

**Проводной 2D сканер Proton
ICS-1290
Руководство пользователя
(новая версия)**

Precautions

Please read all the contents of the manual carefully before using the products described in this manual. Please read the following precautions carefully to ensure that the barcode scanner is safe to use according to the design specifications, and please carefully keep the manual for future reference.

1. All software (including firmware) provided to the user with the barcode scanner is protected by copyright.
2. The manufacturer reserves the right to make changes to the software (including firmware) to improve the stability or other performance of the barcode scanner.
3. The contents of this manual are subject to change without notice.
4. The manufacturer is not responsible for any loss or claim arising from the use of this manual by a third party.
5. Do not throw or drop the barcode scanner or subject it to strong impact. Doing so can damage the part, abort the execution of the program, cause the memory contents to be lost, or interfere with the normal use of the barcode scanner.
6. Use only your fingertips or blunt instruments to operate the switch button. Using a pointed object can damage the buttons and cause a short circuit in the internal circuitry.
7. When the temperature suddenly changes, condensation may form on the outer casing of the barcode scanner. If you run a barcode scanner at this time, it may affect normal work. Therefore, care should be taken to avoid environments that may cause condensation. If condensation forms frost, wait until it is completely dry before using the barcode scanner.

Table of Contents

Precautions.....	2
Version Record.....	3
Foreword.....	10
Introduction.....	10
Chapter Outline.....	11
Chapter 1 Connection and Basic Settings.....	12
Introduction.....	12
Unpacking.....	12
Device Connection.....	12
USB Connection.....	13
PS/2 Connection.....	14
RS232 Connection.....	15
Barcode Reading.....	16
Defaults Setting.....	17
User-defined Settings.....	17
Factory Default Setting.....	17
Delete User-defined Settings.....	18
Chapter 2 Interface Type.....	19
Introduction.....	19
RS232.....	19
RS232 Baud Rate.....	20
RS232 Word Length: Data Bits, Stop Bits, and Parity.....	21
USB.....	23
USB IBM SurePos.....	23
USB PC Keyboard.....	23
USB HID.....	23
USB Serial.....	24
Chapter 3 Input/Output Settings.....	25
Introduction.....	25
Startup Beeper.....	25
Trigger Click Beeper.....	25
Good Read and Error Read Indicators.....	26
Good Read Beeper.....	26

Good Read Beeper Volume.....	26
Good Read Beeper Frequency.....	27
Good Read Beeper Duration.....	27
Error Read Beeper Frequency.....	27
Good Read LED.....	28
Good Read Delay.....	29
Manual Trigger Mode.....	29
Mobile Phone Read Mode.....	30
Chapter 4 Data Editing.....	31
Introduction.....	31
Add Prefix or Suffix.....	32
Example.....	33
Add a Suffix to a Specific Symbology.....	33
To Add a Carriage Return Suffix to All Symbologies.....	35
Clear Prefix or Suffix.....	35
Prefix Selections.....	36
Suffix Selections.....	36
Function Code Transmit.....	37
Intermessage Delay.....	37
Chapter 5 Data Formatting.....	38
Introduction.....	38
Add a Data Format.....	39
Example.....	40
Add Specific Data Format.....	40
Other Programming Selections.....	42
Data Format Editor Commands.....	44
Data Format Configuration.....	44
Primary/Alternate Data Formats.....	45
Chapter 6 Symbologies.....	46
Introduction.....	46
All Symbologies.....	47
Message Length Description.....	47
Codabar.....	48
On/Off.....	48
Start/Stop Characters.....	48
Check Character.....	48

Concatenation.....	50
Message Length.....	51
Code 39.....	52
Code 39 On/Off.....	52
Start/ Stop Characters.....	52
Check Character.....	53
Message Length.....	53
Code 39 Append.....	55
Example.....	55
Code 32 Pharmaceutical (PARAF).....	56
FULL ASCII.....	57
Interleaved 2 of 5.....	58
On/Off.....	58
Check Digit.....	58
Message Length.....	60
NEC 2 of 5.....	61
On/Off.....	61
Check Digit.....	61
Message Length.....	63
Code 93.....	64
On/Off.....	64
Message Length.....	64
Straight 2 of 5 Industrial (three-bar start/stop).....	65
On/Off.....	65
Message Length.....	65
Straight 2 of 5 IATA (two-bar start/stop).....	66
On/Off.....	66
Message Length.....	66
Matrix 2 of 5.....	67
On/Off.....	67
Message Length.....	67
Code 11.....	68
On/Off.....	68
Check Digits Required.....	68
Message Length.....	69
Code 128.....	70
On/Off.....	70
ISBT 128 Concatenation.....	70

Message Length.....	71
GS1-128.....	72
On/Off.....	72
Message Length.....	72
Telepen.....	73
On/Off.....	73
Message Length.....	73
UPC-A.....	74
Check Digit.....	74
Number System.....	75
Addenda.....	75
Addenda Required.....	76
Addenda Separator.....	76
UPC-E0.....	77
On/Off.....	77
Expand.....	78
Addenda Required.....	78
Addenda Separator.....	78
Check Digit.....	79
Number System.....	80
Addenda.....	80
UPC-E1.....	81
EAN/JAN-13.....	81
On/Off.....	81
Check Digit.....	82
Addenda.....	82
Addenda Required.....	83
Addenda Separator.....	83
ISBN Translate.....	83
EAN/JAN-8.....	85
On/Off.....	85
Check Digit.....	85
Addenda.....	85
Addenda Required.....	86
Addenda Separator.....	86
MSI.....	88
On/Off.....	88
Check Characte.....	89

Message Length.....	89
GS1 DataBar Omnidirectional.....	91
On/Off.....	91
GS1 DataBar Limited.....	91
On/Off.....	91
GS1 DataBar Expanded.....	92
On/Off.....	92
Message Length.....	92
PDF417.....	93
On/Off.....	93
Message Length.....	93
QR Code.....	94
On/Off.....	94
Message Length.....	94
Data Matrix.....	95
On/Off.....	95
Message Length.....	95
Aztec Code.....	96
On/Off.....	96
Message Length.....	96
China Post (Hong Kong 2 of 5).....	97
On/Off.....	97
Message Length.....	97
Korea Post.....	98
On/Off.....	98
Message Length.....	98
Check Digit.....	98
Chapter 7 Utilities.....	100
Show Software Revision.....	100
Chapter 8 Common Problems and Solutions.....	101
Chapter 9 Maintenance and Customer Service.....	102
Maintenance.....	102
Customer Service.....	102
Reference Charts.....	103
Symbology Charts.....	103
Linear Symbologies.....	103

2D Symbologies.....	105
Postal Symbologies.....	106
ASCII Conversion Chart.....	107
Sample Symbols.....	111
Programming Charts.....	114

Foreword

Introduction

This manual provides instructions for starting and configuring the barcode scanner, as well as maintenance and customer support information.

