

CipherLab User Guide

1204 Barcode Scanner Setup barcodes included

Version 1.00



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Important Notices

For USA

This equipment has been tested and found to comply with the limits for a **Class B** digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- ▶ Reorient or relocate the receiving antenna.
- ▶ Increase the separation between the equipment and receiver.
- ▶ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- ▶ Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

For Canada

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the interference-causing equipment standard entitled "Digital Apparatus," ICES-003 of Industry Canada.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Cet appareil numérique respecte les limites de bruits radioélectriques applicables aux appareils numériques de Classe B prescrites dans la norme sur le matériel brouilleur: "Appareils Numériques," NMB-003 édictée par l'Industrie.



Safety Precautions

- ▶ DO NOT expose the scanner to any flammable sources.
- ▶ Under no circumstances, internal components are self-serviceable.

Care & Maintenance

- ▶ Use a clean cloth to wipe dust off the scanning window and the body of the scanner. DO NOT use/mix any bleach or cleaner.
- ▶ Keep the scanner away from any magnets and magnetic fields.
- ▶ If finding the scanner malfunctioning, write down the specific scenario and consult the local sales representative.



Release Notes

Version	Date	Notes
1.00	July 30, 2025	▶ • Initial release



Contents

IMPORTANT NOTICES	- 3 -
For USA.....	- 3 -
For Canada.....	- 3 -
Safety Precautions	- 4 -
Care & Maintenance.....	- 4 -
RELEASE NOTES	- 5 -
CONTENTS	7
INTRODUCTION	10
Features	10
Inside the Package.....	11
Product Highlights	11
Symbolologies Supported	12
QUICK START	14
Enter Configuration Mode.....	15
Exit Configuration Mode.....	15
Default Settings	15
Save as User Defaults	15
Restore User Defaults.....	16
Restore System Defaults	16
Firmware Information.....	16
Hardware Information	16
Read a Setup Barcode	17
Configure Parameters.....	17
Create One-Scan Setup Barcodes.....	21
Setup QR Code.....	21
CHAPTER 1: SETTING THE SCANNER	22
1.1 Power-On	23
1.2 LED Indicator.....	23
1.3 Scan Mode	23
1.3.1 Test Mode.....	24
1.3.2 Laser Mode.....	24
1.3.3 Presentation Mode.....	24
1.4 Beeper.....	25
1.4.1 Beeper Switch.....	25
1.4.2 Beeper Volume	25
1.4.3 Beeper Type.....	26
1.5 Decoding	27
1.5.1 Aiming Pattern.....	27



1.5.2 Read Negative Barcode.....	27
1.5.3 Decoding Illumination.....	27
CHAPTER 2: SELECTING OUTPUT INTERFACE.....	29
2.1 Direct USB HID.....	29
2.1.1 Activate USB HID & Select Keyboard Type.....	30
2.1.2 Special Keyboard Feature.....	33
2.1.3 Key Delay (Inter-Character Delay).....	33
2.1.4 Control Character Escaping.....	34
2.1.5 GS Control Character Replacement.....	34
2.1.6 Input Encoding Type.....	36
2.1.7 Output Encoding Type.....	36
2.2 Direct USB VCOM.....	37
2.2.1 Activate USB Virtual COM.....	37
CHAPTER 3: CHANGING SYMBOLOGY SETTINGS.....	38
3.1 2D Symbologies.....	39
3.1.1 QR Code.....	39
3.1.2 Micro QR Code.....	40
3.1.3 Data Matrix.....	40
3.1.4 PDF417.....	41
3.1.5 MicroPDF417.....	41
3.1.6 Aztec.....	42
3.1.7 Maxicode.....	43
3.1.8 Han Xin.....	44
3.2 Code 128/Codabar Symbologies.....	45
3.2.1 Code 128.....	45
3.2.2 GS1-128 (EAN-128).....	46
3.2.3 Codabar.....	46
3.3 UPC/EAN Symbologies.....	48
3.3.1 UPC-E.....	48
3.3.2 EAN-8.....	49
3.3.3 EAN-13.....	50
3.3.4 UPC-A.....	51
3.3.5 Add On Code.....	52
3.4 GS1 DataBar (RSS Family).....	53
3.4.1 GS1 DataBar Omnidirectional (RSS-14).....	53
3.4.2 GS1 DataBar Expanded (RSS Expanded).....	54
3.4.3 GS1 DataBar Limited (RSS Limited).....	54
3.5 Code 25.....	54
3.5.1 Industrial 25.....	54
3.5.2 Interleaved 25.....	56
3.5.3 Matrix 25.....	57
3.5.4 Standard 25.....	58
3.6 Code 11/Code 93/MSI/Plessey Symbologies.....	60
3.6.1 Code 11.....	60



3.6.2 Code 93	61
3.6.3 MSI.....	63
3.6.4 Plessey	64
3.7 Code 39	66
3.7.1 Standard/Full ASCII Code 39.....	66
3.7.2 Transmit Start/Stop Characters.....	66
3.7.3 Verify/Transmit Check Digit	67
3.7.4 Code Length Qualification	67
3.8 Italian Pharmacode (Code 32)	68
3.8.1 Transmit Start/Stop Characters.....	68
CHAPTER 4: DEFINING OUTPUT FORMAT	69
4.1 General Settings	69
4.1.1 Prefix/Suffix Code.....	69
4.1.2 Letter Case.....	70
4.1.3 Start Character.....	70
4.1.4 End Character	71
4.1.5 Line Break	71
4.2 Data Editing	72
4.2.1 Data Extraction.....	72
4.3 GS1 Formatting	77
4.3.1 GS1 AI Processed	77
4.4 Code ID.....	78
4.5 AIM Code ID	79
SPECIFICATIONS.....	81
FIRMWARE UPGRADE	83
Using USB Virtual COM.....	83
DEFINITION OF SPECIAL KEYBOARD	87
Apply Special Keyboard.....	87
Bypass Special Keyboard.....	88
NUMERAL SYSTEMS.....	89
Decimal System	89
Hexadecimal System.....	90
ASCII Table.....	91
CHARACTER ESCAPE KEY MAPPING.....	92



Introduction

The tethered handheld scanners are designed to help accelerate productivity while lowering the total cost of ownership. Intensive data collection jobs are made easier with fast, accurate barcode scanning in various working environments, specifically in small businesses.

Features

Owing to the slim, ergonomic design, extremely low power consumption, and powerful decoding capability, CipherLab Barcode Scanners are the best choice for the following applications –

- ▶ Retail receiving
- ▶ Product labeling & Tracking
- ▶ Shelf Product Replenishment
- ▶ Mobile Point of Sale (POS)
- ▶ Mobile Inventory Management
- ▶ Order Picking & Staging
- ▶ Work-In-Process Tracking
- ▶ Material Flow Control
- ▶ Transportation & Distribution
- ▶ Warehousing
- ▶ Asset Management

This manual provides you with the instructions on the installation, the operation, the system setup, the technical specifications and the maintenance for the 1204 Barcode Scanner.

Thank you for choosing CipherLab products!



Inside the Package

The items included in the package may be different, depending on order. Rich choices of output interfaces are available to enhance the total performance of the scanner. Refer to the product specifications.

- ▶ 1204 Barcode Scanner
- ▶ USB Interface Cable
- ▶ Adjustable Scanner Stand (Optional)

Save the box and packaging material for future use in case it is needed to store or ship the scanner.

Product Highlights

- ▶ Small-form-factor and built tough to survive drop test
- ▶ Extremely low power consumption
- ▶ Firmware upgradeable
- ▶ Supports most popular barcode symbologies, including GS1-128 (EAN-128), GS1 DataBar (RSS), etc.
- ▶ Supports different scan modes.
- ▶ Beeping tone and duration programmable for Good Read
- ▶ Programmable parameters include data output format and symbologies, etc.



Symbologies Supported

Most of the popular barcode symbologies are supported, as listed below. Each can be individually enabled or disabled.

The scanner will automatically discriminate and recognize all the symbologies that are enabled.

Refer to "[Chapter 3: Changing Symbology Settings](#)" for more details on each symbology supported.

Symbologies Supported: Enable/Disable		Default	
2D Symbologies	QR Code	Enabled	
	MicroQR	Enabled	
	Data Matrix	Enabled	
	PDF417	Enabled	
	MicroPDF417	Enabled	
	Aztec		Disabled
	Maxicode		Disabled
	HanXin		Disabled
Code 128 / Codabar Symbologies	Code 128	Enabled	
	GS1-128 (EAN-128)	Enabled	
	Codabar	Enabled	
UPC / EAN Symbologies	UPC-E	Enabled	
	EAN-8	Enabled	
	EAN-13	Enabled	
	UPC-A	Enabled	
	Add On Code		Ignored
	ISBN		Disabled
GS1 DataBar Symbologies (RSS)	GS1 DataBar Omnidirectional (RSS-14)	Enabled	
	GS1 DataBar Expanded (RSS Expanded)	Enabled	
	GS1 DataBar Limited (RSS Limited)	Enabled	
	GS1 DataBar Truncated	Enabled	
	GS1 DataBar Stacked	Enabled	
	GS1 DataBar Stacked Omnidirectional	Enabled	
	GS1 DataBar Expanded Stacked	Enabled	
Code 2 of 5	Industrial 25	Enabled	
	Interleaved 25	Enabled	
	Matrix 25	Enabled	



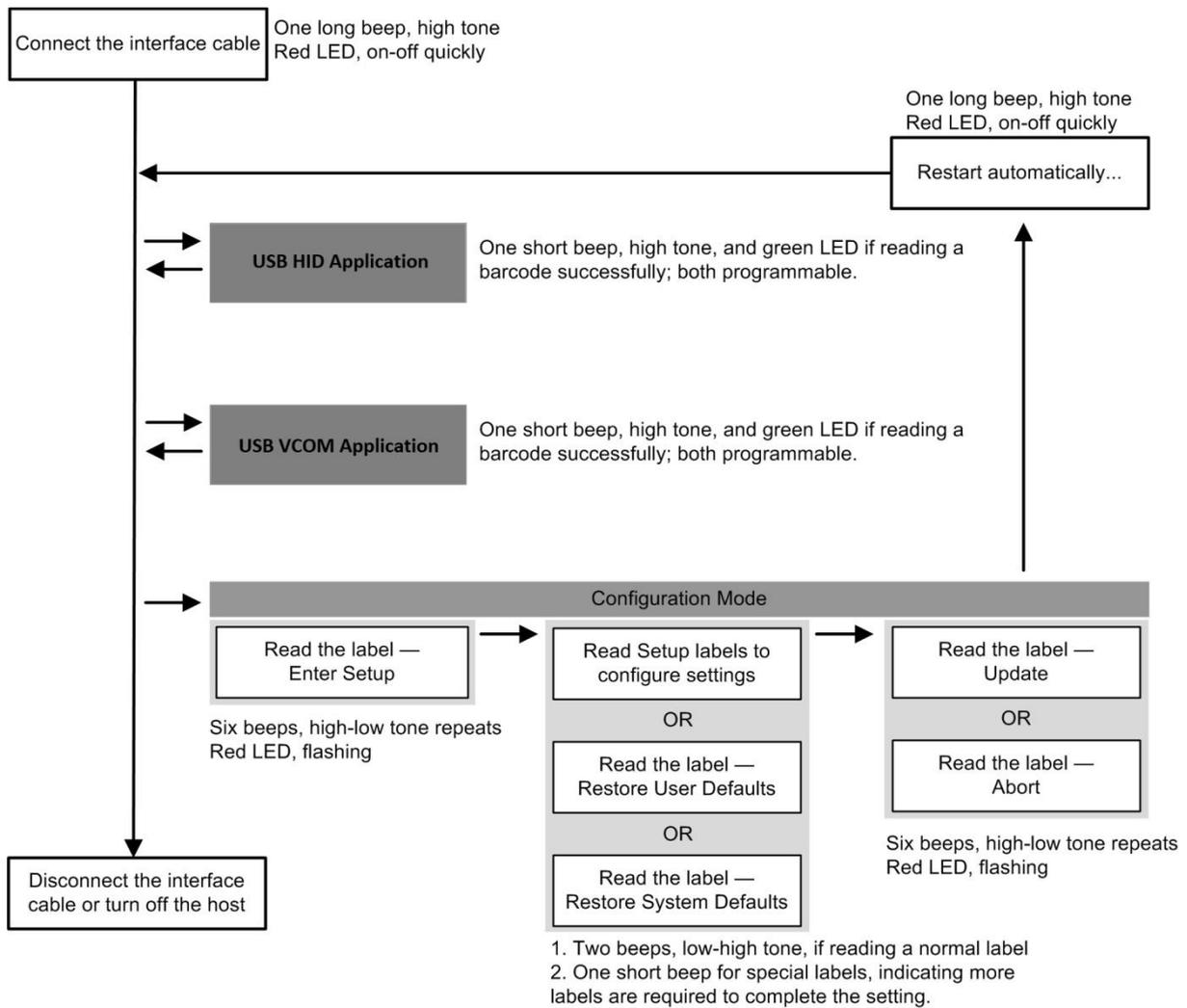
	Standard 25	Enabled	
Code 11			Disabled
Code 93		Enabled	
MSI			Disabled
Plessey			Disabled
Code 3 of 9	Code 39	Enabled	
	Italian Pharmacode		Disabled



Quick Start

The configuration of the scanner can be done by reading the setup barcodes contained in this manual or via the **ScanMaster** software.

