust the USB transmission speed according to the delay between data characters. It will transmit faster with smaller delay. You can customize the delay between characters according to your needs. The delay time range is 2- 50MS.

Custom USB transmission speed

Example: Set the delay between characters to 8MS.

Step 1: Scan the "Enable setup code" setup code.

Step 2: Scan the "Custom USB Transmission Speed" setup code.

Step 3: Scan the number "8" of "Appendix-Data Code".

Step 4: Scan the "Save" of "Appendix-Save or Cancel".

USB-COM Virtual Serial Port

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

USB-COM

TTL/RS232 Serial Port Interface

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

Serial port interface default communication protocol: baud rate 9600, no check character.

TTL/RS232

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

Baud Rate

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

4800bps

9600bps*

19200bps

38400bps

57600bps

115200bps

Data Bit / Stop Bit / Check Bit

7 data bits/1 stop bit/NONE

7 data bits/1 stop bit/EVEN

7 data bits/1 stop bit/ODD

7 data bits/2 stop bits/NONE

7 data bits/2 stop bits/EVEN

7 data bits/2 stop bits/ODD

*8 data bits/1 stop bit/NONE

8 data bits/1 stop bit/EVEN

8 data bits/1 stop bit/ODD

8 data bits/2 stop bits/NONE

8 data bits/2 stop bits/EVEN

8 data bits/2 stop bits/ODD

Chapter 3 Scanning Mode

Manual

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

The default scanning mode is "Manual".

Manual*

Induction

Induction

Induction - Scanning Delay between Same Barcodes

Scanning delay between same barcodes means that same barcode cannot be scanned over a period of time. It will be scanned after the duration has expired. Default: 750MS.

500MS

*750MS

1000MS

2000MS

Induction - Scanning Delay between Different Barcodes


SHINTV0

100MS


SHINTV1

*300MS


SHINTV2

500MS


SHINTV3

600MS


SHINTV4

800MS


SHINTV5

1000MS


SHINTV6

2000MS


SHINTV7

5000MS


SHINTV8

10000MS

Chapter 4 Data Editing

Introduction

After the scanner is successfully decoded, the device obtains a string of data, which can be numbers, English, symbols, etc. In applications, we may not only need the data information of the barcode, or the data information contained in the barcode cannot meet your needs. For example, you may want to know which type of barcode this string of data information comes from, or attach special data to this string of data, and these may not be included in the data information of the barcode.

Adding these contents when making codes will inevitably increase the length of the barcode and is not flexible enough, which is not a recommended practice. Therefore, artificially adding some content before or after the barcode data information, and these added content can be changed according to needs, and you can choose to add or block. This is the method of adding prefix and suffix of the barcode data information, which not only satisfies the demand but does not need to modify the content of the barcode information.

Data editing format:

<Start Charcter>	<Code ID>	<AIM ID>	<Custom Prefix>	Barcode Information	<Custom Suffix>	<Code ID>	<AIM ID>	<Terminator>

Prefix Order

*Start Character + Code ID + AIM ID + Custom Prefix

Start Character + Custom Prefix + Code ID + AIM ID

Suffix Order

*Custom Suffix + Code ID + AIM ID + Terminator

Code ID + AIM ID + Custom Suffix + Terminator

Code ID Prefix

The default is "Do not transmit Code ID"

Do not transmit Code ID*

Transmit Code ID before barcode

Transmit Code ID after barcode

Custom Code ID

Set the custom Code ID according to the following steps. After the custom Code ID is set, the system default Code ID will be replaced.

Custom Code ID

Clear custom Code ID

AIM ID Prefix

AIM means Automatic Identification Manufacturers.

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

*Disable AIM ID

Transmit AIM ID before barcode

Transmit AIM ID after barcode

Custom Prefix

Transmit Custom Prefix

The default is "Do not transmit custom prefix".

Transmit custom prefix

Do not transmit custom prefix*

Custom Prefix Setting

Users can set custom prefix for different barcode types according to the "Appendix-Code ID" information. Add up to 10 characters for the custom prefix.

Custom prefix

Example: Add a custom prefix of XYZ to all barcode types

Firstly, the Code ID corresponding to all barcodes is 99, and the HEX value corresponding to XYZ is 58,59,5A.

Step 1: Scan the "Enable setup code" setup code.

Step 2: Scan the "Custom Prefix" setup code.

Step 3: Scan the number "9" and "9" setup codes in "Appendix-Data Code".

Step 4: Scan the "5", "8", "5", "9", "5", and "A" setup codes in "Appendix-Data Code".

Step 5: Scan the "Save" setup code of "Appendix-Save or Cancel".

Step 6: Scan the "Transmit Custom Prefix" setup code to complete the configuration.

Clear Custom Prefix

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

Clear custom prefix

Custom Suffix

Transmit custom suffix

The default is "Do not transmit custom suffix".

Transmit custom suffix

Do not transmit custom suffix*

Custom Suffix Setting

Users can set custom suffix for different barcode types according to the "Appendix-Code ID" information. Add up to 10 characters for the custom suffix.

Custom suffix

Example: Add a custom suffix of XYZ to all barcode types

Firstly, the Code ID corresponding to all barcodes is 99, and the HEX value corresponding to XYZ is 58,59,5A.

Step 1: Scan the "Enable setup code" setup code.

Step 2: Scan the "Custom Suffix" setup code.

Step 3: Scan the number "9" and "9" setup code in "Appendix-Data Code".

Step 4: Scan the "5", "8", "5", "9", "5", and "A" setup codes in "Appendix-Data Code".

Step 5: Scan the "Save" setup code of "Appendix-Save or Cancel".

Step 6: Scan the "Transmit Custom Suffix" setup code to complete the configuration.

Clear Custom Suffix

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

Clear custom suffix

Hide Characters

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

First, we divide a barcode data into three groups of data: Start, Center, and End, and then set the length of the Start and End fields according to the actual needs, and set the fields that need to be displayed according to the actual needs.

First: Set the Length of Fields

Set the length of Start field

Set the length of end field

Note: The length of the field is in bytes (1 byte for English characters and 2 bytes for Chinese characters), using decimal data for configuration.