Some content about the above models are not supported in this manual:

1. Chapter 2 Interface Type
2. Chapter 3 input and output settings : Good Read Delay
3. Chapter 5 Data Formatting
4. Chapter 6 Symbologies code 39- Full ASCII, UPC-E1

The barcode scanners are factory configured for common terminal and communication settings. If you need to change it, you can scan the barcode configuration code in this manual to modify it.

An asterisk (*) indicates the default configuration.

Chapter outline

- Chapter 1 Getting Started** Barcode scanner connection method
- Chapter 2 Interface Type** Describes the main types of interface types.
- Chapter 3 Input/Output Settings** Decoding success/failure LED and buzzer response.
- Chapter 4 Data Editing** Describe how to add a prefix/suffix
- Chapter 5 Data Formatting** Introduce the addition and editing of data formats
- Chapter 6 Symbologies** Introduce all the code systems and configurations supported by barcode scanners
- Chapter 7 Utilities** Provide software version display
- Chapter 8 Common problems and solutions** List common problems and solutions
- Chapter 9 maintenance and customer service** Introducing equipment maintenance and customer support information
- Reference Charts** Provide common code charts, etc.

Chapter 1 Connection and Basic Settings

Introduction

The barcode scanner supports three connection methods. Please follow the appropriate connection procedure to connect the barcode scanner.

Unpacking

To open the product packaging, perform the following steps:

- Remove the scanner and its accessories and inspect for damage during shipment.
- Make sure the items in the carton match your order.
- If there are any damaged or missing parts, please contact your supplier for after-sales service

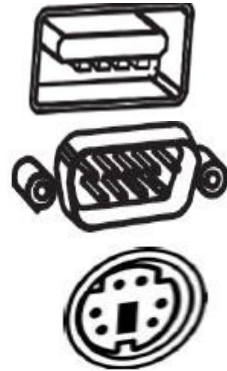
Device Connection

The interface above the host is shown below:

USB USB interface on the host

RS232 RS232 interface on the host

PS/ 2 PS/2 interface on the host



USB Connection

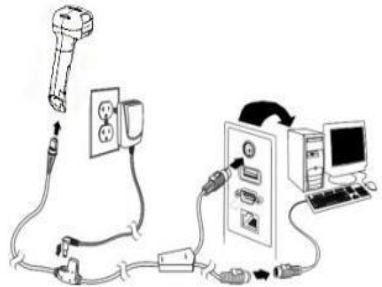
The barcode scanner can be connected to the USB port of your computer.

1. Connect the device interface (RJ45 connector) of the USB cable to the device.
2. Connect the host interface (USB interface) of the USB cable to the host.
3. The barcode scanner is humming.
4. Verify the operation by scanning the [Sample Symbols](#) at the end of this manual.



PS/2 Connection

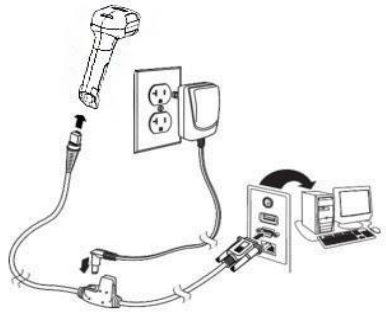
1. Connect the device interface end (RJ45 interface) of the PS/2 data cable to the scanner.
2. Connect the host interface end (PS/2 interface) of the PS/2 data cable to the host.
3. Connect the PS/2 cable to the power adapter if needed.
4. If necessary, connect the normal keyboard to the PS/2 data cable host interface (PS/2 interface).
5. The barcode scanner is humming.
6. Verify the operation by scanning the [Sample Symbols](#) at the end of this manual.



RS232 Connection

1. Connect the device interface (RJ45 connector) of the RS-232 cable to the scanner.
2. Connect the host interface (RS-232 interface) of the RS-232 cable to the host.
3. The barcode scanner is humming.
4. Verify the operation by scanning the [Sample Symbols](#) at the end of this manual.

The interface is configured for 115,200 baud, 8 data bits, no parity and 1 stopbit.



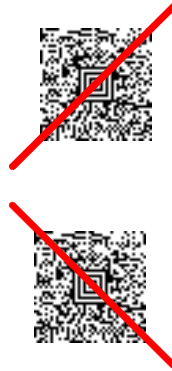
Barcode Reading

The barcode scanner has a line of sight/point that projects a red aiming beam that corresponds to the horizontal field of view of the barcode scanner. The line of sight/point should be at the center of the barcode, but it can be positioned in any direction to facilitate reading.

Linearbarcode



2D Matrixsymbol



The aiming beam or pattern is smaller when the barcode scanner is closer to the code and larger when it is farther from the code. Symbologies with smaller bars or elements (mil size) should be read closer to the unit. Symbologies with larger bars or elements (mil size) should be read farther from the unit. To read single or multiple symbols (on a page or on an object), hold the barcode scanner at an appropriate distance from the target, press the button, and center the aiming beam or pattern on the symbol. If the code being scanned is highly reflective (e.g., laminated), it may be necessary to tilt the code up 15° to 18° to prevent unwanted reflection.

Defaults Setting

User-defined Settings

Create user-defined settings according to your needs. Scan the “**Load User-defined Settings**” barcode first, scan the settings you need to customize, and then scan “**Save User-defined Settings**” to save the current settings to user-defined settings and overwrite the previously set users. Custom settings. User-defined settings will be saved and will not be lost unless the user-defined settings are remodified. Scanning the “**Load Factory Defaults**” barcode does not change the user-defined settings.



(800010.)

Load User-defined Settings



(800011.)