This section describes the procedure of configuring the scanner by reading the setup barcodes and provides some examples for demonstration.



Enter Configuration Mode

For the scanner to enter the configuration mode, have it read the "Enter Setup" barcode located at the bottom of almost every even page of this manual.

- ▶ The scanner will respond with six beeps and its LED indicator will become flashing blue after reading the barcode.

Enter Setup



For configuring scanner parameters, see "[Read a Setup Barcode](#)" below.

Exit Configuration Mode

For the scanner to save settings and exit the configuration mode, have it read the "Update" barcode located at the bottom of almost every odd page of this manual. To exit the configuration mode without saving any changes, have the scanner read the "Abort" barcode instead.

- ▶ Just like reading the "Enter Setup" barcode, the scanner will respond with six beeps and its LED indicator will become flashing blue after reading the barcode. Wait for a few seconds for the scanner to restart itself.

Update



109999

Abort



109998

Default Settings

Save as User Defaults

For the scanner to keep the customized settings as user defaults, have it read the "Save as User Defaults" barcode. This is a normal setup barcode, and the scanner will respond with two beeps (low-high tone).

- ▶ After reading the "Update" barcode, the current settings will be saved as user defaults.

Save as User
Defaults



109986



Update

Restore User Defaults

For the scanner to restore the user defaults, have it read the "Restore User Defaults" barcode. This is a normal setup barcode, and the scanner will respond with two beeps (low-high tone).

- ▶ After reading the "Update" barcode, all the parameters of the scanner will return to the customized values.

Restore User
Defaults



109987

Restore System Defaults

For the scanner to restore the factory defaults, have it read the "Restore System Defaults" barcode. This is a normal setup barcode, and the scanner will respond with two beeps (low-high tone).

- ▶ After reading the "Update" barcode, all the parameters of the scanner will return to the default values.

Restore System
Defaults



109993

Note: The system default value (if there is any) for each setting is indicated by an asterisk "*".

Firmware Information

Scan the barcode below for firmware information.

Firmware
Information



109815

Hardware Information

Hardware
Information



109816



Read a Setup Barcode

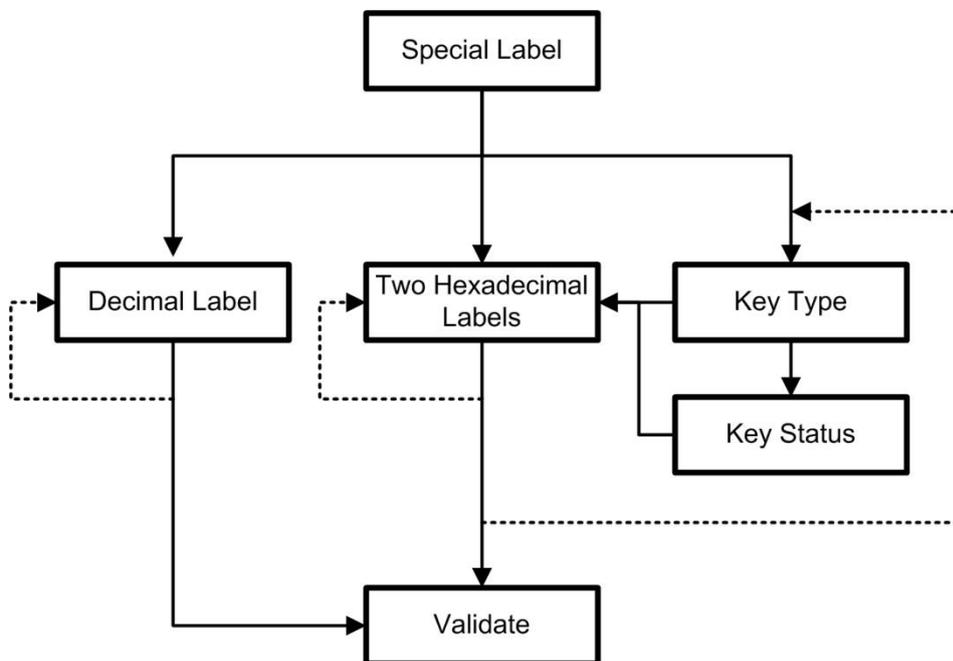
Configure Parameters

For most of the scanner parameters, only one read is required to set them to new values. The scanner will respond with two beeps (low-high tone) when each parameter is set successfully.

But for a number of special parameters, multiple reads are required to complete the setting. In this case, the scanner will respond with a short beep to indicate it needs to read more setup barcodes. These special parameters may require reading one or more setup barcodes, such as

- ▶ Numeric barcodes, say, for keyboard type, inter-character delay, length qualification
- ▶ Hexadecimal barcodes, say, for character strings as prefix, suffix, etc.
- ▶ When "USB HID" is configured for interface, Key Type and Key Status will then become applicable. Decide whether or not to change key status when "Normal Key" is selected for Key Type.

To complete the configuration of these special parameters, the scanner requires reading the "Validate" barcode, and then responds with two beeps (low-high tone) to indicate the input values are validated.



The example below shows how to save settings as "User Default" so that you can restore user defaults later:

Steps	Action	Scanner Feedback if Successful
1	Power on the scanner...	The scanner will respond with a long beep (high tone) and its LED indicator will become solid blue.
2	Enter the Configuration Mode...	The scanner will respond with six beeps (high-low tone repeats three times), and its LED indicator will be flashing blue.
3	Read a Setup barcode... For example,  	The scanner will respond with two beeps (low-high tone) if reading a normal setup barcode.
4	Exit the Configuration Mode...  OR 	Same as for <i>Enter the Configuration Mode</i> .
5	The scanner will automatically restart itself...	Same as for <i>Power on the scanner</i> .
*	When any configuration error occurs...	The scanner will respond with one long beep (low tone).



Enter Setup

The example below shows how to set the numeric parameters:

Steps	Action	Scanner Feedback if Successful
1	Power on the scanner...	The scanner will respond with a long beep (high tone) and its LED indicator will become solid blue.
2	Enter the Configuration Mode... Enter Setup 	The scanner will respond with six beeps (high-low tone repeats three times), and its LED indicator will become flashing blue.
3	Read a Setup barcode... For example, Normal setup barcode *Enable Interleaved 25  100309 Special setup barcode Max. Length (*126)  100606 Decimal barcodes 5  109905 Validate  109994	The scanner will respond with two beeps (low-high tone) if reading a normal setup barcode. The scanner will respond with one short beep if reading a special setup barcode such as "Max. Length", indicating the setup requires reading more barcodes. Read the " Decimal Value " barcode(s). • Refer to the " Decimal System " in the Appendix III.
4	Exit the Configuration Mode... Update  109999 OR Abort  109998	The scanner will respond with two beeps (low-high tone) when the input values are validated. Same as for <i>Enter the Configuration Mode</i> .
5	The scanner will automatically restart itself...	Same as for <i>Power on the scanner</i> .



Update

The example below shows how to set the string parameters:

Steps	Action	Scanner Feedback if Successful
1	Power on the scanner...	The scanner will respond with a long beep (high tone) and its LED indicator will become solid blue.
2	Enter the Configuration Mode... Enter Setup 	The scanner will respond with six beeps (high-low tone repeats three times), and its LED indicator will become flashing blue.
3	Read a Setup barcode... For example, Special setup barcodes Configure Prefix  101230 Hexadecimal barcodes  109902  109911 Validate  109994	The scanner will respond with one short beep if reading a special setup barcode such as "Prefix Code", indicating the setup requires reading more barcodes. Read the "Hexadecimal Value" barcodes for the desired character string. For example, read "2" and "B" for the scanner to prefix the character "+". <ul style="list-style-type: none"> Refer to the "Hexadecimal System" in the Appendix III. The scanner will respond with two beeps (low-high tone) when the input values are validated.
4	Exit the Configuration Mode... Update  109999 OR Abort  109998	Same as for <i>Enter the Configuration Mode</i> .
5	The scanner will automatically restart itself...	Same as for <i>Power on the scanner</i> .



Create One-Scan Setup Barcodes

The fact is most of the scanner parameters require only one read for setting new values. To facilitate configuring the scanner, create a One-Scan setup QR Code for use.

Setup QR Code

Users can also scan a single QR Code combining with a series of serial commands to configure the scanner. For example, if you want to change the suffix character to `#`, you will need to input the serial commands in sequence as follows (underlining the digits is to make them more readable):

#@CipherLab101231109902109903109994

Command	Purpose
#@CipherLab	Enter Setup
101231	▶ Configure suffix
109902	Give the first hexadecimal digit of 0x23
109903	▶ Give the second hexadecimal digit of 0x23 for taking `#` as the suffix
109994	Validate the settings

Setup QR Code for configuring suffix



Chapter 1: Setting the Scanner

This chapter introduces the features and settings of the scanner.

In This Chapter

1.1 Power-On.....	23
1.2 LED Indicator	23
1.3 Scan Mode	23
1.4 Status Indicator.....	25
1.5 Decoding	27



1.1 Power-On

Connect the interface cable between the scanner and computer.

- ▶ The scanner will respond with one long beep (high tone) and its LED indicator will become solid blue.

1.2 LED Indicator

The blue LED on top of the scanner is used to indicate operating status. For example, the LED becomes solid blue upon powering on. Users can tell the difference by the beeps – for instance, you will hear a long beep of high tone when powering on the scanner.

Scanner LED	Meaning
Blue, on	▶ Power on, with one long beep (high tone)
Blue, off-on	Good Read, with one short beep (high tone) and beeper pitch programmable
Blue, flashing	Configuration Mode (On/Off ratio 0.5 s: 0.5 s)

1.3 Scan Mode

Barcode scanners support multiple scanning modes. It is important to select the mode that best suits the specific requirements of your application. Refer to the comparison table below for details on each mode's features and capabilities.

Scan Mode	Start Scanning					Stop Scanning		
	Always	Press trigger once	Hold trigger	Press trigger twice	Release trigger	Release trigger	Barcode being read	Timeout
<i>Test Mode</i>	✓							
<i>Laser Mode</i>			✓			✓	✓	✓
<i>Presentation Mode</i>	✓							

Note: By default, the scan mode is set to Laser Mode.



1.3.1 Test Mode

The scanner is always scanning.