Example: Set the length of the Start field to 4 and the length of the End field to 12.

Step 1: Scan the "Enable setup code" setup code.

Step 2: Scan the "Set the length of start field" setup code.

Step 3: Scan the number "4" of "Appendix-Data Code".

Step 4: Scan the "Save" setup code of "Appendix-Save and Cancel Settings".

Step 5: Scan the setup code of "Set length of end field".

Step 6: Scan the number "1" "2" setup code of "Appendix-Data Code".

Step 7: Scan the "Save" setup code of "Appendix-Save and Cancel Settings".

Second: Set the Transmission Field

*Transmit full Data field

Transmit Start field

Transmit Center field

Transmit End field

Example: After setting the complete Data barcode "12345678901234567890", the length of the Start field is 4 and the length of the End field is 12.

Set "Transmit full Data Field" and the output result is: 12345678901234567890

Set "transmit Start field" and the output result is: 1234

Set "transmit Center field" output result is: 5678

Set "Transmit End field" and the output result is: 901234567890

Start Character Setting

The start character is used to mark the beginning of a complete data message. The start character must be the first content of a piece of data when it is sent, and there will be no data before it. Default is no start character.

No start character*

Set the start character to <STX>(0x02)

Terminator

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

The fundamental difference between the terminator and the custom suffix is that the content of the custom suffix and the decoding information, prefix and other content can be formatted again, but the terminator cannot.

<CR>(0x0D)

<LF>(0x0A)

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

<HT>(0x09)

NONE

<ETX>(0x03)

Chapter 5 Barcode Parameter Setting

Introduction

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

Global Setting

All barcode types: On

All barcode types: Off

1D barcode: On

1D barcode: Off

2D barcode: On

2D barcode: Off

Note: When closing all barcodes, the setup code will not be closed.

UPC-A

On*

Off

Transmit Check Character

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

On*

Off

Transmit System/Country Character

The system character of the UPC-A barcode is a prefix character, which is generally not displayed below the barcode, and "0" represents USA

Transmit system character*

Transmit system and country character

Do not transmit system character

Convert to EAN-13

The default is no conversion.

On

Off*

UPC-E

On*

Off

Transmit Check Character

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

On*

Off

Transmit System/Country Character

The system character of the UPC-E barcode is a prefix character, which is generally not displayed below the barcode, and "0" represents USA.

Transmit system character*

Transmit system and country character

Do not transmit system character

Convert to UPC-A

The default is not to convert.

On

Off*

EAN-8


EAN81

On*


EAN80

Off

EAN-13

On*

Off

Convert to ISBN

On

Off*

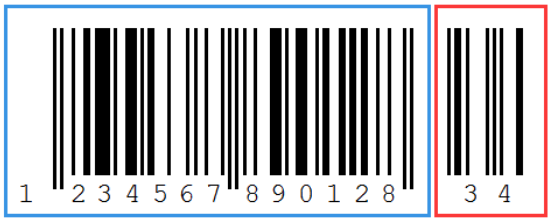
Convert to ISSN

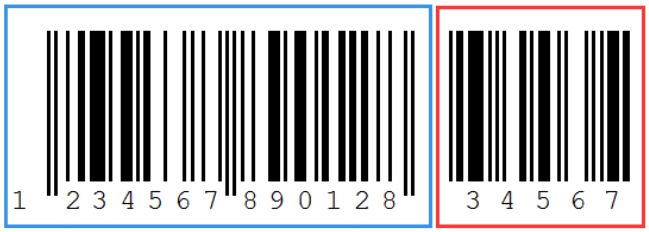
On

Off*

UPC/EAN/JAN Additional Digits

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





2/5 additional digits: On

2/5 additional digits: Off*

Adaptive 2/5 additional digits

Code 128

On*

Off

GS1-128(UCC/EAN 128)

On*

Off

Code128/GS1-128 Reading Length

The scanner can be configured to only read Code128/GS1-128 barcodes whose length is between (including) the minimum and maximum lengths.

Minimum Length

Maximum Length

Example: Restrict the scanner to only read Code128/GS1-128 barcodes with a minimum of 8 bytes and a maximum of 12 bytes:

1. Read "Enable setup code".
2. Read the "minimum length" setup code.
3. Read the data code "8" of “appendix-data code”.
4. Read the "save" setup code of “appendix-save or cancel”.
5. Read the "maximum length" setup code.
6. Read the data code "1".
7. Read the data code "2".
8. Read the "Save" setup code.

ISBT 128

On*

Off

Code 39

On*

Off

Check Character

Code 39 barcode data is not mandatory to include a check character. If there is a check character, it is the last character of the data. The check character is a value calculated based on all data to check whether the data is correct. You can turn on or off the check according to your needs, and set whether to send check characters.

The default is "check character off".

Check character Off*

MOD43 check character On，transmit check character

MOD 43 check character On，do not transmit check character

Full ASCII

On

Off*

Code39 Reading Length

The scanner can be configured to only read Code39 barcode whose length is between (including) the minimum and maximum lengths.

Minimum Length

Maximum Length

Example: Restrict the scanner to only read Code39 barcode with a minimum of 8 bytes and a maximum of 12 bytes:

1. Read "Enable setup code".
2. Read the "minimum length" setup code.
3. Read the data code "8" of “appendix-data code”.
4. Read the "save" setup code of “appendix-save or cancel”.
5. Read the "maximum length" setup code.
6. Read the data code "1".
7. Read the data code "2".
8. Read the "Save" setup code.

Code 32

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

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

On

Off*

Note: Enabling Code32 will affect Code 39, and it can only be read when Code 39 is enabled and without check.

Code 93

On*

Off

Code 93 Reading Length

The scanner can be configured to only read Code93 barcode whose length is between (including) the minimum and maximum lengths.

Minimum

Maximum

Example: Restrict the scanner to only read Code93 barcode with a minimum of 8 bytes and a maximum of 12 bytes:

1. Read "Enable setup code".
2. Read the "minimum length" setup code.
3. Read the data code "8" of “appendix-data code”.
4. Read the "save" setup code of “appendix-save or cancel”.
5. Read the "maximum length" setup code.
6. Read the data code "1".
7. Read the data code "2".
8. Read the "Save" setup code.