Save User-defined Settings

A series of user-defined settings have been set, and you want to change a setting by simply scanning the new settings to overwrite the old ones. For example, if you have saved the beep sound volume to low as user-defined and decided to set the beep sound volume to high, you only need to scan the “**Load User-Defined Settings**” barcode, then scan the beep sound volume to high barcode, and finally Scan the “**Save User Defined Settings**” barcode. The remaining user-defined settings will be retained, but the beep volume setting will be updated to high.

Factory Default Setting

If you want to apply user-defined settings to the barcode scanner, scan the “**Load Factory Defaults**” barcode below to reset the barcode scanner to user-defined settings. If there are no user-defined settings, the barcode scanner will be reset to the factory default settings.



(800006.)

Load Factory Defaults

Delete User-defined Settings

If you are not sure which user-defined settings are in the barcode scanner, or if you have changed some settings and want to restore the barcode scanner to the factory defaults, first scan the "**Delete User-defined Settings**" barcode and then scan "**Load Factory Defaults**" barcode. This will reset the barcode scanner to the factory default settings.



(800007.)

Delete User-defined Settings



(800006.)

Load Factory Defaults

Chapter 2 Interface Type

Introduction

This chapter introduces the USB and RS232 interface types and lists their related configurations.

RS232

Connect RS232 interface, you need to scan the "**RS232**" barcode, the serial port related configuration is: 115200 baud rate, 8 data bits, no parity, 1 stop bit, add carriage return and line feed by default.



(8810010.)
RS232

RS232 Baud Rate

Baud Rate sends the data from the scanner to the terminal at the specified rate. The host terminal must be set for the same baud rate as the scanner. Default =115200.



(8310030.)
300



(8310031.)
600



(8310032.)
1200



(8310033.)
2400



(8310034.)
4800



(8310035.)
9600



(8310036.)
19200



(8310037.)
38400



(8310038.)
57,600



(8310039.)
*115,200

RS232 Word Length: Data Bits, Stop Bits, and Parity

Data Bits You can choose to transfer 7,8-bit data bits, and you must set the terminal to the same data bit as the barcode scanner to communicate properly. Default = 8.

Stop Bits sets the stop bits at 1 or 2. Default = 1.

Parity provides a means of checking character bit patterns for validity.

Default = None.



(8310063.)

7 Data, 1 Stop, Parity Even



(8310060.)

7 Data, 1 Stop , Parity None



(8310066.)

7 Data, 1 Stop, Parity Odd



(8310064.)

7 Data, 2 Stop, Parity Even



(8310061.)

7 Data, 2 Stop Parity None



(8310067.)

7 Data, 2 Stop, Parity Odd



(8310065.)

8 Data, 1 Stop, Parity Even



(8310062.)

*** 8 Data, 1 Stop, Parity None**



(8310068.)

8 Data, 1 Stop, Parity Odd

USB

USB IBM SurePos

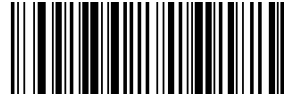
Scan one of the following codes to program the scanner for an IBM SurePos (USB handheld scanner) or IBM SurePos (USB tabletop scanner) interface.

Note: After scanning one of these codes, you must power cycle the cash register.



(881001128.)

**USB IBM SurePos
USB Handheld Scanner
Interface**



(881001129.)

**USB IBM SurePos
USB Tabletop Scanner
Interface**

USB PC Keyboard

Scan one of the following code to program the scanner for USB PC Keyboard .Scanning these code also adds a CR and LF.



(881001124.)

USB Keyboard (PC)

USB HID

Scan the following code to program the scanner for USB HID barcode scanners.



(881001131.)

USB HID BarCode Scanner

USB Serial

Scan the following code to program the scanner to emulate a regular RS232-based COM Port.



(881001130.)

USB Serial

Note: No extra configuration (e.g., baud rate) is necessary.

Chapter 3 Input/Output Settings

Introduction

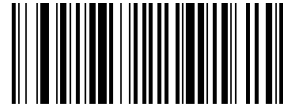
This chapter mainly introduces the configuration of the beep and LED of the barcode scanner when it is powered on, decoded, and triggered by the button.

Startup Beeper

The scanner can be programmed to beep when it's started up. Default = Startup Beeper On.



Startup Beeper Off



(8410131.)

* Startup Beeper On

Trigger Click Beeper

To hear an audible click every time the scanner button is pressed, scan the **Trigger Click Beeper On** barcode below. Default = Trigger Click Beeper Off.



(8410140.)

*Trigger Click Beeper Off



(8410141.)

Trigger Click Beeper On

Good Read and Error Read Indicators

Good Read Beeper

The beeper may be programmed On or Off in response to a good read.
Default = Good Read Beeper On.



(8410010.)

Good Read Beeper Off



(8410011.)

*** Good Read Beeper On**

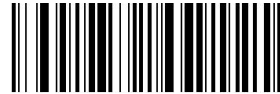
Good Read Beeper Volume

The beeper volume codes modify the volume of the beep the scanner emits on a good read. Default = High.



(8410091.)

Low



(8410092.)

Medium



(8410093.)

*** High**



(8410090.)

Off

Good Read Beeper Frequency

The beeper frequency codes modify the frequency of the beep the scanner emits on a good read. Default = Medium.



(8410061600.)
Low (1600 Hz)



(8410062400.)
* Medium (2400 Hz)



(8410064200.)
High (4200 Hz)

Good Read Beeper Duration

The beeper duration codes modify the length of the beep the scanner emits on a good read. Default = Normal .



(8410020.)
* Normal



(8410021.)
Short

Error Read Beeper Frequency

The beeper frequency codes modify the frequency of the sound the scanner emits when there is a bad read or error. Default = Razz.



(841007250.)
* Razz (250 Hz)



(8410073250.)
Medium (3250 Hz)



(8410074200.)
High (4200 Hz)

Good Read LED

The LED indicator can be programmed **On** or **Off** in response to a good read. Default = On.



(8410081.)
* Good Read LED On



(8410080.)
Good Read LED Off

Good Read Delay

This sets the minimum amount of time before the scanner can read another barcode. Default = * Short Delay (750 ms)



(8510060.)

No Delay



(851006750.)

* Short Delay (750 ms)



(8510061000.)

Medium Delay (1,000 ms)



(8510061500.)

Long Delay (1,500 ms)

Manual Trigger Mode

When in manual trigger mode, the scanner scans until a barcode is read, or until the button is released. Default = Manual Trigger-Normal.