- ▶ Capable of decoding the same barcode repeatedly without removing it, for testing purpose.

Test Mode



1.3.2 Laser Mode

The scanner will start scanning once the trigger is held down.

- ▶ The scanning won't stop until (1) a barcode is decoded, (2) the pre-set timeout expires, or (3) the trigger is released.

▶

*Laser Mode



▶

1.3.3 Presentation Mode

The scanner will be expecting barcodes. Whenever a barcode is brought within range, the scanner will be able to decode it. It is suggested to seat the scanner in the Adjustable Scanner Stand for hands-free operation.

Presentation Mode



1.4 Beeper

The scanner has a beeper to give feedback for various operating conditions.

Beeping	Meaning
One long beep, high tone	Power on, with blue LED on
One short beep, high tone ▶ • Programmable, default to 4 KHz	Good Read, with blue LED on-off quickly
Six short beeps ▶ • High-low tone repeats three times	▶ Enter Configuration Mode, with blue LED flashing ▶ Exit Configuration Mode
Two beeps, low-high tone	▶ Setup barcode read successfully
One long beep, low tone	Configuration error (Wrong barcode...)

1.4.1 Beeper Switch

*Beeper On



Beeper Off
(Mute)



1.4.2 Beeper Volume

Minimum Volume



*Maximum Volume



Update

1.4.3 Beeper Type

Frequency

* Type I
(4 kHz)



Type II
(2 kHz)



Type III
(1 kHz)



1.5 Decoding

1.5.1 Aiming Pattern



1.5.2 Read Negative Barcode

Normally, barcodes are printed with the color of the bars darker than that of the spaces. But for negative barcodes, they are printed in the opposite sense just like negative films. The spaces of negative barcodes are printed with a color darker than that of the bars. You can configure the scanner to be able to read negative barcodes in the following symbologies:

- ▶ All 1D symbologies
- ▶ Data Matrix
- ▶ QR Code
- ▶ Aztec
- ▶



1.5.3 Decoding Illumination

Enable/Disable illumination during scanning.

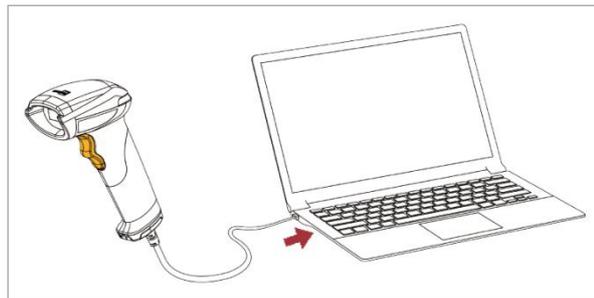
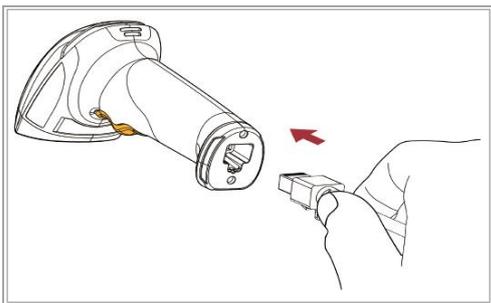
- ▶ Enabling illumination usually results in superior images. The effectiveness of the illumination decreases as the distance to the target increases.



Chapter 2: Selecting Output Interface

In order to establish a proper connection between computer and the scanner, we suggest following these instructions:

- 1) Have the scanner read the "Enter Setup" barcode to enter the configuration mode.
- 2) Have the scanner read the associated barcodes to activate the desired interface.
- 3) See the following sections for output interfaces supported.
- 4) Have the scanner read the barcodes for related settings.
- 5) Have the scanner read the "Update" barcode to apply the settings and quit the configuration mode.



In This Chapter

2.1 Direct USB HID	29
2.2 Direct USB VCOM	37

2.1 Direct USB HID

For USB HID, connect the scanner to the USB port of PC. Run any text editor on the computer, and the scanned data will be transmitted to the computer.

HID Settings	Defaults
Keyboard Type	English_US
Alternate Composing	No
Digits Transmission	Alpha numeric keypad
Special Keyboard Feature	Apply
Key Delay	5 ms
Control Character Escaping	Disable
Input Encoding Type	Auto



2.1.1 Activate USB HID & Select Keyboard Type

When the USB HID interface is activated, you need to select a keyboard type to complete the setting.



By default, the keyboard type is set to PCAT (US).
The following keyboard types are supported:



USB HID

*English_US	 103300
Japanese	 103301
Brazil (Portuguese)	 103302
Czech (QWERTZ)	 103303
Danish	 103304
Swedish	 103305
French	 103306
Italian	 103307
Norwegian	 103308
Spanish	 103309
Slovak	 103310



Update

Turkish Q



English_UK



Germany



Greek



Hungarian



Finnish



ALT Composing

By default, Alternate key composing is disabled. Select [Yes] to allow emulating Alternate key code of a specific keyboard character. For example, [Alt] + [065] will be sent to host for the character "A" regardless the keyboard type using.

Yes



*No

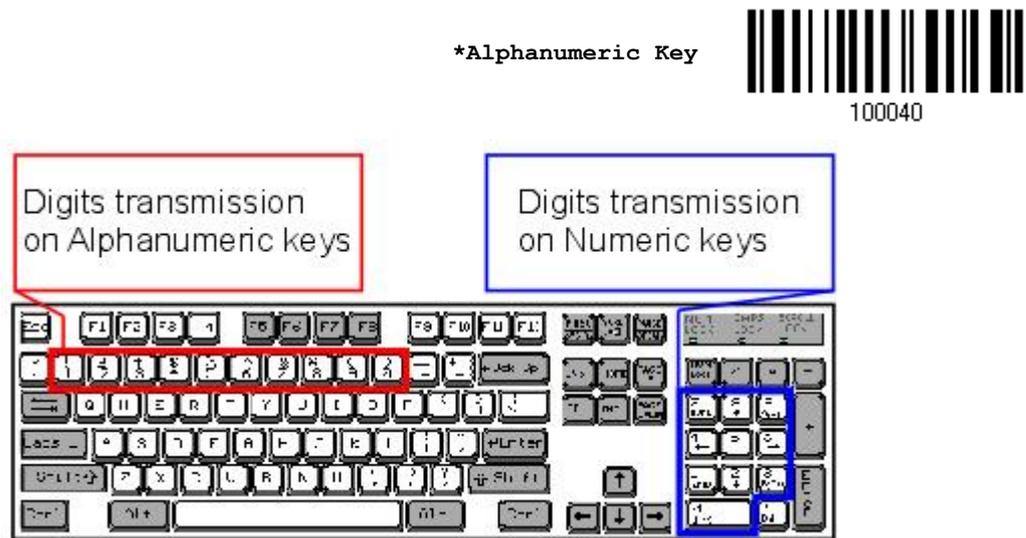


Digits Transmission

By default, the alphanumeric keypad is used for transmitting digits. Select "Numeric Keypad" to use the keys on the numeric keypad.

Numeric Key





Note: If selecting "Numeric Keypad", the Num Lock status of the physical keyboard should be "ON".

2.1.2 Special Keyboard Feature

By default, the special keyboard feature is applied. Scan the "Bypass" barcode below to disable the feature if you don't need it.

Bypass



***Apply**



2.1.3 Key Delay (Inter-Character Delay)

By default, the inter-character delay is set to "Disable". Specify whether to enable or disable this function by scanning the barcodes below. The computer response time of the keyboard interface can be set to 5, 10, 20, or 40 minutes.

Such delay time is inserted between every character being transmitted. The longer the delay time is, the slower the transmission speed will be.

***Disable**



Update



2.1.4 Control Character Escaping

The control character escaping keyboard rules output by this product may not be recognized by certain systems or software.

To achieve the desired application effect, configure control character escaping as needed.

After a successful decode, perform the escape operation as follows:

1. Press and hold the CTRL key.
2. Following the key mapping for character escape in [Appendix IV](#), press the corresponding keys on the keyboard in sequence.
3. Release the CTRL key.

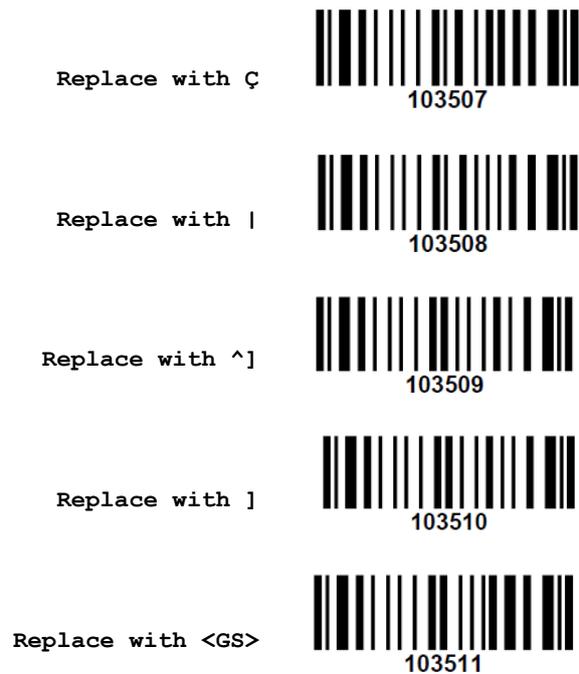


2.1.5 GS Control Character Replacement

This function replaces the GS control character (0x1D) found in barcodes with a custom-defined string.

Scan the barcodes below for desired settings.





For User-defined Replacement settings (Up to 8 characters can be replaced):

Example: Replace the GS control character with the string #GS#

Step1: Scan the configuration barcode "Enable User-defined Replacement".

Step2: Scan the configuration barcode "User-defined: Replace to".

Step3: Scan the ASCII codes of the replacement string #GS#.

Step4: Refer to the [ASCII Table](#) for the values for #GS#: 0x23, 0x47, 0x53, and 0x23.

Step5: Scan the corresponding digit barcodes from the [Hexadecimal System](#) table in the appendix in sequence: 2, 3, 4, 7, 5, 3, 2, 3

Step6: Scan the "[Validate](#)" barcode in the end of the Hexadecimal System table.



Note:

If you're using the CipherLab ScanMaster platform, after selecting "User define", click the empty field of "User Define: Replace to", a "Normal Key" table will appear for you to select the desired replacement.



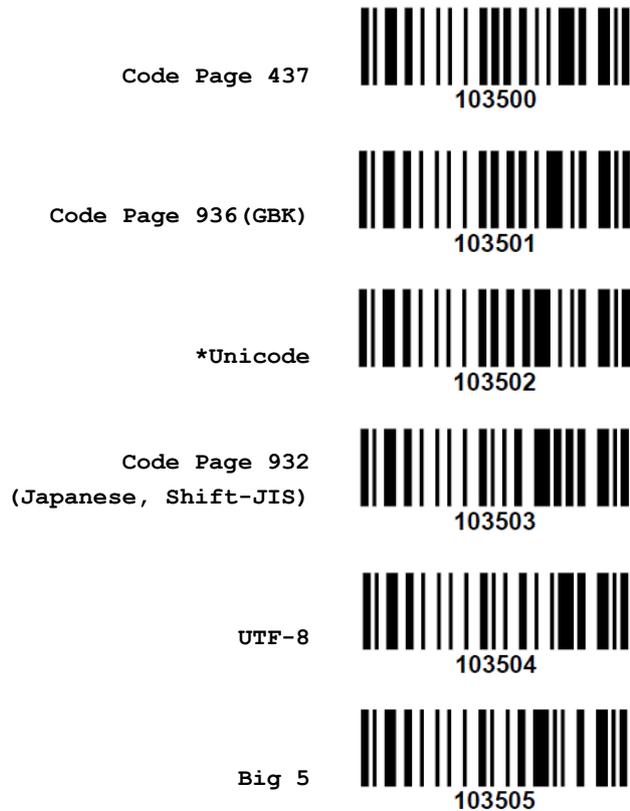
2.1.6 Input Encoding Type

By default, barcodes encoded in **UTF-8** and **Shift-JIS** are automatically recognized. For the rest such as PDF417, QR Code, and Data Matrix, etc., select the encoding format to create barcodes. This must be configured first to ensure proper recognition.