Code 11


C11ENA1

On


C11ENA0

Off*

Check Character

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


C11CKE0

*No check character


C11CKE1

1 check character


C11CKE2

2 check characters

Transmit Check Character


C11CKT1

On


C11CKT0

Off*

Code 11 Reading Length

The scanner can be configured to only read Code11 barcode whose length is between (including) the minimum and maximum lengths.

Minimum length

Maximum length

Example: Restrict the scanner to only read Code11 barcode with a minimum of 8 bytes and a maximum of 12 bytes:

1. Read "Enable setup code".
2. Read the "minimum length" setup code.
3. Read the data code "8" of “appendix-data code”.
4. Read the "save" setup code of “appendix-save or cancel”.
5. Read the "maximum length" setup code.
6. Read the data code "1".
7. Read the data code "2".
8. Read the "Save" setup code.

Codabar（NW-7）


CODBAR1

On*


CODBAR0

Off

Start and End Characters


CBRENA1

On


CBRENA0

Off*

Codabar Reading Length

The scanner can be configured to only read Codabar barcode whose length is between (including) the minimum and maximum lengths.

Minimum length

Maximum length

Example: Restrict the scanner to only read Codabar barcode with a minimum of 8 bytes and a maximum of 12 bytes:

1. Read "Enable setup code".

2. Read the "minimum length" setup code.

3. Read the data code "8" of “appendix-data code”.

4. Read the "save" setup code of “appendix-save or cancel”.

5. Read the "maximum length" setup code.

6. Read the data code "1".

7. Read the data code "2".

8. Read the "Save" setup code.

Interleaved 2 of 5

On*

Off

Check Character

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

The code number of Interleaved 2 of 5 barcode must be an even number. The check character is included in the code. If it is an odd number, the first digit should be filled with 0. The default is "Interleaved 2 of 5 Check character Off", "Do not transmit Interleaved 2 of 5 Check".

Check character Off*

Check character On, transmit check character

Check character On, do not transmit check character

Interleaved 2 of 5 Reading Length

The scanner can be configured to only read Interleaved 2 of 5 barcode whose length is between (including) the minimum and maximum lengths.

Read any length (4-24 bytes)

Read 14 bytes

Minimum Length

Maximum Length

Example: Restrict the scanner to only read Interleaved 2 of 5 barcode with a minimum of 8 bytes and a maximum of 12 bytes:

1. Read "Enable setup code".
2. Read the "minimum length" setup code.
3. Read the data code "8" of “appendix-data code”.
4. Read the "save" setup code of “appendix-save or cancel”.
5. Read the "maximum length" setup code.
6. Read the data code "1".
7. Read the data code "2".
8. Read the "Save" setup code.

Matrix 2 of 5

On*

Off

Matrix 2 of 5 Reading Length

The scanner can be configured to only read Matrix 2 of 5 barcode whose length is between (including) the minimum and maximum lengths.

Minimum Length

Maximum Length

Example: Restrict the scanner to only read Matrix 2 of 5 barcode with a minimum of 8 bytes and a maximum of 12 bytes:

1. Read "Enable setup code".

2. Read the "minimum length" setup code.

3. Read the data code "8" of “appendix-data code”.

4. Read the "save" setup code of “appendix-save or cancel”.

5. Read the "maximum length" setup code.

6. Read the data code "1".

7. Read the data code "2".

8. Read the "Save" setup code.

Industrial 2 of 5

On*

Off

Industrial 2 of 5 Reading Length

The scanner can be configured to only read Industrial 2 of 5 barcode whose length is between (including) the minimum and maximum lengths.

Minumum Length

Maximum Length

Example: Restrict the scanner to only read Industrial 2 of 5 barcode with a minimum of 8 bytes and a maximum of 12 bytes:

1. Read "Enable setup code".

2. Read the "minimum length" setup code.

3. Read the data code "8" of “appendix-data code”.

4. Read the "save" setup code of “appendix-save or cancel”.

5. Read the "maximum length" setup code.

6. Read the data code "1".

7. Read the data code "2".

8. Read the "Save" setup code.

MSI Plessey

On

Off*

Check Character

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

Transmit check character

*Do not transmit check character

*1 check character

2 check characters

MOD10/MOD10

MOD10/MOD11

MSI Plessey Reading Length

The scanner can be configured to only read MSI Plessey barcode whose length is between (including) the minimum and maximum lengths.

Minimum Length

Maximum Length

Example: Restrict the scanner to only read MSI Plessey barcode with a minimum of 8 bytes and a maximum of 12 bytes:

1. Read "Enable setup code".
2. Read the "minimum length" setup code.
3. Read the data code "8" of “appendix-data code”.
4. Read the "save" setup code of “appendix-save or cancel”.
5. Read the "maximum length" setup code.
6. Read the data code "1".
7. Read the data code "2".
8. Read the "Save" setup code.

Febraban

Note: AIM ID function need to be closed before using Febraban function.

ITF25 Type


FEBRA1

On


FEBRA0

Off*

Code 128 Type


FEBRC1

On


FEBRC0

Off*

Check Character


FEBCK1

On


FEBCK0

Off*

GS1 DataBar 14(RSS-14)


RSS141

On*


RSS140

Off

Note: GS1 DataBar 14 is also named GS1 Databar Omnidirectional and RSS-14

GS1 DataBar Limited (RSS-Limited)


GS1LMT1

On*


GS1LMT0

Off

Note: GS1 DataBar Limited is also named RSS-Limited

GS1 DataBar Expanded (RSS-Expanded)


GS1EPD1

On*


GS1EPD0

Off

Note: GS1 DataBar Expanded is also named RSS-Expanded

GS1 Composite


On


Off

QR Code


QRCODE1

On*


QRCODE0

Off

Micro QR Code

On*

Off

Data Matrix

On*

Off

PDF 417


PDF4171

On*


PDF4170

Off

Micro PDF 417


MPDF1

On*


MPDF0

Off

Aztec


AZTEC1

On*


AZTEC0

Off

Chapter 6 Communication Instructions

Introduction

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

Command Feedback Value

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

Successful returned： 31 00 00 00 55 00

Execution failure return：

Unknown/Unsupported Command：31 00 FF 00 55 00

Wrong Check code：31 00 FE 00 55 00

Correct command, device error：31 00 FD 00 55 00

Wrong parameter or device value：31 00 FC 00 55 00

Check Scanner Status

Check scanner status：57 00 16 02 80 00 55 00

Return value：31 00 00 02 80 02 00 4F 4B 00 55 00

Trigger Instruction

Enable Scan （Hexadecimal）：57 00 18 00 55 00

Disable Scan （Hexadecimal）：57 00 19 00 55 00

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

Command Sending Example

Send a hexadecimal command to control the scan, use the open decoding command to send, confirm the serial port protocol setting, and enter the corresponding command in the command sending input box to send.