(801030.)

* Manual Trigger – Normal

Mobile Phone Read Mode

When this mode is selected, your scanner is optimized to read barcodes from mobile phone or other LED displays. However, the speed of scanning printed barcodes may be slightly lower when this mode is enabled.



(801031.)

Hand Held Scanning - Mobile Phone



(801033.)

Presentation Scanning - Mobile Phone

Chapter 4 Data Editing

Introduction

This chapter describes how to add prefixes and suffixes.

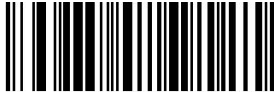
- Default prefix = None. Default suffix = None.
- A prefix or suffix may be added or cleared from one symbology or all symbologies.
- You can add any prefix or suffix from the ASCII Conversion Chart deplus Code I.D. and AIM I.D.
- Enter prefixes and suffixes in the order in which you want them to appear on the output.
- When setting up for specific symbologies (as opposed to all symbologies), the specific symbology ID value counts as an added prefix or suffix character.
- The maximum size of a prefix or suffix configuration is 200 characters, which includes header information.

Add Prefix or Suffix

- Step 1.** Scan the **Add Prefix** or **Add Suffix** symbol
- Step 2.** Determine the 2 digit Hex value from the [Symbology Chart](#) for the symbology to which you want to apply the prefix or suffix. For example, for Code 11, Code ID is “h” and Hex ID is “68”.
- Step 3.** Scan the 2 hex digits from the [Programming Chart](#) inside the back cover of this manual or scan **9, 9** for all symbologies.
- Step 4.** Determine the hex value from the [ASCII Conversion Chart](#) , for the prefix or suffix you wish to enter.
- Step 5.** Scan the 2 digit hex value from the [Programming Chart](#) inside the back cover of this manual.
- Step 6.** Repeat Steps 4 and 5 for every prefix or suffix character.
- Step 7.** To add the Code I.D., scan **5, C, 8, 0**.
To add AIM I.D., scan **5, C, 8, 1**.
To add a backslash (\), scan **5, C, 5, C**.
- Step 8.** Scan **Save** to exit and save, or scan **Discard** to exit without saving.



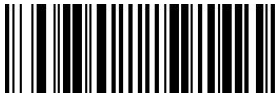
(889002.)
Add Prefix



(888002.)
Add Suffix



(800002.)
Save



(800000.)
Discard

Example

Add a Suffix to a specific symbology

To send a CR (carriage return) Suffix for code 128. only:

Step 1. Scan **Add Suffix**.

Step 2. Determine the 2 digit hex value from the [Symbology Charts](#) for code 128.

Step 3. Scan **6, 3** from the [Programming Chart](#) inside the back cover of this manual.

Step 4. Determine the hex value from the [ASCII Conversion Chart](#) , for the CR (carriage return).

Step 5. Scan **0, D** from the [Programming Chart](#) inside the back cover of this manual.

Step 6. Scan **Save**, or scan **Discard** to exit without saving.



(888002.)
Add Suffix



(S6S.)
6



(SAS.)
A



(S0S.)
0



(SDS.)
D



(80002.)

Save

To Add a Carriage Return Suffix to All Symbologies

Scan the following barcode if you wish to add a carriage return suffix to all symbologies at once. This action first clears all current suffixes, then programs a carriage return suffix for all symbologies.



Add CR Suffix All Symbologies

Clear Prefixes or Suffixes

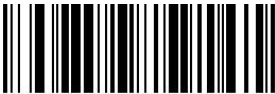
You can clear a single prefix or suffix, or clear all prefixes/suffixes for a symbology. If you have been entering prefixes and suffixes for single symbologies, you can use **Clear One Prefix (Suffix)** to delete a specific character from a symbology. When you **Clear All Prefixes (Suffixes)**, all the prefixes or suffixes for a symbology are deleted.

Step 1. Scan the **Clear One Prefix** or **Clear One Suffix** symbol.

Step 2. Determine the 2 digit Hex value from the [Symbology Charts](#) for the symbology from which you want to clear the prefix or suffix.

Step 3. Scan the 2 digit hex value from the [Programming Chart](#) inside the back cover of this manual or scan **9, 9** for all symbologies.

Step 4. Scan the **Save** symbol.



Clear One Prefix



Clear One Suffix



Save

Prefix Selections



(889002.)
Add Prefix

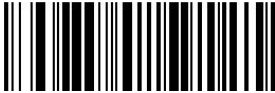


(889004.)
Clear One Prefix



(889003.)
Clear All Prefixes

Suffix Selections



(888002.)
Add Suffix



(888004.)
Clear One Suffix



(888003.)
Clear All Suffixes

Function Code Transmit

When this selection is enabled and function codes are contained within the scanned data, the scanner transmits the function code to the terminal.
Default = Enable.



(8870010.)

* Enable

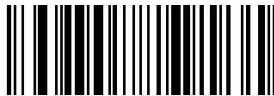
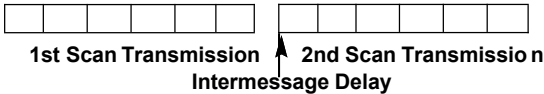


(8870011.)

Disable

Intermessage Delay

An intermessage delay of up to 5000 milliseconds (in 5ms increments) may be placed between each scan transmission. Scan the **Intermessage Delay** barcode below, then scan the number of 5ms delays, and the **Save** barcode using the [Programming Chart](#) inside the back cover of this manual.



(851004.)

Intermessage Delay

To remove this delay, scan the **Intermessage Delay** barcode, then set the number of delays to 0. Scan the **Save** barcode using the [Programming Chart](#) inside the back cover of this manual.

Chapter 5 Data Formatting

Introduction

You may use the data format editor to change the scanner's output. Foreexample, you can use the data format editor to insert characters at certain points in barcode data as it is scanned. The selections in the following pages are used only if you wish to alter the output. Default Data Format = None.

Normally, when you scan a barcode, it gets outputted automatically; however when you create a format, you must use a "send" command ([Data Format Editor Commands](#)) within the format program to output data.

The maximum size of a data format configuration is 2000 bytes, which includes header information.

If you have changed data format, and wish to clear all data formats and return to the factory defaults data format, scan the **Default Data Format** code below.



(886000.)

* Default Data Format

Add a Data Format

Step 1. Scan the **Enter Data Format** barcode .