2.1.7 Output Encoding Type

If the received data does not display the correct characters, it may be because the scanned barcode was created using a code page different from what the host application expects.



2.2 Direct USB VCOM

For USB Virtual COM, connect the scanner to the USB port of PC. Run HyperTerminal.exe on the computer, and the scanned data will be transmitted to the computer.

2.2.1 Activate USB Virtual COM

Activate Direct USB
Virtual COM



Update

Chapter 3: Changing Symbology Settings

In this chapter, a brief instruction on the symbology settings is provided for reference.

In This Chapter

3.1 2D Symbologies.....	39
3.2 Code 128/Codabar Symbologies	45
3.3 UPC/EAN Symbologies	48
3.4 GS1 DataBar (RSS Family).....	53
3.5 Code 25.....	54
3.6 Code 11/Code 93/MSI/Plessey Symbologies	60
3.7 Code 39.....	66
3.8 Italian Pharmacode (Code 32)	68



3.1 2D Symbologies

3.1.1 QR Code

*Enable



Disable



Code Length Qualification

To prevent the "short scan" error, define the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length (Range: 1-7280).

- ▶ If "Max/Min Length" is selected, the maximum length and the minimum length must be specified. It only accepts those barcodes with lengths that fall between max/min lengths specified.

1) Read the barcode for Max. Length and Min. Length.

Max. Length (*7280)



Min. Length (*1)



- 2) Read the "[Decimal Value](#)" barcodes listed in the Appendix III for the desired length.
- 3) Read the "[Validate](#)" barcode on the same page to complete this setting.



Update

3.1.2 Micro QR Code



3.1.3 Data Matrix

Decide whether to enable Data Matrix barcodes.

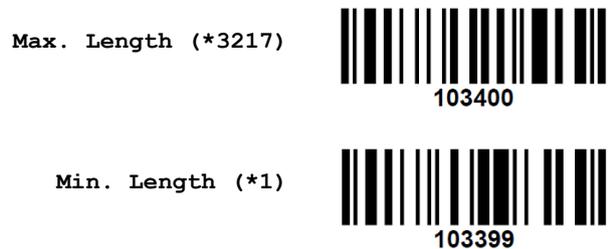


Code Length Qualification

To prevent the "short scan" error, define the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length (Range: 1-3217).

- ▶ If "Max/Min Length" is selected, the maximum length and the minimum length must be specified. It only accepts those barcodes with lengths that fall between max/min lengths specified.

1) Read the barcode for Max. Length and Min. Length.



- 2) Read the "[Decimal Value](#)" barcodes listed in the Appendix III for the desired length.
- 3) Read the "Validate" barcode on the same page to complete this setting.



3.1.4 PDF417

***Enable PDF417**



Disable



Code Length Qualification

To prevent the "short scan" error, define the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length (Range: 1-2810).

- ▶ If "Max/Min Length" is selected, the maximum length and the minimum length must be specified. It only accepts those barcodes with lengths that fall between max/min lengths specified.

1) Read the barcode for Max. Length and Min. Length.

Max. Length (*2810)



Min. Length (*1)



- 2) Read the "[Decimal Value](#)" barcodes listed in the Appendix III for the desired length.
- 3) Read the "Validate" barcode on the same page to complete this setting.

3.1.5 MicroPDF417

***Enable**



Disable



Update

3.1.6 Aztec

Enable Aztec



*Disable



Code Length Qualification

To prevent the "short scan" error, define the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length (Range: 1-3832).

- ▶ If "Max/Min Length" is selected, the maximum length and the minimum length must be specified. It only accepts those barcodes with lengths that fall between max/min lengths specified.

1) Read the barcode for Max. Length and Min. Length.

Max. Length (*3832)



Min. Length (*1)



- 2) Read the "[Decimal Value](#)" barcodes listed in the Appendix III for the desired length.
- 3) Read the "Validate" barcode on the same page to complete this setting.



3.1.7 Maxicode

Enable Maxicode



*Disable



Code Length Qualification

To prevent the "short scan" error, define the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length (Range: 1-150).

- ▶ If "Max/Min Length" is selected, the maximum length and the minimum length must be specified. It only accepts those barcodes with lengths that fall between max/min lengths specified.

1) Read the barcode for Max. Length and Min. Length.

Max. Length (*150)



Min. Length (*1)



- 2) Read the "[Decimal Value](#)" barcodes listed in the Appendix III for the desired length.
- 3) Read the "Validate" barcode on the same page to complete this setting.



Update

3.1.8 Han Xin

***Disable**



102046

Enable



102047

Code Length Qualification

To prevent the "short scan" error, define the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length (Range: 1-6000).

- ▶ If "Max/Min Length" is selected, the maximum length and the minimum length must be specified. It only accepts those barcodes with lengths that fall between max/min lengths specified.

- 1) Read the barcode for Max. Length and Min. Length.

Max. Length (*6000)



103410

Min. Length (*1)



103409

- 2) Read the "[Decimal Value](#)" barcodes listed in the Appendix III for the desired length.
- 3) Read the "Validate" barcode on the same page to complete this setting.



3.2 Code 128/Codabar Symbologies

3.2.1 Code 128

*Enable



Disable



Code Length Qualification

To prevent the "short scan" error, define the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length (Range: 1-80).

- ▶ If "Max/Min Length" is selected, the maximum length and the minimum length must be specified. It only accepts those barcodes with lengths that fall between max/min lengths specified.

Note:

1. The specified length(s) must not include the check digit(s) the barcode contains.
2. Length excluding 6 will disable 1D setting. Use 2D instead if needed.

- 1) Read the barcode for Max. Length and Min. Length.

Max. Length (*50)



Min. Length (*4)



- 2) Read the "[Decimal Value](#)" barcodes listed in the Appendix III for the desired length.
- 3) Read the "Validate" barcode on the same page to complete this setting.



Update

3.2.2 GS1-128 (EAN-128)



Note: GS1-128 barcodes can be decoded only when this setting is enabled.

3.2.3 Codabar



Verify/Transmit Check Digit

Decide whether to verify the check digit, and if verified, whether the check digit will be transmitted or not.



Transmit Start/Stop Characters

Decide whether to include the start/stop characters in the data being transmitted.



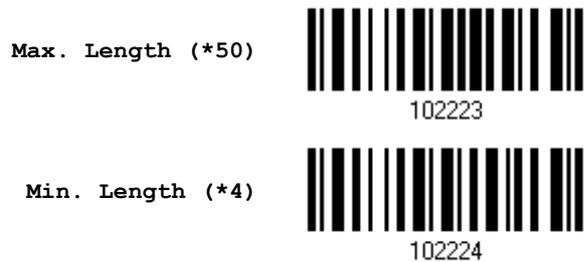
Code Length Qualification

To prevent the "short scan" error, define the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length (Range: 2-50).

- ▶ If "Max/Min Length" is selected, the maximum length and the minimum length must be specified. It only accepts those barcodes with lengths that fall between max/min lengths specified.

Note: The specified length(s) must not include the check digit(s) the barcode contains.

- 1) Read the barcode for Max. Length and Min. Length.



- 2) Read the "[Decimal Value](#)" barcodes listed in the Appendix III for the desired length.
- 3) Read the "Validate" barcode on the same page to complete this setting.



Update

3.3 UPC/EAN Symbologies

3.3.1 UPC-E

UPC-E

***Enable**
(No Add-on)



Disable



Convert to UPC-A

Decide whether to expand the read UPC-E barcode, as well as its addons, into UPC-A.

- ▶ After conversion, the data follows UPC-A format and is affected by UPC-A programming selections (e.g. System Number, Check Digit).

Convert to UPC-A



***Do Not Convert**



Transmit Check Digit

Decide whether to include the check digit in the data being transmitted.

***Transmit UPC-E**
Check Digit



Do Not Transmit



Transmit System Number

Decide whether to include the system number in the data being transmitted.

Transmit UPC-E
System Number



*Do Not Transmit



3.3.2 EAN-8

EAN-8

*Enable EAN-8
(No Addon)



Disable



Convert to EAN-13

Decide whether to expand the read EAN-8 barcode, as well as its addons, into EAN-13.

- ▶ After conversion, the data follows EAN-13 format and is affected by EAN-13 programming selections (e.g. System Number, Check Digit).

Convert EAN-8 to
EAN-13



*Do Not Convert



Update

Transmit Check Digit

Decide whether to include the check digit in the data being transmitted.

***Transmit EAN-8
Check Digit**



Do Not Transmit



3.3.3 EAN-13

EAN-13

***Enable EAN-13
(No Addon)**



Disable



Transmit Check Digit

Decide whether to include the check digit in the data being transmitted.

***Transmit EAN-13
Check Digit**

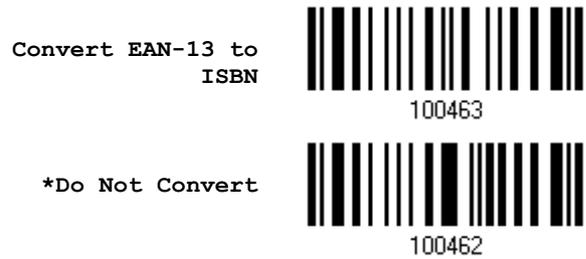


Do Not Transmit



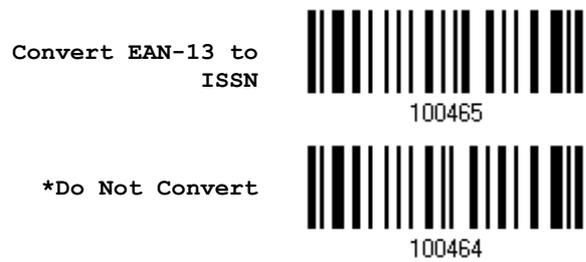
Convert to ISBN

Decide whether to convert the EAN-13 barcode, starting with 978 and 979, to ISBN.



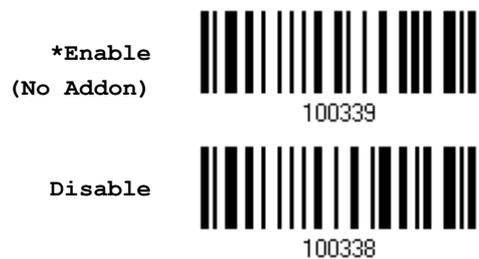
Convert to ISSN

Decide whether to convert the EAN-13 barcode, starting with 977 to ISSN.



3.3.4 UPC-A

UPC-A



Update

Transmit Check Digit

Decide whether to include the check digit in the data being transmitted.

***Transmit UPC-A
Check Digit**



100469

Do Not Transmit



100468

Transmit System Number

Decide whether to include the system number in the data being transmitted.

***Transmit UPC-A
System Number**



100477

Do Not Transmit



100476

3.3.5 Add-on Mode

Decide whether to enable the Add-on Mode in the 1204 scanner. The default setting is "Ignore", meaning the scanner will not decode any add-ons.

If "Only" is selected, the scanner will decode only barcodes that contain add-ons.