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

Chapter 7 Appendix

Appendix-Data Code

0

1

2

3

4

5

6

7

8

9


KAK

A


KBK

B


KCK

C


KDK

D


KEK

E


KFK

F

Appendix-Save and Cancel

Cancel current settings

Save

Cancel the previous 1 data

Cancel the previously read string of data

Appendix-Default Setting Table

Parameter Name	Default Setting	Description
Comprehensive Settings		
Setup code Function	ON	Default On
Power-on sound	ON	
Successful decoding sound	ON	
Duration of successful decoding sound	Short	
Frequency of successful decoding sound	High	
Volume of successful decoding sound	High	
Error worning sound	ON	Low frequency
Fill light	ON	
Aim light	ON	
Data output format	English/Latin-1	
Invoice function	ON	
Invoice type	Special ticket	
Image inversion	Normal	
Image recognition area	Full area	
Communication Setting		

Interface Mode	USB-KBW	
Keyboard Mode	American English	
Virtual Keyboard	OFF	
Operation system under virtual keyboard	WINDOWS	
GS replacement	OFF	
Control character escape	OFF	
Case conversion	OFF	Normal
USB transmit speed	Low	
Baud rate	9600	
Serial port check	No check	
Data bit	8 bits	
Stop bit	1 bit	
Reading Mode		
Reading mode	Manual reading	
Continuous reading-the same barcode reading delay	ON	500MS
Induction reading mode	OFF	
induction reading-the same barcode reading delay	ON	750MS
Data Editing		

Prefix order	CID+AID+custom prefix	
Suffix order	Custom suffix+CID+AID+terminator	
Transmit Code ID	OFF	
Transmit AIM ID	OFF	
Transmit custom prefix	OFF	
Transmit custom suffix	OFF	
Hide leading data	OFF	
Hide medium data	OFF	
Hide trailing data	OFF	
Start character	OFF	no
Terminator	ON	CR+LF
Barcode Parameter Setting		
Open all barcodes	OFF	
UPC-A		
Allow reading	ON	
Transmit check character	ON	
2 additional digits	OFF	
5 additional digits	OFF	
Mandatory additional digits, 2 additional digits	OFF	

Mandatory additional digits, 5 additional digits	OFF	
Transmit leading character	ON	System character
Convert to EAN-13	OFF	
UPC-E		
Allow reading	ON	
Transmit check character	ON	
Transmit leading character	ON	System character
2 additional digits	OFF	
5 additional digits	OFF	
Mandatory additional digits, 2 additional digits	OFF	
Mandatory additional digits, 5 additional digits	OFF	
EAN-8		
Allow reading	ON	
2 additional digits	OFF	
5 additional digits	OFF	
Mandatory additional digits, 2 additional digits	OFF	
Mandatory additional digits, 5	OFF	

additional digits	
EAN-13	
Allow reading	ON
2 additional digits	OFF
5 additional digits	OFF
Mandatory additional digits, 2 additional digits	OFF
Mandatory additional digits, 5 additional digits	OFF
Convert to ISBN	OFF
Convert to ISSN	OFF
Code 128	
Allow reading	ON
GS 1-128	
Allow reading	ON
ISBT 128	
Allow reading	ON
Code 39	
Allow reading	ON
Transmit check character	OFF
MOD43 check	ON

Full ASCII	OFF
Code 32	
Allow reading	OFF
Code 93	
Allow reading	ON
Code 11	
Allow reading	OFF
Open check	OFF
Transmit check character	OFF
Codabar	
Allow reading	ON
Transmit start and end characters	OFF
Start and end characters format	ABCD/ABCD
Interleaved 2 of 5	
Allow reading	ON
Open check	OFF
Transmit check character	OFF
Matrix 2 of 5	
Allow reading	ON
Industrial 2 of 5	
Allow reading	ON

MSI Plessey		
Allow reading	OFF	
Open check	ON	一位 check
Transmit check character	OFF	
Febraban		
Allow reading (ITF25)	OFF	
Allow reading (Code 128)	OFF	
Open check	OFF	
RSS-14		
Allow reading	ON	
RSS-Limited		
Allow reading	ON	
RSS-Expanded		
Allow reading	ON	
GS1 Composite		
Allow reading	OFF	
QR Code		
Allow reading	ON	
Micro QR Code		
Allow reading	ON	
Data Matrix		

Allow reading	ON
PDF 417	
Allow reading	ON
Micro PDF 417	
Allow reading	ON
Aztec	
Allow reading	OFF

Appendix-Code ID

Number	Barcode Type	Code ID	HEX
0	All barcodes		99
1	UPC-A/UPC-E	c	63
2	EAN-8/EAN-13	d	64
3	ISBN	B	42
4	ISSN	N	6E
5	Code 128/GS1-128/ISBT 128	j	6A
6	Code 39	b	62
7	Code 93	i	69
8	Code 32	<	3C
9	Code 11	H	48
10	Codabar	a	61
11	Interleaved 2 of 5	e	65
12	Matrix 2 of 5	v	76
13	Industrial 2 of 5	D	44
14	GS1 DataBar	R	52
15	MSI Plessey	m	6D
16	PDF 417	r	72
17	Micro PDF 417	S	53
18	Data Matrix	u	75
19	QR Code/Micro QR Code	Q	51
20	Aztec	z	7A

Note: Open conversion is required to view the Code ID of ISBN and ISSN.