Step 2. Select **Primary/Alternate Format**

Determine if this will be your primary data format, or one of 3 alternate formats. This allows you to save a total of 4 different data formats. To program your primary format, scan **0** using the [Programming Chart](#) inside the back cover of this manual. If you are programming an alternate format, scan **1**, **2**, or **3**, depending on which alternate format you are programming.

Step 3. Terminal Type

Refer to Terminal ID Table and locate the Terminal ID number for your PC. Scan three numeric barcodes on the inside back cover to program the scanner for your terminal ID (you must enter 3 digits). For example, scan **1 2 4** for an PC Keyboard.

Note: The wildcard for all terminal types is 099.

Step 4. Code I.D.

In the [Symbology Charts](#), find the symbology to which you want to apply the data format. Locate the Hex value for that symbology and scan the 2 digit hex value from the [Programming Chart](#) inside the back cover of this manual.

Step 5. Length

Specify what length (up to 9999 characters) of data will be acceptable for this symbology. Scan the four digit data length from the [Programming Chart](#) inside the back cover of this manual. (Note: 50 characters is entered as 0050. 9999 is a universal number, indicating all lengths.)

Step 6. Editor Commands

Refer to [Data Format Editor Commands](#). Scan the symbols that represent the command you want to enter.

Step 7. Scan **Save** to save your data format, or **Discard** to exit without saving your changes.

Step 8. Scan the selected data format **"Data Format 1"** barcode for the configuration to take effect.



(886002.)
Enter Data Format



(800002.)
Save



(800000.)
Discard

Example

Add Specific Data Format

- Step 1.** Scan the **Enter Data Format** barcode.
- Step 2.** To select an alternative data format 1, please scan the "1" barcode in the appendix to the manual.
- Step 3.** The terminal type is USB serial (Note: the terminal type is determined according to the actual situation) and the corresponding terminal type number is 130. Scan the three digital barcodes in the appendix of this manual. Scan the "1", "3", "0" barcodes to indicate USB serial.
- Step 4.** Select the code 128 to add the data format . In the [Symbology Charts](#), find the hexadecimal value of the code system is 6A, and scan the number corresponding to the 2-digit hexadecimal value in the [Programming Chart](#) of this manual.
- Step 5.** The maximum length allowed for the specified code 128 is 10, which is expressed as 0010. Scan the digital barcode "0", "0", "1", "0" of the four-digit data length from the [Programming Chart](#).
- Step 6..** From the [Data Format Editor Commands](#) select the command to be

input is E902. Scan the digital barcodes “E”, “9”, “0”, “2” from the [Programming Chart](#).

Step 7. Scan Save to “**save**” your data format, or “**Discard**” to exit without saving your changes.

Step 8. Scan the selected data format “**Data Format 1**” barcode for the configuration to take effect.



(886002.)
Enter Data Format



(S1S.)
1



(S3S.)
3



(S0S.)
0



(S6S.)
6



(SAS.)
A



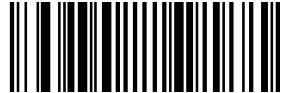
(SES.)
E



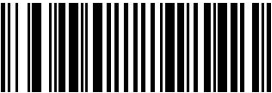
(S9S.)
9



(S2S.)
2



(800002.)
Save



(800000.)
Discard



(8850011.)
Data Format 1

Other Programming Selections

Clear One Data Format

This deletes one data format for one symbology. If you are clearing the primary format, scan **0** from the [Programming Chart](#) inside the back cover of this manual. If you are clearing an alternate format, scan **1**, **2**, or **3**, depending on the format you are clearing. Scan the Terminal Type and Code I.D. , and the barcode data length for the specific data format that you want to delete. All other formats remain

unaffected.

Clear all Data Formats

This clears all data formats.

Save to exit and save your data format changes.

Discard to exit without saving any data format changes.



(886004.)

Clear One Data Format



(886003.)

Clear All Data Formats



(800002.)

Save



(800000.)

Discard

Terminal ID Table

<u>Terminal</u>	<u>Model(s)</u>	<u>Terminal ID</u>
IBM	PC/AT and compatibles	003
	USB SurePOS Handheld Scanner	128
	USB SurePOS Tabletop Scanner	129
RS232	True	000
	TTL	000
USB	PC Keyboard	124
	Mac Keyboard	125
	Japanese Keyboard (PC)	134
	HID POS	131
	Serial	130

Data Format Editor Commands

Send Commands

Send all characters

- F1** Command format=F1xx(xx: hexadecimal of the character to be inserted)
 Outputs all characters to the right of the cursor and then outputs the character xx.
 Refer to the [ASCII Conversion Chart](#) for decimal, hex and character codes.

Send a number of characters

- F2** Command format=F2nxx(nn:00-99, the length of the character to be sent; xx: the hexadecimal value of the character to be inserted)
 Outputs nn characters to the right of the cursor and then outputs the character xx.
 Refer to the [ASCII Conversion Chart](#) for decimal, hex and character codes.

Send all characters before the last few characters

- E9** Command format = E9nn (nn: 00-99, the length of the last character not output)
 Outputs all characters from the right side of the cursor to the front of the last nn characters (left side). The cursor moves to the right of the last transmitted character (that is, to the left of the last nn characters).
 Refer to the [ASCII Conversion Chart](#) for decimal, hex and character codes.

Insert a character multiple times

- F4** Command format=F4xnn(xx: hexadecimal value of the character to be inserted; nn:00-99, times of characters output)
 The character xx is output nn times, and the cursor position is unchanged.
 Refer to the [ASCII Conversion Chart](#) for decimal, hex and character codes.

Data format configuration

Scan the "**Data Format Off**" barcode. The barcode data is output according to the data content without adding data format, but includes the prefix and suffix.



(8860010.)

Data Formatter Off

Primary/Alternate Data Formats

You can save up to four data formats, and switch between these formats. Your primary data format is saved under **0**. Other three formats are saved under **1**, **2**, and **3**. To set your device to use one of these formats, scan one of the barcodes below.



(8850010.)

Primary Data Format



(8850011.)

Data Format 1



(8850012.)

Data Format 2



(8850013.)

Data Format 3

Chapter 6 Symbologies

Introduction

Each type of barcode has its own unique properties. The barcode scanner can be adjusted to accommodate these property changes through the configuration code in this chapter. The fewer the barcode types, the faster the barcode scanner can read. You can disable the barcode scanner to read the barcode types that will not be used to improve the performance of the barcode scanner.