***Ignore**



103368

Auto



103369

Only



103370



3.4 GS1 DataBar (RSS Family)

GS1 DataBar is categorized into three groups:

Group I – GS1 DataBar Omnidirectional (RSS-14)

- ▶ GS1 DataBar Omnidirectional
- ▶ GS1 DataBar Truncated
- ▶ GS1 DataBar Stacked
- ▶ GS1 DataBar Stacked Omnidirectional

Group II – GS1 DataBar Expanded (RSS Expanded)

- ▶ GS1 DataBar Expanded
- ▶ GS1 DataBar Expanded Stacked

Group III – GS1 DataBar Limited (RSS Limited)

- ▶ GS1 DataBar Limited

3.4.1 GS1 DataBar Omnidirectional (RSS-14)

***Enable RSS-14 &
RSS Expanded
(Groups I, II)**



Disable



The settings below apply to Group I symbologies only:

- ▶ GS1 DataBar Omnidirectional
- ▶ GS1 DataBar Truncated
- ▶ GS1 DataBar Stacked
- ▶ GS1 DataBar Stacked Omnidirectional



3.4.2 GS1 DataBar Expanded (RSS Expanded)

***Enable RSS-14 &
RSS Expanded
(Groups I, II)**



Disable



The settings below apply to Group II symbologies only:

- ▶ GS1 DataBar Expanded
- ▶ GS1 DataBar Expanded Stacked

3.4.3 GS1 DataBar Limited (RSS Limited)

***Enable RSS Limited
(Group III)**



Disable



3.5 Code 25

3.5.1 Industrial 25

***Enable**



Disable



Verify/Transmit Check Digit

Decide whether to verify the check digit, and if verified, whether the check digit will be transmitted or not.



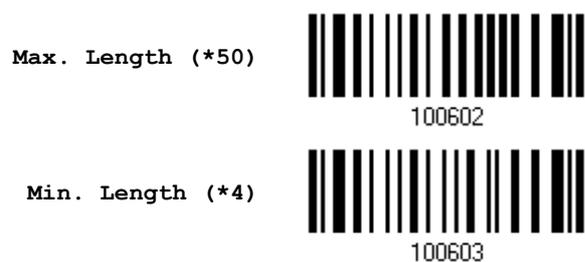
Code Length Qualification

To prevent the "short scan" error, define the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length (Range: 4-50).

- ▶ If "Max/Min Length" is selected, the maximum length and the minimum length must be specified. It only accepts those barcodes with lengths that fall between max/min lengths specified.

Note: The specified length(s) must not include the check digit(s) the barcode contains.

Read the barcode for Max. Length and Min. Length.



- 1) Read the "[Decimal Value](#)" barcodes listed in the Appendix III for the desired length.
- 2) Read the "Validate" barcode on the same page to complete this setting.



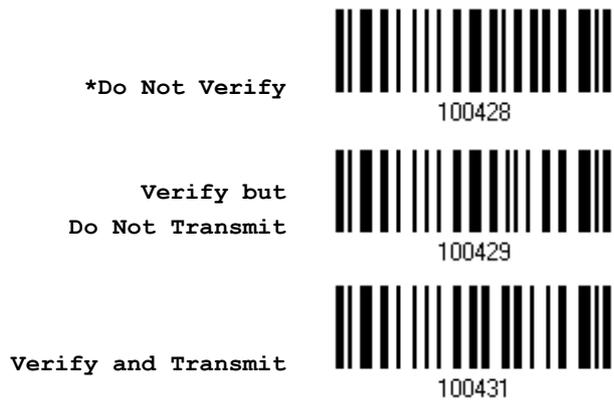
Update

3.5.2 Interleaved 25



Verify/Transmit Check Digit

Decide whether to verify the check digit, and if verified, whether the check digit will be transmitted or not.



Code Length Qualification

To prevent the "short scan" error, define the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length (Range: 4-80).

- ▶ If "Max/Min Length" is selected, the maximum length and the minimum length must be specified. It only accepts those barcodes with lengths that fall between max/min lengths specified.

Note: The specified length(s) must not include the check digit(s) the barcode contains.



1) Read the barcode for Max. Length and Min. Length.

Max. Length (*50)



Min. Length (*6)



- 2) Read the "[Decimal Value](#)" barcodes listed in the Appendix III for the desired length.
- 3) Read the "Validate" barcode on the same page to complete this setting.

3.5.3 Matrix 25

*Enable



Disable



Verify/Transmit Check Digit

Decide whether to verify the check digit, and if verified, whether the check digit will be transmitted or not.

*Do Not Verify



Verify but
Do Not Transmit



Verify and Transmit



Update

Code Length Qualification

To prevent the "short scan" error, define the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length (Range: 4-80).

- ▶ If "Max/Min Length" is selected, the maximum length and the minimum length must be specified. It only accepts those barcodes with lengths that fall between max/min lengths specified.

Note: The specified length(s) must not include the check digit(s) the barcode contains.

1) Read the barcode for Max. Length and Min. Length.

Max. Length (*50)



Min. Length (*6)



- 2) Read the "[Decimal Value](#)" barcodes listed in the Appendix III for the desired length.
- 3) Read the "Validate" barcode on the same page to complete this setting.

3.5.4 Standard 25

Disable



*Enable



Verify/Transmit Check Digit

Decide whether to verify the check digit, and if verified, whether the check digit will be transmitted or not.

*Do Not Verify



Verify but
Do Not Transmit



Verify and Transmit



Code Length Qualification

To prevent the "short scan" error, define the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length (Range: 4-80).

- ▶ If "Max/Min Length" is selected, the maximum length and the minimum length must be specified. It only accepts those barcodes with lengths that fall between max/min lengths specified.

Note: The specified length(s) must not include the check digit(s) the barcode contains.

- 1) Read the barcode for Max. Length and Min. Length.

Max. Length (*50)



Min. Length (*4)



- 2) Read the "[Decimal Value](#)" barcodes listed in the Appendix III for the desired length.
- 3) Read the "[Validate](#)" barcode on the same page to complete this setting.



Update

3.6 Code 11/Code 93/MSI/Plessey Symbolgies

3.6.1 Code 11

Enable



102007

*Disable



102006

Transmit Check Digit

Decide whether to include the check digit(s) in the data being transmitted after verifying the check digit(s).

*Do Not Transmit



102106

Transmit



102107

Verify Check Digit

Decide whether to verify the check digit(s). If incorrect, the barcode will not be accepted.

*Do Not Verify



102243

1 Check Digit



102244

2 Check Digits



102245



Code Length Qualification

To prevent the "short scan" error, define the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length (Range: 3-80).

- ▶ If "Max/Min Length" is selected, the maximum length and the minimum length must be specified. It only accepts those barcodes with lengths that fall between max/min lengths specified.

Note: The specified length(s) must not include the check digit(s) the barcode contains.

1) Read the barcode for Max. Length and Min. Length.

Max. Length (*50)



Min. Length (*4)



- 2) Read the "[Decimal Value](#)" barcodes listed in the Appendix III for the desired length.
- 3) Read the "Validate" barcode on the same page to complete this setting.

3.6.2 Code 93

*Enable



Disable



Update

Verify/Transmit Check Digit

Decide whether to verify the check digit, and if verified, whether the check digit will be transmitted or not.



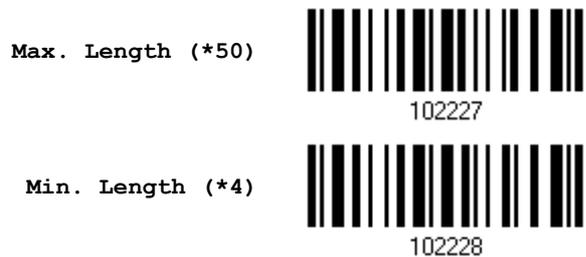
Code Length Qualification

To prevent the "short scan" error, define the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length (Range: 1-80).

- ▶ If "Max/Min Length" is selected, the maximum length and the minimum length must be specified. It only accepts those barcodes with lengths that fall between max/min lengths specified.

Note: The specified length(s) must not include the check digit(s) the barcode contains.

- 1) Read the barcode for Max. Length and Min. Length.



- 2) Read the "[Decimal Value](#)" barcodes listed in the Appendix III for the desired length.
- 3) Read the "Validate" barcode on the same page to complete this setting.



3.6.3 MSI

***Disable**



100344

Enable



100345

Verify/Transmit Check Digit

Decide whether to verify the check digit, and if verified, whether the check digit will be transmitted or not.

***Do Not Verify**



103389

**Verify but
Do Not Transmit**



103390

Verify and Transmit



103391

Verify Check Digit

Select one of the two calculations to verify check digit(s) when decoding barcodes. If incorrect, the barcode will not be accepted.

***Modulo 10**



100448

Double Modulo 10



100449



Update

Code Length Qualification

To prevent the "short scan" error, define the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length (Range: 3-50).

If "Max/Min Length" is selected, the maximum length and the minimum length must be specified. It only accepts those barcodes with lengths that fall between max/min lengths specified.

Note: The specified length(s) must not include the check digit(s) the barcode contains.

1) Read the barcode for Max. Length and Min. Length.

Max. Length (*50)



Min. Length (*4)



2) Read the "[Decimal Value](#)" barcodes listed in the Appendix III for the desired length.

3) Read the "Validate" barcode on the same page to complete this setting.

3.6.4 Plessey

*Disable



Enable



Verify/Transmit Check Digit

Decide whether to include the check digit(s) in the data being transmitted after the check digit has been verified.

*Do Not Verify



Verify but
Do Not Transmit



Verify and Transmit



Code Length Qualification

To prevent the "short scan" error, define the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length (Range: 4-50).

- ▶ If "Max/Min Length" is selected, the maximum length and the minimum length must be specified. It only accepts those barcodes with lengths that fall between max/min lengths specified.

Note: The specified length(s) must not include the check digit(s) the barcode contains.

1) Read the barcode for Max. Length and Min. Length.

Max. Length (*50)



Min. Length (*6)



- 2) Read the "[Decimal Value](#)" barcodes listed in the Appendix III for the desired length.
- 3) Read the "Validate" barcode on the same page to complete this setting.



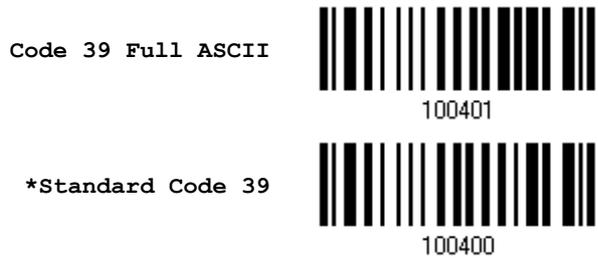
Update

3.7 Code 39



3.7.1 Standard/Full ASCII Code 39

Decide whether to support Code 39 Full ASCII that includes all the alphanumeric and special characters.



Note: Trioptic Code 39 and Code 39 Full ASCII cannot be enabled at the same time.

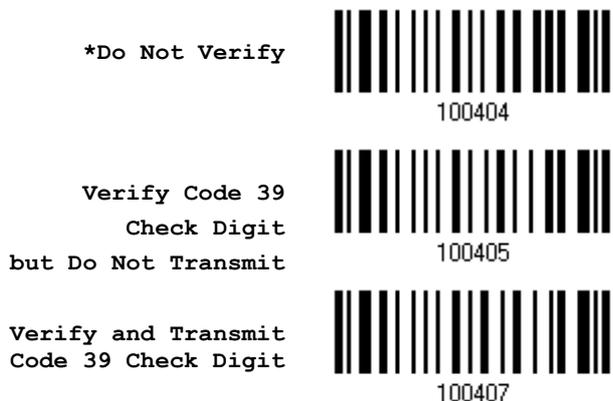
3.7.2 Transmit Start/Stop Characters

Decide whether to include the start/stop characters in the data being transmitted.



3.7.3 Verify/Transmit Check Digit

Decide whether to include the check digit in the data being transmitted after the check digit has been verified.