Appendix-AIM ID

Number	Barcode Type	AIM ID	Description
1	UPC-A/UPC-E	]Em	m：0，3
2	UPC-E	c	63
3	EAN-8/EAN-13	]Em	m：0，1，3，4
4	EAN-13	d	64
5	ISBN	]X0	
6	ISSN	]X0	
7	Code 128	]C0	m：0，1，2，4
8	Code 39	]Am	m：0，1，3，4，5，7
9	Code 93	]G0	
10	Code 32	]A0	
11	Code 11	]Hm	m：0，1，3，8，9
12	Codabar	]Fm	m：0~1
13	Interleaved 2 of 5	]Im	m：0，1，3
14	Matrix 2 of 5	]X0	
15	Industrial 2 of 5	]S0	
16	GS1-128（UCC/EAN 128）	]C1	
17	GS1 DataBar	]e0	
18	PDF 417 /Micro PDF 417	]Lm	m: 0~5
19	Data Matrix	]dm	m: 0~6
20	QR Code/Micro QR Code	]Qm	m: 0~6
21	Aztec	]z0	

Appendix-Control Character List

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

Hexadecimal	ASCII (Decimal)	USB keyboard mode		Serial Port/Virtual serial Port mode
		Corresponding key value (Close Control character escape)	Corresponding key value (open Control character escape)	Corresponding Character
00	00	Stay	Ctrl+@	NUL
01	01	Insert	Ctrl+A	SOH
02	02	Home	Ctrl+B	STX
03	03	End	Ctrl+C	ETX
04	04	Delete	Ctrl+D	EOT
05	05	PageUp	Ctrl+E	ENQ
06	06	PageDown	Ctrl+F	ACK
07	07	ESC	Ctrl+G	BEL
08	08	Backspace	Ctrl+H	BS
09	09	Tab	Ctrl+I	HT
0A	10	Enter	Ctrl+J	LF

		(Performance is affected by the configuration of carriage return and line feed processing)		
0B	11	Caps Lock	Ctrl+K	VT
0C	12	Print Screen	Ctrl+L	FF
0D	13	Enter (Performance is affected by the configuration of carriage return and line feed processing)	Ctrl+M	CR
0E	14	Scroll Lock	Ctrl+N	SO
0F	15	Pause/Break	Ctrl+O	SI
10	16	F11	Ctrl+P	DLE
11	17	↑	Ctrl+Q	DC1
12	18	↓	Ctrl+R	DC2
13	19	←	Ctrl+S	DC3

14	20	→	Ctrl+T	DC4
15	21	F12	Ctrl+U	NAK
16	22	F1	Ctrl+V	SYN
17	23	F2	Ctrl+W	ETB
18	24	F3	Ctrl+X	CAN
19	25	F4	Ctrl+Y	EM
1A	26	F5	Ctrl+Z	SUB
1B	27	F6	Ctrl+[	ESC
1C	28	F7	Ctrl+\	FS
1D	29	F8	Ctrl+]	GS
1E	30	F9	Ctrl+^	RS
1F	31	F10	Ctrl+_	US

Appendix-ASCII Code Table

Note: ASCII code table 0-31 are invisible characters used as control characters, and 32-127 are visible characters.

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

11	17	DC1 (XON) (Device Control 1)
12	18	DC2 (Device Control 2)
13	19	DC3 (XOFF) (Device Control 3)
14	20	DC4 (Device Control 4)
15	21	NAK (Negative Acknowledgment)
16	22	SYN (Synchronous Idle)
17	23	ETB (End of Trans. Block)
18	24	CAN (Cancel)
19	25	EM (End of Medium)
1A	26	SUB (Substitute)
1B	27	ESC (Escape)
1C	28	FS (File Separator)
1D	29	GS (Group Separator)
1E	30	RS (Request to Send)
1F	31	US (Unit Separator)
20	32	SP (Space)
21	33	! (Exclamation Mark)
22	34	" (Double Quote)
23	35	# (Number Sign)
24	36	$ (Dollar Sign)
25	37	% (Percent)

26	38	& (Ampersand)
27	39	` (Single Quote)
28	40	((Right / Closing Parenthesis)
29	41	) (Right / Closing Parenthesis)
2A	42	* (Asterisk)
2B	43	+ (Plus)
2C	44	, (Comma)
2D	45	- (Minus / Dash)
2E	46	. (Dot)
2F	47	/ (Forward Slash)
30	48	0
31	49	1
32	50	2
33	51	3
34	52	4
35	53	5
36	54	6
37	55	7
38	56	8
39	57	9
3A	58	: (Colon)

3B	59	; (Semi-colon)
3C	60	< (Less Than)
3D	61	= (Equal Sign)
3E	62	> (Greater Than)
3F	63	? (Question Mark)
40	64	@ (AT Symbol)
41	65	A
42	66	B
43	67	C
44	68	D
45	69	E
46	70	F
47	71	G
48	72	H
49	73	I
4A	74	J
4B	75	K
4C	76	L
4D	77	M
4E	78	N
4F	79	O

50	80	P
51	81	Q
52	82	R
53	83	S
54	84	T
55	85	U
56	86	V
57	87	W
58	88	X
59	89	Y
5A	90	Z
5B	91	[(Left / Opening Bracket)
5C	92	\ (Back Slash)
5D	93	] (Right / Closing Bracket)
5E	94	^ (Caret / Circumflex)
5F	95	_ (Underscore)
60	96	' (Grave Accent)
61	97	a
62	98	b
63	99	c
64	100	d

65	101	e
66	102	f
67	103	g
68	104	h
69	105	i
6A	106	j
6B	107	k
6C	108	l
6D	109	m
6E	110	n
6F	111	o
70	112	p
71	113	q
72	114	r
73	115	s
74	116	t
75	117	u
76	118	v
77	119	w
78	120	x
79	121	y

7A	122	z
7B	123	{ (Left/ Opening Brace)
7C	124	| (Vertical Bar)
7D	125	} (Right/Closing Brace)
7E	126	~ (Tilde)
7F	127	DEL (Delete)