This programming section contains the following menu selections.

- [AllSymbologies](#)
- [Codabar](#)
- [Code39](#)
- [Interleaved 2 of5](#)
- [NEC 2 of5](#)
- [Code93](#)
- [Straight 2 of 5 Industrial \(three-bar start/stop\)](#)
- [Straight 2 of 5 IATA \(two-barstart/stop\)](#)
- [Matrix 2 of5](#)
- [Code11](#)
- [Code128](#)
- [GS1-128](#)
- [Telepen](#)
- [UPC-A](#)
- [UPC-E0](#)
- [UPC-E1](#)
- [EAN/JAN-13](#)
- [EAN/JAN-8](#)
- [MSI](#)
- [GS1 DataBar Omnidirectional](#)
- [GS1DataBarLimited](#)
- [GS1DataBarExpanded](#)
- [PDF417](#)
- [QRCode](#)
- [Data Matrix](#)
- [AztecCode](#)
- [China Post \(Hong Kong 2of5\)](#)
- [Korea Post](#)

All Symbologies

If you want to decode all the symbologies allowable for your scanner, scan the **All Symbologies On** barcode. If on the other hand, you want to decode only a particular symbology, scan **All Symbologies Off** followed by the **On** barcode for that particular symbology.



(9990011.)

All Symbologies On



(9990010.)

All Symbologies Off

Note: When **All Symbologies On** is scanned, 2D Postal Codes are not enabled. 2D Postal Codes must be enabled separately.

Message Length Description

You are able to set the valid reading length of some of the barcode symbologies. If the data length of the scanned barcode doesn't match the valid reading length, the scanner will issue an error tone. You may wish to set the same value for minimum and maximum length to force the scanner to read fixed length barcode data. This helps reduce the chances of a misread.

EXAMPLE: Decode only those barcodes with a count of 6-10 characters.

Min. length = 06 Max. length = 10

Step 1. Select the barcode symbology to set the maximum reading length or the minimum reading length, scan the **Minimum Message Length** barcode in its catalog, and scan the number "6" and "Save" barcodes from the [Programming Chart](#).

Step 2. Scan the **Maximum Message Length** barcode and scan the numbers 1, 0 barcode and **Save** barcode from the [Programming Chart](#). The above process sets the selected barcode symbology small reading length to 6 and the maximum reading length to 10

EXAMPLE: Decode only those barcodes with a count of 13 characters.

Min. length = 13 Max. length = 13

Codabar

<Default All Codabar Settings>



(900000.)

Default All Codabar Settings

On/Off



(9000031.)

* On



(9000030.)

Off

Start/Stop Characters

Start/Stop characters identify the leading and trailing ends of the barcode. You may either transmit, or not transmit Start/Stop characters.
Default = Don't Transmit.



(9000061.)

Transmit



(9000060.)

* Don't Transmit

Check Character

No Check Character indicates that the scanner reads and transmits barcode data with or without a check character.

When Check Character is set to **Validate and Transmit**, the scanner will only read Codabar barcodes printed with a check character, and will transmit this character at the end of the scanned data.

When Check Character is set to **Validate, but Don't Transmit**, the unit will only read Codabar barcodes printed with a check character, but will not transmit the check character with the scanned data. Default = No Check Character.



(9000010.)

*** No Check Character**



(9000011.)

Validate but Don't Transmit



(9000012.)

Validate and Transmit

Concatenation

Codabar supports symbol concatenation. When you enable concatenation, the scanner looks for a Codabar symbol having a “D” start character, adjacent to a symbol having a “D” stop character. In this case the two messages are concatenated into one with the “D” characters omitted.



Select Require to prevent the scanner from decoding a single “D” Codabar symbol without its companion. This selection has no effect on Codabar symbols without Stop/Start D characters.



(9000021.)

On



(9000020.)

* Off



(9000022.)

Require

Message Length

Scan the barcodes below to change the message length. Refer to [Message Length Description](#) for additional information. Minimum and Maximum lengths= 2-60. Minimum Default = 4, Maximum Default = 60.



(900005.)

Minimum Message Length



(900004.)

Maximum Message Length

Code 39

< Default All Code 39 Settings >



(901000.)

Default All Code 39 Settings

Code 39 On/Off



(9010011.)

* On



(9010010.)

Off

Start/ Stop Characters

Start/Stop characters identify the leading and trailing ends of the barcode. You may either transmit, or not transmit Start/Stop characters. Default = Don't Transmit.



(9010091.)

Transmit



(9010090.)

* Don't Transmit

Check Character

No Check Character indicates that the scanner reads and transmits barcode data with or without a check character.

When Check Character is set to **Validate, but Don't Transmit**, the unit only reads Code 39 barcodes printed with a check character, but will not transmit the check character with the scanned data.

When Check Character is set to **Validate and Transmit**, the scanner only reads Code 39 barcodes printed with a check character, and will transmit this character at the end of the scanned data. Default = No Check Character.



(9010040.)

* No Check Character



(9010041.)

Validate, but Don't Transmit

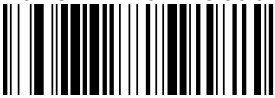


(9010042.)

Validate and Transmit

Message Length

Scan the barcodes below to change the message length. Refer to [Message Length Description](#) for additional information. Minimum and Maximum lengths = 0-48. Minimum Default = 0, Maximum Default = 48.



(901008.)

Minimum Message Length



(901007.)

Maximum Message Length

Code 39 Append

This function allows the scanner to append the data from several Code 39 barcodes together before transmitting them to the host computer. When the scanner encounters a Code 39 barcode with the append trigger character(s), it buffers Code 39 barcodes until it reads a Code 39 barcode that does not have the append trigger. The data is then transmitted in the order in which the barcodes were read (FIFO). Default = Off.



(9010021.)

On



(9010020.)

* Off

Example

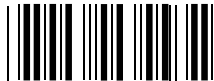
After scanning **on** barcode, scan the three bar codes below in order. The barcode scanner does not output any data until the last bar code is scanned. After scanning the **ESS** barcode, the SUCCESS word is output correctly.