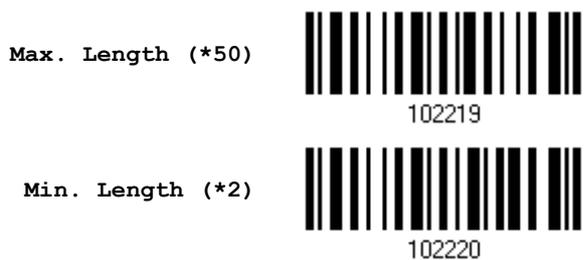
3.7.4 Code Length Qualification

To prevent the "short scan" error, define the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length (Range: 1-50).

- ▶ If "Max/Min Length" is selected, the maximum length and the minimum length must be specified. It only accepts those barcodes with lengths that fall between max/min lengths specified.

Note: The specified length(s) must not include the check digit(s) the barcode contains.

- 1) Read the barcode for Max. Length and Min. Length.



- 2) Read the "[Decimal Value](#)" barcodes listed in the Appendix III for the desired length.
- 3) Read the "Validate" barcode on the same page to complete this setting.



Update

3.8 Italian Pharmacode (Code 32)

Enable



100303

*Disable



100302

Note: Code 39 must be enabled first.

3.8.1 Transmit Start/Stop Characters

Decide whether to include the start/stop characters in the data being transmitted.

*Do Not Transmit



103377

Transmit Start/Stop
Characters



103378



Chapter 4: Defining Output Format

Users can configure the data output format in which the collected data will be output to the host computer. Barcodes read by the scanner will be processed in the following sequence:

- 1) Perform character substitution on the data scanned.
- 2) Add [Code ID](#) and Length Code to the front of the data: [Code ID] [Length Code] [Data]
- 3) Process the whole data in step 2 with user formats. Data is now divided into fields by user specified rules.
- 4) Add [Prefix Code](#) and [Suffix Code](#) before transmission: [Prefix Code] [Processed Data] [Suffix Code]

In This Chapter

4.1 General Settings	69
4.2 Data Editing	72
4.3 GS1 Formatting	77
4.4 Code ID	78
4.5 AIM Code ID.....	79

4.1 General Settings

4.1.1 Prefix/Suffix Code

By default, there is no prefix code, and [ENTER] or [CR] (Carriage Return) is configured to be suffix code. Up to 8 characters can be configured, for example, "Barcode_", and have the string appear in front of the barcode read, like this – "Barcode_1234567890".

- ▶ If "USB HID" is configured for interface, **Key Type** will then become applicable.

Key Type	
Normal Key	Up to 8 character strings are allowed.



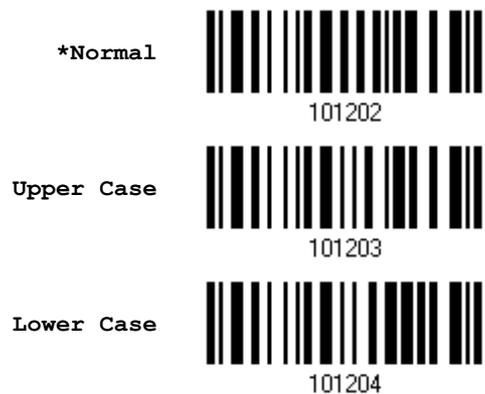
- 1) Read the barcode above to apply prefix code or suffix code separately, and follow steps 2~3. (Max. 8 characters each)



- 2) Read the "[Hexadecimal Value](#)" barcodes listed in the Appendix III for the desired character string. For example, read "2" and "B" for the scanner to prefix or suffix the character [+].
- 3) Read the "Validate" barcode to complete this setting.

4.1.2 Letter Case

By default, the alphabets transmission is case-sensitive, meaning that the alphabets will be transmitted according to their original case. Ignoring the original letter case, select [Upper Case] to output data in upper case only; otherwise, select [Lower Case] to output data in lower case only.

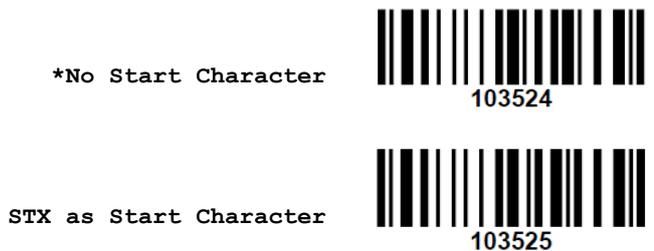


4.1.3 Start Character

The **End Character** is located at the end of the data, while the **Start Character** is located at the beginning.

By default, there is no Start Character.

The ETX (End of Text) character corresponds to the End key value, and the STX (Start of Text) character corresponds to the Home key value.



4.1.4 End Character

By default, CR is the End Character

Scan the barcodes below for the desired settings.

No End Character	 103518
*CR as End Character	 103519
CRLF as End Character	 103520
TAB as End Character	 103521
ETX as End Character	 103522
LF as End Character	 103523

4.1.5 Line Break

If the barcode contains the 0A line feed (LF) character, it may not be properly recognized or processed in Windows systems. In this case, it is recommended to convert it to 0D, which represents a carriage return (CR).

Only LF	 103535
*Only CR	 103536
Both	 103537



Update

4.2 Data Editing

4.2.1 Data Extraction

The scanner enables data editing through user-configured formats. By scanning the setting barcodes, users can specify which portion of the data and what length of that portion to be extracted.

Complete Data

By default, the scanner extracts the complete data.

*Complete Data



Before Data

To customize the data format, follow the steps below:

- 1) Read the "Enter Setup" barcode to enter the Configuration Mode.
- 2) Read the "Before Data" barcode.
- 3) Read the "Before Data Length" barcode.

Before Data



Before Data Length



- 4) Read the "[Decimal Value](#)" barcodes listed in the Appendix III for the desired length.
- 5) Read the "[Validate](#)" barcode on the same page to complete this setting.
- 6) Read the "Update" barcode to exit the Configuration Mode.



Middle Data

To extract Middle Data, the user must specify the lengths of both the Before Data and the End Data. This defines the exact length of the Middle Data to be extracted.

To customize the data format, follow the steps below:

- 1) Read the "Enter Setup" barcode to enter the Configuration Mode.
- 2) Read the "Middle Data" barcode.
- 3) Read the "Before Data Length" barcode.

Middle Data



Before Data Length



End Data Length



- 4) Read the "[Decimal Value](#)" barcodes listed in the Appendix III for the desired length.
- 5) Read the "[Validate](#)" barcode on the same page.
- 6) Read the "End Data Length" barcode.
- 7) Read the "[Decimal Value](#)" barcodes for the desired length.
- 8) Read the "[Validate](#)" barcode on the same page.
- 9) Read the "Update" barcode to exit the Configuration Mode.

End Data

To customize the data format, follow the steps below:

- 1) Read the "Enter Setup" barcode to enter the Configuration Mode.
- 2) Read the "End Data" barcode.
- 3) Read the "End Data Length" barcode.

End Data



End Data Length



- 4) Read the "[Decimal Value](#)" barcodes listed in the Appendix III for the desired length.
- 5) Read the "[Validate](#)" barcode on the same page.



Update

Before + Middle Data

To customize the data format, follow the steps below:

- 1) Read the "Enter Setup" barcode to enter the Configuration Mode.
- 2) Read the "Before + Middle Data" barcode.
- 3) Read the "Before Data Length" barcode.

Before + Middle Data



Before Data Length



End Data Length



- 4) Read the "[Decimal Value](#)" barcodes listed in the Appendix III for the desired length.
- 5) Read the "[Validate](#)" barcode on the same page.
- 6) Read the "End Data Length" barcode.
- 7) Read the "[Decimal Value](#)" barcodes for the desired length.
- 8) Read the "[Validate](#)" barcode on the same page.
- 9) Read the "Update" barcode to exit the Configuration Mode.



Before + End Data

To customize the data format, follow the steps below:

- 1) Read the "Enter Setup" barcode to enter the Configuration Mode.
- 2) Read the "Before + End Data" barcode.
- 3) Read the "Before Data Length" barcode.

Before + End Data



Before Data Length



End Data Length



- 4) Read the "[Decimal Value](#)" barcodes listed in the Appendix III for the desired length.
- 5) Read the "[Validate](#)" barcode on the same page.
- 6) Read the "End Data Length" barcode.
- 7) Read the "[Decimal Value](#)" barcodes for the desired length.
- 8) Read the "[Validate](#)" barcode on the same page.
- 9) Read the "Update" barcode to exit the Configuration Mode.



Update

Middle + End Data

To customize the data format, follow the steps below:

- 1) Read the "Enter Setup" barcode to enter the Configuration Mode.
- 2) Read the "Middle + End Data" barcode.
- 3) Read the "Before Data Length" barcode.

Middle + End Data



Before Data Length



End Data Length



- 4) Read the "[Decimal Value](#)" barcodes listed in the Appendix III for the desired length.
- 5) Read the "[Validate](#)" barcode on the same page.
- 6) Read the "End Data Length" barcode.
- 7) Read the "[Decimal Value](#)" barcodes for the desired length.
- 8) Read the "[Validate](#)" barcode on the same page.
- 9) Read the "Update" barcode to exit the Configuration Mode.



4.3 GS1 Formatting

4.3.1 GS1 AI Processed

It supports recognition of barcodes containing GS1 AI (Application Identifier) characters, such as GS1-128, GS1 DataMatrix, GS1 DataBar, and UDI (Unique Device Identification) medical barcodes. For example:



(01) 0 0000123 00001 7 (17) 240601
GS1-DM



(01) 0 0000123 00001 7
GS1-128

The output includes AI characters enclosed in parentheses.
Scan the barcodes below for the desired settings.

***Not Processed**



Parentheses



Parentheses & LF



Update

4.4 Code ID

By default, Code ID is disabled. Scan
Scan the barcodes below for the desired settings.



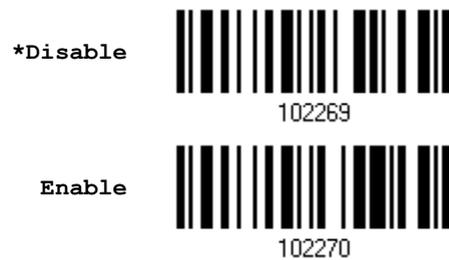
Refer to the following table for available Code ID options.

Code ID Options		Code ID options	
Codabar	a	ISBN	B
Code 39	b	ISSN	n
Code 32	<	Plessey	p
Interleaved 25	e	MSI	m
Standard 25	s	GS1 DataBar(RSS14)	y
Industrial 25	D	GS1 DataBar Limited	y
Matrix 25	v	GS1 DataBar Expanded	y
Code 93	i	QR Code	Q
Code 11	H	Micro QR	Q
Code 128	j	Data Matrix	u
GS1-128	j	PDF417	r
UPC-A	c	MicroPDF417	S
UPC-E	c	Maxicode	x
EAN/JAN-8	d	Aztec	z
EAN/JAN-13	d	Han Xin	h



4.5 AIM Code ID

You can add an AIM (Automatic Identification and Mobility) code ID in front of the barcode for the common purpose of identifying, tracking, recording, storing, and communicating essential business, personal, or product data. Enabling this function can provide you with a fast and accurate data collection and entry.



After applying AIM Code ID, three characters are added in front of the output data. “]” is always the first character. The second (Character) and third (Modifier Character) may vary depending on symbologies. Please refer to the table below.