Appendix-Instruction Set

Note: Serial commands need to be used in serial mode

Function	Instruction
1. Check the status of scanner	57 00 16 02 80 00 55 00
2. Scan Control-Open Scan	57 00 18 00 55 00
3. Scan control-Close Scan	57 00 19 00 55 00
4. Open setup code	57 00 17 03 30 01 00 01 00 55 00
5. Close setup code	57 00 17 03 30 00 00 01 00 55 00
6. Version	57 00 16 01 80 00 55 00
7. Save user default settings	57 00 17 02 30 00 00 01 00 55 00
8. Clear user default settings	57 00 17 01 30 00 00 01 00 55 00
9. Open power-on sound	57 00 17 10 00 01 00 01 00 55 00
10. Close power-on sound	57 00 17 10 00 00 00 01 00 55 00
11. Open successful decoding sound	57 00 17 11 00 01 00 01 00 55 00
12. Close successful decoding sound	57 00 17 11 00 00 00 01 00 55 00
13. Short successful decoding sound	57 00 17 15 00 01 00 01 00 55 00
14. Long successful decoding sound	57 00 17 15 00 00 00 01 00 55 00
15. Low successful decoding frequency	57 00 17 13 00 03 00 01 00 55 00
16. Medium successful decoding frequency	57 00 17 13 00 02 00 01 00 55 00
17. High successful decoding frequency	57 00 17 13 00 01 00 01 00 55 00

18. Low successful decoding volume	57 00 17 12 00 01 00 01 00 55 00
19. High successful decoding volume	57 00 17 12 00 03 00 01 00 55 00
20. Error warning tone-low frequency	57 00 17 14 00 01 00 01 00 55 00
21. Error warning tone-medium frequency	57 00 17 14 00 02 00 01 00 55 00
22. Error warning tone-high frequency	57 00 17 14 00 03 00 01 00 55 00
23. Data output format-English	57 00 17 02 00 00 00 01 00 55 00
24. Data output format-GBK	57 00 17 02 00 01 00 01 00 55 00
25. Data output format-Unicode	57 00 17 02 00 02 00 01 00 55 00
26. Open the invoice function	57 00 17 0E 00 01 00 01 00 55 00
27. Close the invoice function	57 00 17 0E 00 00 00 01 00 55 00
28. Invoice type-special	57 00 17 0F 00 00 00 01 00 55 00
29. Invoice type-normal	57 00 17 0F 00 01 00 01 00 55 00
30. Normal image recognition	57 00 17 26 00 00 00 01 00 55 00
31. Inverted image recognition	57 00 17 26 00 01 00 01 00 55 00
32. Normal and reverse image recognition	57 00 17 26 00 02 00 01 00 55 00
33. GS character replacement-NONE	57 00 17 84 00 00 00 01 00 55 00
34. GS character replacement -Ç	57 00 17 84 00 01 00 01 00 55 00
35. GS character replacement -|	57 00 17 84 00 02 00 01 00 55 00
36. GS character replacement -^]	57 00 17 84 00 03 00 01 00 55 00
37. GS character replacement -]	57 00 17 84 00 04 00 01 00 55 00

38. GS character replacement -<GS>	57 00 17 84 00 05 00 01 00 55 00
39. USB keyboard-Open control character escape function	57 00 17 0C 00 01 00 01 00 55 00
40. USB keyboard-close control character escape function	57 00 17 0C 00 00 00 01 00 55 00
41. case-normal	57 00 17 0D 00 00 00 01 00 55 00
42. case-inverse	57 00 17 0D 00 01 00 01 00 55 00
43. case-all capital	57 00 17 0D 00 02 00 01 00 55 00
44. case-all lower	57 00 17 0D 00 03 00 01 00 55 00
45. USB transmit speed-low	57 00 17 03 00 00 00 01 00 55 00
46. USB transmit speed-medium	57 00 17 03 00 01 00 01 00 55 00
47. USB transmit speed-high	57 00 17 03 00 02 00 01 00 55 00
48. Baud rate-4800	57 00 17 54 00 00 00 01 00 55 00
49. Baud rate -9600	57 00 17 54 00 01 00 01 00 55 00
50. Baud rate -19200	57 00 17 54 00 02 00 01 00 55 00
51. Baud rate -38400	57 00 17 54 00 03 00 01 00 55 00
52. Baud rate -57600	57 00 17 54 00 04 00 01 00 55 00
53. Baud rate -115200	57 00 17 54 00 05 00 01 00 55 00
54. 7data 1stop no check	57 00 17 56 00 00 00 01 00 55 00
55. 7data 1stop even check	57 00 17 56 00 01 00 01 00 55 00
56. 7data 1stop odd check	57 00 17 56 00 02 00 01 00 55 00
57. 7data 2stop no check	57 00 17 56 00 03 00 01 00 55 00

58. 7data 2stop even check	57 00 17 56 00 04 00 01 00 55 00
59. 7data 2stop odd check	57 00 17 56 00 05 00 01 00 55 00
60. 8data 1stop no check	57 00 17 56 00 06 00 01 00 55 00
61. 8data 1stop even check	57 00 17 56 00 07 00 01 00 55 00
62. 8data 1stop odd check	57 00 17 56 00 08 00 01 00 55 00
63. 8data 2stop no check	57 00 17 56 00 09 00 01 00 55 00
64. 8data 2stop even check	57 00 17 56 00 0A 00 01 00 55 00
65. 8data 2stop odd check	57 00 17 56 00 0B 00 01 00 55 00
66. scan mode-manual mode	57 00 17 20 00 00 00 01 00 55 00
67. scan mode-induction mode	57 00 17 20 00 03 00 01 00 55 00
68. induction mode-delay500MS	57 00 17 24 00 00 00 01 00 55 00
69. induction mode-delay750MS	57 00 17 24 00 01 00 01 00 55 00
70. induction mode-delay1000MS	57 00 17 24 00 02 00 01 00 55 00
71. induction mode-delay2000MS	57 00 17 24 00 03 00 01 00 55 00
72. data format-start+CID+AID+prefix	57 00 17 09 00 00 00 01 00 55 00
73. data format-start+prefix+CID+AID	57 00 17 09 00 01 00 01 00 55 00
74. data format-suffix+CID+AID+terminator	57 00 17 0A 00 00 00 01 00 55 00
75. data format-CID+AID+suffix+terminator	57 00 17 0A 00 01 00 01 00 55 00
76. Code ID-close	57 00 17 07 00 00 00 01 00 55 00
77. Code ID-before barcode	57 00 17 07 00 01 00 01 00 55 00