SU



CC



ESS

Code 32 Pharmaceutical (PARAF)

Code 32 Pharmaceutical is a form of the Code 39 symbology used by Italian pharmacies. This symbology is also known as PARAF.



(9010051.)

On



(9010050.)

* Off

FULL ASCII

If Full ASCII Code 39 decoding is enabled, certain character pairs within the barcode symbol will be interpreted as a single character. For example: \$V will be decoded as the ASCII character SYN, and /C will be decoded as the ASCII character #. Default = Off.

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

Character pairs /M and /N decode as a minus sign and period respectively.
Character pairs /P through /Y decode as 0 through 9.



(9010031.)

FULL ASCII On



(9010030.)

* FULL ASCII Off

Interleaved 2 of 5

< Default All Interleaved 2 of 5 Settings >



(902000.)

Default All Interleaved 2 of 5 Settings

On/Off



(9020021.)

* On



(9020020.)

Off

Check Digit

No Check Digit indicates that the scanner reads and transmits barcode data with or without a check digit.

When Check Digit is set to **Validate, but Don't Transmit**, the unit only reads Interleaved 2 of 5 barcodes printed with a check digit, but will not transmit the check digit with the scanned data.

When Check Digit is set to **Validate and Transmit**, the scanner only reads Interleaved 2 of 5 barcodes printed with a check digit, and will transmit this digit at the end of the scanned data. Default = No Check Digit.



(9020010.)

* No Check Digit



(9020011.)

Validate, but Don't Transmit



(9020012.)

Validate and Transmit

Message Length

Scan the barcodes below to change the message length. Refer to [Message Length Description](#) for additional information. Minimum and Maximum lengths = 2-80. Minimum Default = 4, Maximum Default = 80.



(902004.)

Minimum Message Length



(902003.)

Maximum Message Length

NEC 2 of 5

< Default All NEC 2 of 5 Settings >



(903000.)

Default All NEC 2 of 5 Settings

On/Off



(9030011.)

* On



(9030010.)

Off

Check Digit

No Check Digit indicates that the scanner reads and transmits barcode data with or without a check digit.

When Check Digit is set to **Validate, but Don't Transmit**, the unit only reads NEC 2 of 5 barcodes printed with a check digit, but will not transmit the check digit with the scanned data.

When Check Digit is set to **Validate and Transmit**, the scanner only reads NEC 2 of 5 barcodes printed with a check digit, and will transmit this digit at the end of the scanned data. Default = No Check Digit



(9030020.)

* No Check Digit



(9030021.)

Validate, but Don't Transmit



(9030022.)

Validate and Transmit

Message Length

Scan the barcodes below to change the message length. Refer to [Message Length Description](#) for additional information. Minimum and Maximum lengths = 2-80. Minimum Default = 4, Maximum Default = 80.



(903004.)

Minimum Message Length



(903003.)

Maximum Message Length

Code 93

< Default All Code 93 Settings >



(904000.)

Default All Code 93 Settings

On/Off



(9040021.)

* On



(9040020.)

Off

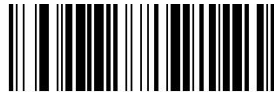
Message Length

Scan the barcodes below to change the message length. Refer to [Message Length Description](#) for additional information. Minimum and Maximum lengths = 0-80. Minimum Default = 0, Maximum Default = 80.



(904004.)

Minimum Message Length



(904003.)

Maximum Message Length

Straight 2 of 5 Industrial (three-bar start/stop)

<Default All Straight 2 of 5 Industrial Settings>



(905000.)

Default All Straight 2 of 5 Industrial (three-bar start/stop)Settings

On/Off



(9050011.)

On



(9050010.)

* Off

Message Length

Scan the barcodes below to change the message length. Refer to [Message Length Description](#) for additional information. Minimum and Maximum lengths = 1-48. Minimum Default = 4, Maximum Default = 48.



(905003.)

Minimum Message Length



(905002.)

Maximum Message Length

Straight 2 of 5 IATA (two-bar start/stop)

<Default All Straight 2 of 5 IATA Settings>



(906000.)

Default All Straight 2 of 5 IATA (two-bar start/stop)Settings

On/Off



(9060011.)

On



(9060010.)

*Off

Message Length

Scan the barcodes below to change the message length. Refer to [Message Length Description](#) for additional information. Minimum and Maximum lengths= 1-48. Minimum Default = 4, Maximum Default = 48.



(906003.)

Minimum Message Length



(906002.)

Maximum Message Length

Matrix 2 of 5

<Default All Matrix 2 of 5 Settings>



(907000.)

Default All Matrix 2 of 5 Settings

On/Off



(9070011.)

On



(9070010.)

* Off

Message Length

Scan the barcodes below to change the message length. Refer to [Message Length Description](#) for additional information. Minimum and Maximum lengths = 1-80. Minimum Default = 4, Maximum Default = 80.



(907003.)

Minimum Message Length



(907002.)

Maximum Message Length

Code 11

<Default All Settings>



(908000.)

Default All Code 11 Settings

On/Off



(9080021.)

On



(9080020.)

* Off

Check Digits Required

This option sets whether 1 or 2 check digits are required with Code 11 barcodes.

Default = Two Check Digits.



(3110280.)

One Check Digit



(3110281.)

* Two Check Digits

Message Length

Scan the barcodes below to change the message length. Refer to [Message Length Description](#) for additional information. Minimum and Maximum lengths = 1-80. Minimum Default = 4, Maximum Default = 80.



(908004.)

Minimum Message Length



(908003.)

Maximum Message Length

Code 128

<Default All Code 128 Settings>



(909000.)

Default All Code 128 Settings

On/Off



(9090011.)

* On



(9090010.)

Off

ISBT 128 Concatenation



(9020051.)

ISBT 128 On



(9020050.)

*ISBT 128 Off

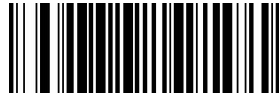
Message Length

Scan the barcodes below to change the message length. Refer to [Message Length Description](#) for additional information. Minimum and Maximum lengths = 0-80. Minimum Default = 0, Maximum Default = 80.



(909003.)

Minimum Message Length



(909002.)

Maximum Message Length

GS1-128

<Default All GS1-128 Settings>



(910000.)

Default All GS1-128 Settings

On/Off



(9100011.)

* On



(9100010.)