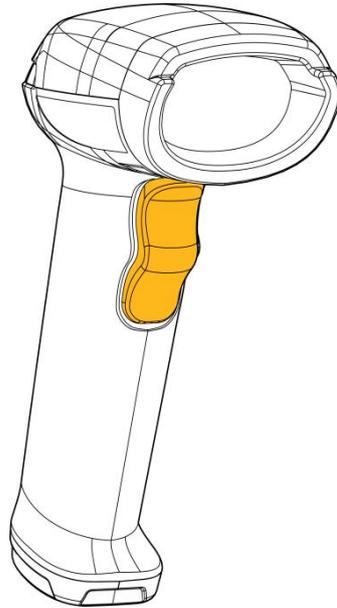
Symbology	Character	Modifier Character
Codabar	F	0, 2, 4
Code 39	A	0, 1, 3, 4, 5, 7
Code 32	X	0
Interleaved 25	I	0, 1, 3
Standard 25	R	0
Industrial 25	S	0
Matrix 25	X	0
Code 93	G	0
Code 11	H	0, 1, 3
Code 93	G	0
Code 128	C	0
GS1-128	C	1
UPC-A/UPC-E	E	0~3
EAN/JAN-8	E	0, 3, 4
EAN/JAN-13	E	0, 3
ISBN	X	0
ISSN	X	0
Plessey	P	0
MSI	M	0, 1



GS1 DataBar(RSS14)	e	0
GS1 DataBar Limited	e	1
GS1 DataBar Expanded	e	2
QR Code	Q	0~6
Micro QR	Q	0~6
Data Matrix	d	0~6
PDF 417	L	0~5
Micro PDF 417	L	0~5
Maxicode	U	0
Aztec	z	0
Han Xin	X	0



Specifications



Optical Characteristics		1204
Scan Engine		2D Imager
Light Source		White LED
Physical Characteristics		
Switch		Tactile switch
Indication		Blue LED and beeper
Interface Options		USB HID, USB Virtual COM
Weight		Approx. 142 g
Power Consumption		
Standby		100 mA
Operating		270 mA
Environmental Characteristics		
Temperature	Operating	0 °C to 50 °C
	Storage	-40 °C to 70 °C
Humidity (Non-condensing)	Operating	10% to 90%
	Storage	5% to 95%



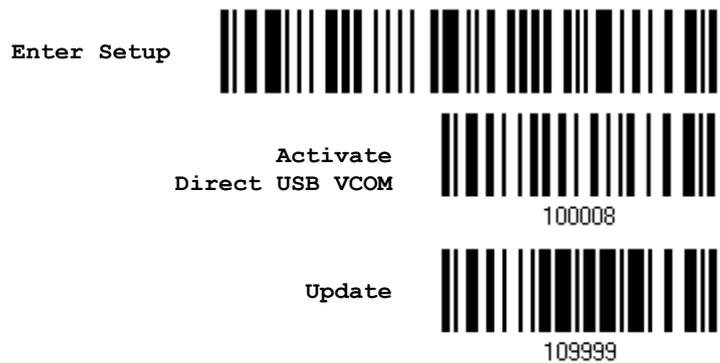
Resistance	
Impact Resistance	1.5 m
Splash / Dust Resistance	IP 42
Electrostatic Discharge	± 15 kV air discharge, ± 8 kV contact discharge
Programming Support	
Configuration via Setup Barcodes	Use setup barcodes
Software	Web-based ScanMaster
Firmware upgradeable	Download firmware updates via the download utility.
Accessories (√ means “supported”)	
Adjustable Scanner Stand	√
USB Cable	√



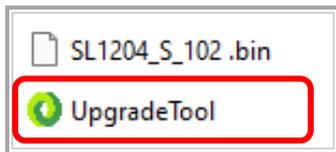
Firmware Upgrade

Using USB Virtual COM

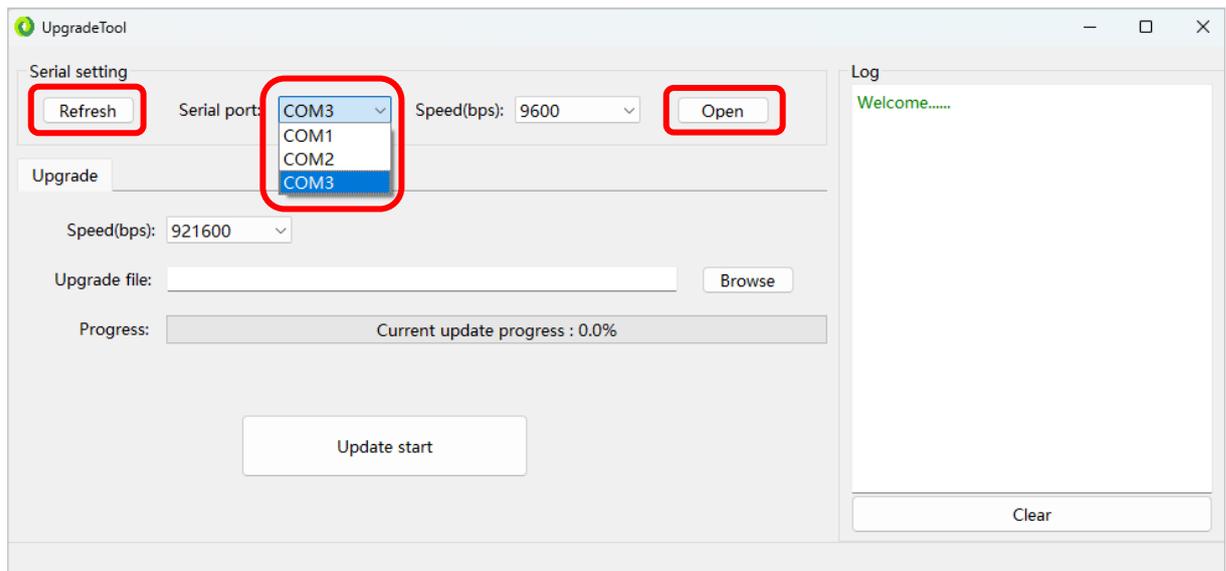
- 1) Connect the scanner and the computer with the USB cable.
 - ▶ If you're using USB Virtual COM for the first time, install its driver beforehand.
- 2) Read the following barcodes in sequence to configure the scanner to use USB Virtual COM as download interface.



- 3) Run the download utility **"UpgradeTool.exe"** on the computer.

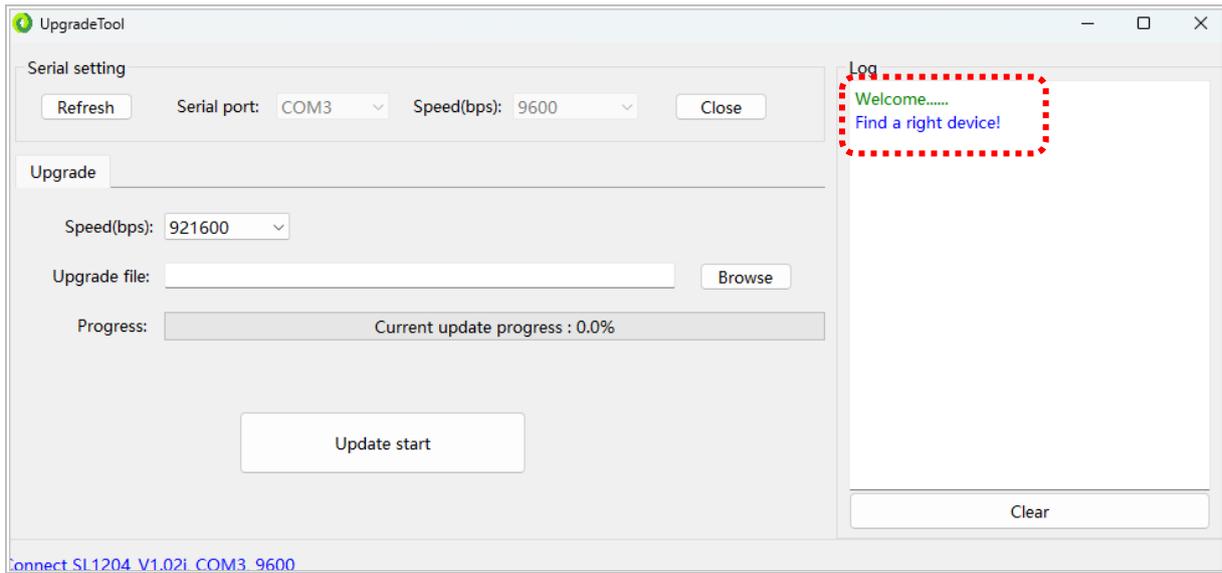


- 4) Click **"Refresh"** in the UpgradeTool window, then select the **"COM3"** serial port and click **"Open"**.

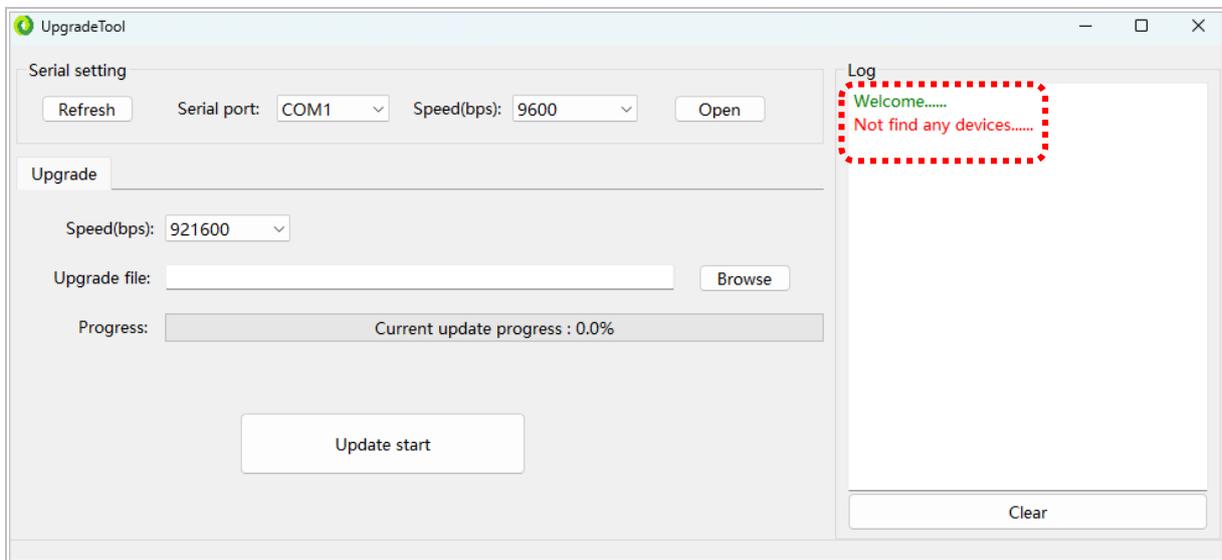


Update

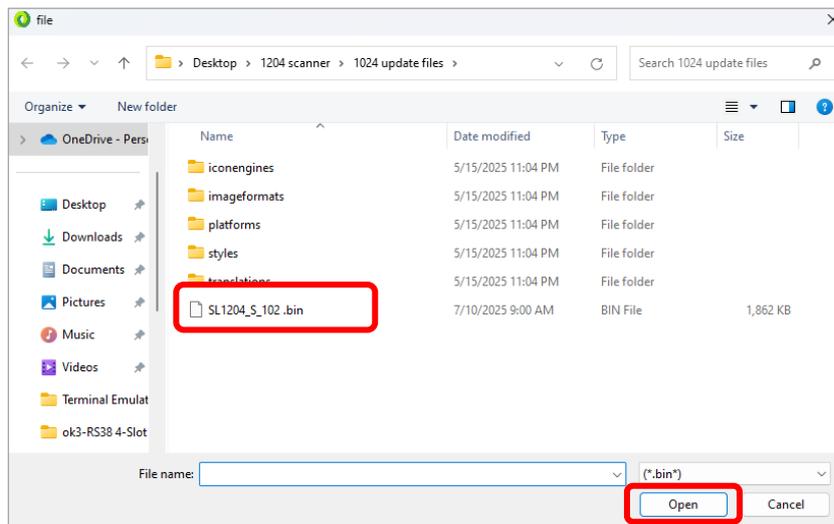
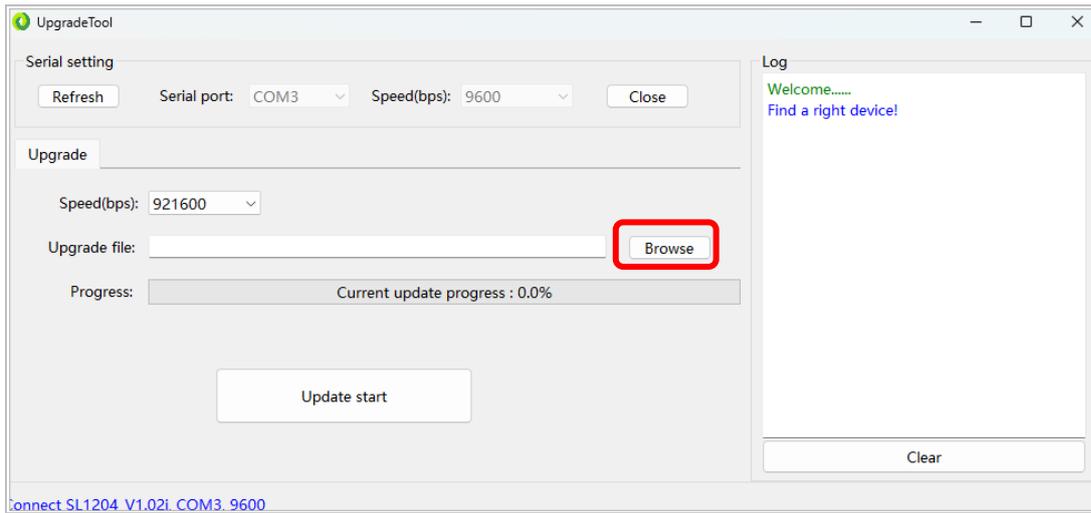
A blue message "Find a right device!" will appear when you select the right serial port.