78. Code ID-after barcode	57 00 17 07 00 02 00 01 00 55 00
79. AIM ID-close	57 00 17 08 00 00 00 01 00 55 00
80. AIM ID-before barcode	57 00 17 08 00 01 00 01 00 55 00
81. AIM ID-after barcode	57 00 17 08 00 02 00 01 00 55 00
82. Start character-no	57 00 17 05 00 00 00 01 00 55 00
83. Start character-STX（0x02）	57 00 17 05 00 01 00 01 00 55 00
84. Terminator -CR（0x0D）	57 00 17 06 00 01 00 01 00 55 00
85. Terminator -LF（0x0A）	57 00 17 06 00 02 00 01 00 55 00
86. Terminator -CR LF（0x0D0A）	57 00 17 06 00 03 00 01 00 55 00
87. Terminator -Tab（0x09）	57 00 17 06 00 04 00 01 00 55 00
88. Terminator –no	57 00 17 06 00 00 00 01 00 55 00
89. Terminator - ETX（0x03）	57 00 17 06 00 05 00 01 00 55 00
90. Open all barcode	57 00 17 04 30 01 00 01 00 55 00
91. Close all barcode	57 00 17 04 30 00 00 01 00 55 00
92. Open all 1D barcodes	57 00 17 05 30 01 00 01 00 55 00
93. Close all 1D barcode	57 00 17 05 30 00 00 01 00 55 00
94. Open all 2D barcode	57 00 17 06 30 01 00 01 00 55 00
95. Close all 2D barcode	57 00 17 06 30 00 00 01 00 55 00
96. UPC-A-Open	57 00 17 32 00 01 00 01 00 55 00
97. UPC-A-close	57 00 17 32 00 00 00 01 00 55 00
98. UPC-A-Transmit check character	57 00 17 33 00 01 00 01 00 55 00

99. UPC-A-do not transmit check character	57 00 17 33 00 00 00 01 00 55 00
100. UPC-A-conversion	57 00 17 61 00 01 00 01 00 55 00
101. UPC-A-no conversion	57 00 17 61 00 00 00 01 00 55 00
102. UPC-E-Open	57 00 17 34 00 01 00 01 00 55 00
103. UPC-E-close	57 00 17 34 00 00 00 01 00 55 00
104. UPC-E-Transmit check character	57 00 17 35 00 01 00 01 00 55 00
105. UPC-E-Transmit check character	57 00 17 35 00 00 00 01 00 55 00
106. UPC-E-conversion	57 00 17 62 00 01 00 01 00 55 00
107. UPC-E-no conversion	57 00 17 62 00 00 00 01 00 55 00
108. EAN-8-Open	57 00 17 3A 00 01 00 01 00 55 00
109. EAN-8-close	57 00 17 3A 00 00 00 01 00 55 00
110. EAN-13-Open	57 00 17 39 00 01 00 01 00 55 00
111. EAN-13-close	57 00 17 39 00 00 00 01 00 55 00
112. EAN-13-Open ISBN conversion	57 00 17 47 00 01 00 01 00 55 00
113. EAN-13-close ISBN conversion	57 00 17 47 00 00 00 01 00 55 00
114. EAN-13-Open ISSN conversion	57 00 17 48 00 01 00 01 00 55 00
115. EAN-13-close ISSN conversion	57 00 17 48 00 00 00 01 00 55 00
116. UPC/EAN/JAN-close 2/5 additional digits	57 00 17 38 00 00 00 01 00 55 00
117. UPC/EAN/JAN-Open 2/5	57 00 17 38 00 01 00 01 00 55 00

additional digits	
118. UPC/EAN/JAN- Adaptive 2/5 additional digits	57 00 17 38 00 02 00 01 00 55 00
119. Code 128-Open	57 00 17 2F 00 01 00 01 00 55 00
120. Code 128-close	57 00 17 2F 00 00 00 01 00 55 00
121. GS1-128-Open	57 00 17 31 00 01 00 01 00 55 00
122. GS1-128-close	57 00 17 31 00 00 00 01 00 55 00
123. Code128 minimum length	57 00 17 6C 00 00 00 01 00 55 00
124. Code128 maximum length	57 00 17 6D 00 50 00 01 00 55 00
125. ISBT 128-Open	57 00 17 30 00 01 00 01 00 55 00
126. ISBT 128-close	57 00 17 30 00 00 00 01 00 55 00
127. Code 39-Open	57 00 17 29 00 01 00 01 00 55 00
128. Code 39-close	57 00 17 29 00 00 00 01 00 55 00
129. Code 39-no check	57 00 17 2A 00 00 00 01 00 55 00
130. Code 39- check and transmit	57 00 17 2A 00 02 00 01 00 55 00
131. Code 39- check and no transmit	57 00 17 2A 00 01 00 01 00 55 00
132. Code 39-Open FullASCII	57 00 17 60 00 01 00 01 00 55 00
133. Code 39-close FullASCII	57 00 17 60 00 00 00 01 00 55 00
134. Code 39 minimum length	57 00 17 68 00 00 00 01 00 55 00
135. Code 39 maximum length	57 00 17 69 00 50 00 01 00 55 00
136. Code 32-Open	57 00 17 46 00 01 00 01 00 55 00