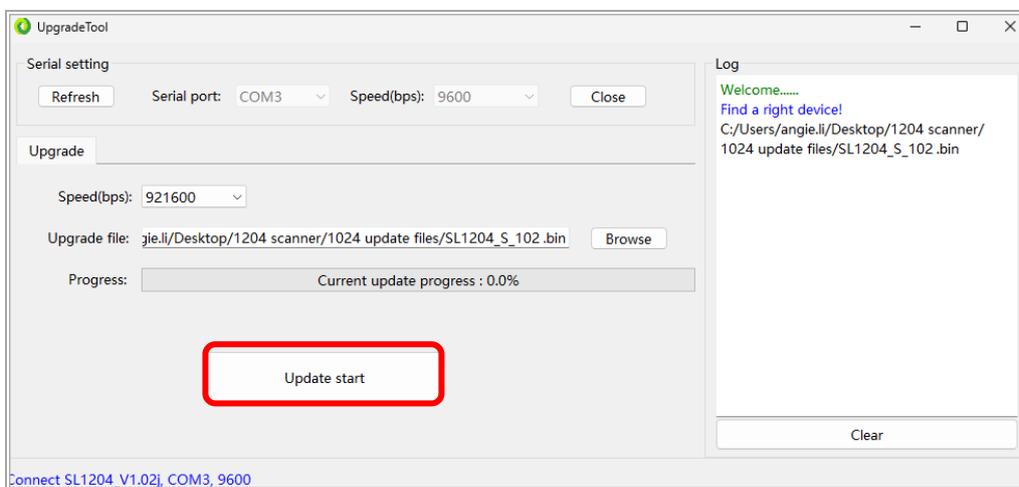
Otherwise, a red message "Not find any devices....." will appear to indicate the failure.



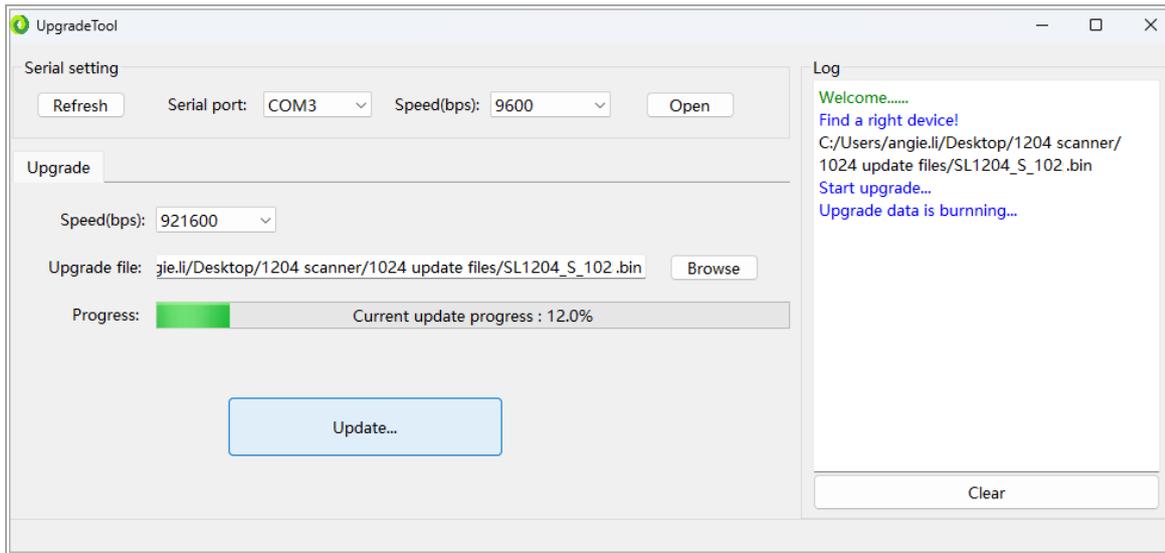
5) Click **“Browse”** to find the upgrade file **“SL1204_S_102.bin”**.



6) Click **“Update start”**.



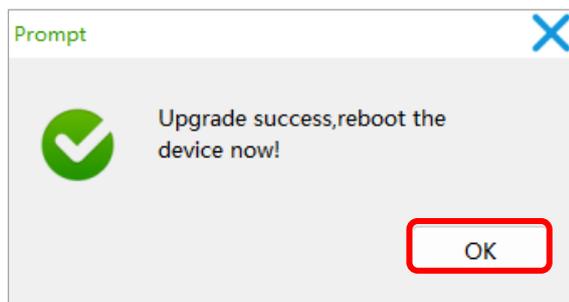
The window will show the progress of Upgrade.



The scanner will have a long beep after the upgrade is completed. A prompt appears to require rebooting the scanner.

7) Click "Ok".

The scanner will automatically restart itself once the download is completed successfully.



Note: The output interface remains unchanged as specified in step 2 (USB Virtual COM).



Definition of Special Keyboard

Apply Special Keyboard

The table below features special keyboard codes applied to the scanner by default. If you have determined to bypass this special keyboard, please refer to the table on the next page.

"Apply" Special Keyboard								
	0	1	2	3	4	5	6	7
0		F11	SP	0	@	P	`	p
1	Insert	Up Arrow	!	1	A	Q	a	q
2	Home	Down Arrow	"	2	B	R	b	r
3	End	Left Arrow	#	3	C	S	c	s
4	Delete	Right Arrow	\$	4	D	T	d	t
5	Page Up	F12	%	5	E	U	e	u
6	Page Down	F1	&	6	F	V	f	v
7	ESC	F2	'	7	G	W	g	w
8	Backspace	F3	(	8	H	X	h	x
9	Tab	F4	)	9	I	Y	i	y
A		F5	*	:	J	Z	j	z
B	Caps Lock	F6	+	;	K	[	k	{
C	Print Screen	F7	,	<	L	\	l	|
D	CR	F8	-	=	M	]	m	}
E	Scroll Lock	F9	.	>	N	^	n	~
F	Pause	F10	/	?	O	_	o	

Note:

- (1) @~@: Digits of numeric keypad.
- (2) CR*/ENTER*: ENTER key on the numeric keypad.



Bypass Special Keyboard

"Bypass" Special Keyboard									
	0	1	2	3	4	5	6	7	8
0			SP	0	@	P	`	p	
1			!	1	A	Q	a	q	
2			"	2	B	R	b	r	
3			#	3	C	S	c	s	
4			\$	4	D	T	d	t	
5			%	5	E	U	e	u	
6			&	6	F	V	f	v	
7			'	7	G	W	g	w	
8	BS		(	8	H	X	h	x	
9	HT		)	9	I	Y	i	y	
A	LF		*	:	J	Z	j	z	
B		ESC	+	;	K	[	k	{	
C			,	<	L	\	l	|	
D	CR		-	=	M	]	m	}	
E			.	>	N	^	n	~	
F			/	?	O	_	o	Dly	



Numeral Systems

Decimal System

Decimal

0	1
 109900	 109901
2	3
 109902	 109903
4	5
 109904	 109905
6	7
 109906	 109907
8	9
 109908	 109909

Validate the Values


109994

Validate

Update

Abort

Hexadecimal System

Hexadecimal

0  109900	1  109901
2  109902	3  109903
4  109904	5  109905
6  109906	7  109907
8  109908	9  109909
A  109910	B  109911
C  109912	D  109913
E  109914	F  109915

Update



Abort



Validate the Values



Validate

ASCII Table

	0	1	2	3	4	5	6	7	
0		DLE	SP	0	@	P	`	p	
1	SOH	DC1	!	1	A	Q	a	q	
2	STX	DC2	"	2	B	R	b	r	
3	ETX	DC3	#	3	C	S	c	s	
4	EOT	DC4	\$	4	D	T	d	t	
5	ENQ	NAK	%	5	E	U	e	u	
6	ACK	SYN	&	6	F	V	f	v	
7	BEL	ETB	'	7	G	W	g	w	
8	BS	CAN	(	8	H	X	h	x	
9	HT	EM	)	9	I	Y	i	y	
A	LF	SUB	*	:	J	Z	j	z	
B	VT	ESC	+	;	K	[	k	{	
C	FF	FS	,	<	L	\	l	|	
D	CR	GS	-	=	M	]	m	}	
E	SO	RS	.	>	N	^	n	~	
F	SI	US	/	?	O	_	o	DEL	

Update



Abort



Character Escape Key Mapping

Refer to the following table for Character Escape key mapping under USB HID:

Decimal	Hexadecimal	Corresponding Key Value (Control Character Escape Off)	Corresponding Key Value (Control Character Escape On)
0	00	Reserved	Ctrl+@
1	01	Insert	Ctrl+A
2	02	Home	Ctrl+B
3	03	End	Ctrl+C
4	04	Delete	Ctrl+D
5	05	PageUp	Ctrl+E
6	06	PageDown	Ctrl+F
7	07	ESC	Ctrl+G
8	08	Backspace	Ctrl+H
9	09	Tab	Ctrl+I
10	0A	Enter *Behavior is affected by carriage return and line feed handling settings	Ctrl+J
11	0B	Caps Lock	Ctrl+K
12	0C	Print Screen	Ctrl+L
13	0D	Enter *Behavior is affected by carriage return and line feed handling settings	Ctrl+M
14	0E	Scroll Lock	Ctrl+N
15	0F	Pause/Break	Ctrl+O
16	10	F11	Ctrl+P
17	11	Arrow Up ↑	Ctrl+Q
18	12	Arrow Down ↓	Ctrl+R
19	13	Arrow Left ←	Ctrl+S
20	14	Arrow Right →	Ctrl+T
21	15	F12	Ctrl+U
22	16	F1	Ctrl+V
23	17	F2	Ctrl+W
24	18	F3	Ctrl+X



Decimal	Hexadecimal	Corresponding Key Value (Control Character Escape Off)	Corresponding Key Value (Control Character Escape On)
25	19	F4	Ctrl+Y
26	1A	F5	Ctrl+Z
27	1B	F6	Ctrl+[
28	1C	F7	Ctrl+\
29	1D	F8	Ctrl+]
30	1E	F9	Ctrl+ ^
31	1F	F10	Ctrl+ _

Update



Abort