137. Code 32-close	57 00 17 46 00 00 00 01 00 55 00
138. Code 93-Open	57 00 17 2E 00 01 00 01 00 55 00
139. Code 93-close	57 00 17 2E 00 00 00 01 00 55 00
140. Code 93 minimum length	57 00 17 6A 00 00 00 01 00 55 00
141. Code 93 maximum length	57 00 17 6B 00 50 00 01 00 55 00
142. Code 11-Open	57 00 17 63 00 01 00 01 00 55 00
143. Code 11-close	57 00 17 63 00 00 00 01 00 55 00
144. Code 11-no check	57 00 17 65 00 00 00 01 00 55 00
145. Code 11-1 check character	57 00 17 65 00 01 00 01 00 55 00
146. Code 11-2 check characters	57 00 17 65 00 02 00 01 00 55 00
147. Code 11-Transmit check character	57 00 17 64 00 01 00 01 00 55 00
148. Code 11-do not Transmit check character	57 00 17 64 00 00 00 01 00 55 00
149. Code 11minimum length	57 00 17 74 00 00 00 01 00 55 00
150. Code 11 maximum length	57 00 17 75 00 50 00 01 00 55 00
151. Codabar-Open	57 00 17 27 00 01 00 01 00 55 00
152. Codabar-close	57 00 17 27 00 00 00 01 00 55 00
153. Codabar-transmit start and end characters	57 00 17 28 00 01 00 01 00 55 00
154. Codabar-do not transmit start and end characters	57 00 17 28 00 00 00 01 00 55 00
155. Codabar minimum length	57 00 17 66 00 00 00 01 00 55 00

156. Codabar maximum length	57 00 17 67 00 50 00 01 00 55 00
157. Interleaved 2 of 5-Open	57 00 17 2B 00 01 00 01 00 55 00
158. Interleaved 2 of 5-close	57 00 17 2B 00 00 00 01 00 55 00
159. Interleaved 2 of 5-no check	57 00 17 2C 00 00 00 01 00 55 00
160. Interleaved 2 of 5- check and transmit	57 00 17 2C 00 02 00 01 00 55 00
161. Interleaved 2 of 5- check and not transmit	57 00 17 2C 00 01 00 01 00 55 00
162. Interleaved 2 of 5- Read any length	57 00 17 2D 00 00 00 01 00 55 00
163. Interleaved 2 of 5-14 only	57 00 17 2D 00 05 00 01 00 55 00
164. Interleaved 2 of 5 minimum length	57 00 17 6E 00 00 00 01 00 55 00
165. Interleaved 2 of 5 maximum length	57 00 17 6F 00 50 00 01 00 55 00
166. Matrix 2 of 5-Open	57 00 17 4A 00 01 00 01 00 55 00
167. Matrix 2 of 5-close	57 00 17 4A 00 00 00 01 00 55 00
168. Matrix 2 of 5 minimum length	57 00 17 72 00 00 00 01 00 55 00
169. Matrix 2 of 5 maximum length	57 00 17 73 00 50 00 01 00 55 00
170. Industrial 2 of 5-Open	57 00 17 49 00 01 00 01 00 55 00
171. Industrial 2 of 5-close	57 00 17 49 00 00 00 01 00 55 00
172. Industrial 2 of 5 minimum length	57 00 17 70 00 00 00 01 00 55 00

173. Industrial 2 of 5 maximum length	57 00 17 71 00 50 00 01 00 55 00
174. MSI-Open	57 00 17 86 00 01 00 01 00 55 00
175. MSI-close	57 00 17 86 00 00 00 01 00 55 00
176. MSI 1 check character	57 00 17 87 00 00 00 01 00 55 00
177. MSI 2 check characters	57 00 17 8700 01 00 01 00 55 00
178. MSI-Mod 10/10 check	57 00 17 89 00 01 00 01 00 55 00
179. MSI- Mod 11/10 check	57 00 17 89 00 00 00 01 00 55 00
180. MSI-Transmit check character	57 00 17 88 00 01 00 01 00 55 00
181. MSI-do not Transmit check character	57 00 17 88 00 00 00 01 00 55 00
182. MSI minimum length	57 00 17 8A 00 00 00 01 00 55 00
183. MSI maximum length	57 00 17 8B 00 04 00 01 00 55 00
184. Febraban-ITF25-Open	57 00 17 81 00 01 00 01 00 55 00
185. Febraban-ITF25-close	57 00 17 81 00 00 00 01 00 55 00
186. Febraban-Code128-Open	57 00 17 82 00 01 00 01 00 55 00
187. Febraban- Code128-close	57 00 17 82 00 00 00 01 00 55 00
188. Febraban-Open check	57 00 17 83 00 01 00 01 00 55 00
189. Febraban-close check	57 00 17 83 00 00 00 01 00 55 00
190. GS1 DataBar 14-Open	57 00 17 3B 00 01 00 01 00 55 00
191. GS1 DataBar 14-close	57 00 17 3B 00 00 00 01 00 55 00
192. GS1 DataBar Limited-Open	57 00 17 3C 00 00 00 01 00 55 00

193.	GS1 DataBar Limited-close	57 00 17 3C 00 01 00 01 00 55 00
194.	GS1 DataBar Expanded-Open	57 00 17 3D 00 01 00 01 00 55 00
195.	GS1 DataBar Expanded-close	57 00 17 3D 00 00 00 01 00 55 00
196.	QR Code-Open	57 00 17 40 00 01 00 01 00 55 00
197.	QR Code-close	57 00 17 40 00 00 00 01 00 55 00
198.	Micro QR Code-Open	57 00 17 41 00 01 00 01 00 55 00
199.	Micro QR Code-close	57 00 17 41 00 00 00 01 00 55 00
200.	Data Matrix-Open	57 00 17 43 00 01 00 01 00 55 00
201.	Data Matrix-close	57 00 17 43 00 00 00 01 00 55 00
202.	PDF 417-Open	57 00 17 3E 00 01 00 01 00 55 00
203.	PDF 417-close	57 00 17 3E 00 00 00 01 00 55 00
204.	Micro PDF 417-Open	57 00 17 3F 00 01 00 01 00 55 00
205.	Micro PDF 417-close	57 00 17 3F 00 00 00 01 00 55 00
206.	Aztec –Open	57 00 17 44 00 01 00 01 00 55 00
207.	Aztec-close	57 00 17 44 00 00 00 01 00 55 00