Off

Message Length

Scan the barcodes below to change the message length. Refer to [Message Length Description](#) for additional information. Minimum and Maximum lengths = 1-80. Minimum Default = 1, Maximum Default = 80.



(910003.)

Minimum Message Length



(910002.)

Maximum Message Length

Telepen

<Default All Telepen Settings>



(911000.)

Default All Telepen Settings

On/Off



(9110011.)

On



(9110010.)

* Off

Message Length

Scan the barcodes below to change the message length. Refer to [Message Length Description](#) for additional information. Minimum and Maximum lengths = 1-60. Minimum Default = 1, Maximum Default = 60.



(911003.)

Minimum Message Length



(911002.)

Maximum Message Length

UPC-A

<Default All UPC-A Settings>



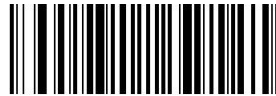
(912000.)

Default All UPC-A Settings



(9120031.)

* On



(9120030.)

Off

Note: When UPC-A **Off** is scanned, UPC-A barcodes are transmitted as EAN- 13.

Check Digit

This selection allows you to specify whether the check digit should be transmitted at the end of the scanned data or not. Default = On.



(9120041.)

* On



(9120040.)

Off

Number System

The numeric system digit of a U.P.C. symbol is normally transmitted at the beginning of the scanned data, but the unit can be programmed so it will not transmit it. Default = On.



(9120051.)

* On



(9120050.)

Off

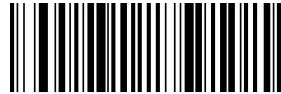
Addenda

This selection adds 2 or 5 digits to the end of all scanned UPC-A data. Default = Off for both 2 Digit and 5 Digit Addenda.



(9120011.)

2 Digit Addenda On



(9120010.)

* 2 Digit Addenda Off



(9120021.)

5 Digit Addenda On



(9120020.)

* 5 Digit Addenda Off

Addenda Required

When **Required** is scanned, the scanner will only read UPC-A barcodes that have addenda. You must then turn on a 2 or 5 digit addenda. Default = NotRequired.



(9120061.)

Required

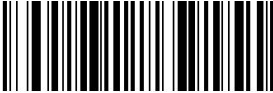


(9120060.)

*** Not Required**

Addenda Separator

When this feature is on, there is a space between the data from the barcode and the data from the addenda. When turned off, there is no space. Default = On.



(9120071.)

*** On**



(9120070.)

Off

UPC-E0

<Default All UPC-E Settings>



(914000.)

Default All UPC-E0 Settings

On/Off

Most U.P.C. barcodes lead with the 0 number system. To read these codes, use the ***UPC-E0 On** selection. If you need to read codes that lead with the 1 number system, use [UPC-E1](#). Default = On.



(9140101.)

* UPC-E0 On



(9140100.)

UPC-E0 Off

Expand

UPC-E Expand expands the UPC-E code to the 12 digit, UPC-A format.
Default = Off.



(9140021.)
On



(9140020.)
* Off

Addenda Required

When **Required** is scanned, the scanner will only read UPC-E barcodes that have addenda. Default = Not Required.



(9140031.)
Required



(9140030.)
* Not Required

Addenda Separator

When this feature is On, there is a space between the data from the barcode and the data from the addenda. When turned Off, there is no space. Default = On



(9140041.)
* On



(9140040.)
Off

Check Digit

Check Digit specifies whether the check digit should be transmitted at the end of the scanned data or not. Default = On.



(9140051.)
***On**



(9140050.)
Off

Number System

The numeric system digit of a U.P.C. symbol is normally transmitted at the beginning of the scanned data, but the unit can be programmed so it will not transmit it. To prevent transmission, scan **Off**. Default = On.



(9140061.)

* On



(9140060.)

Off

Addenda

This selection adds 2 or 5 digits to the end of all scanned UPC-E data. Default = Off for both 2 Digit and 5 Digit Addenda.



(9140071.)

2 Digit Addenda On



(9140070.)

* 2 Digit Addenda Off



(9140081.)

5 Digit Addenda On



(9140080.)

* 5 Digit Addenda Off

UPC-E1

Most U.P.C. barcodes lead with the 0 number system. For these codes, use UPC-E0. If you need to read codes that lead with the 1 number system, use the **UPC-E1 On** selection. Default = Off.



(9140091.)
UPC-E1 On



(9140090.)
* UPC-E1 Off

EAN/JAN-13

<Default All EAN/JAN Settings>

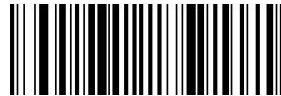


(915000.)
Default All EAN/JAN-13 Settings

On/Off



(9150011.)
*On



(9150010.)
Off

Note: If you want to convert UPC-A barcodes to EAN-13 format, scan the **UPC-A Off** barcode.

Check Digit

This selection allows you to specify whether the check digit should be transmitted at the end of the scanned data or not. Default = On.



(9150021.)

* On



(9150020.)

Off

Addenda

This selection adds 2 or 5 digits to the end of all scanned EAN/JAN-13 data. Default = Off for both 2 Digit and 5 Digit Addenda.



(9150031.)

2 Digit Addenda On



(9150030.)

* 2 Digit Addenda Off



(9150041.)

5 Digit Addenda On



(9150040.)

* 5 Digit Addenda Off

Addenda Required

When **Required** is scanned, the scanner will only read EAN/JAN-13 barcodes that have addenda. Default = Not Required.



(9150051.)

Required



(9150050.)

*** Not Required**

Addenda Separator

When this feature is **On**, there is a space between the data from the barcode and the data from the addenda. When turned **Off**, there is no space. Default = On.



(9150061.)

*** On**



(9150060.)

Off

ISBN Translate

When **On** is scanned, EAN-13 Bookland symbols are translated into their equivalent ISBN number format. Default = Off.



(9150071.)

On



(9150070.)

*** Off**

EAN/JAN-8

<Default All EAN/JAN-8 Settings>



(916000.)

Default All EAN/JAN-8 Settings

On/Off



(9160011.)

* On



(9160010.)

Off

Check Digit

This selection allows you to specify whether the check digit should be transmitted at the end of the scanned data or not. Default = On.



(9160021.)

* On



(9160020.)

Off

Addenda

This selection adds 2 or 5 digits to the end of all scanned EAN/JAN-8 data. Default = Off for both 2 Digit and 5 Digit *Addenda*.



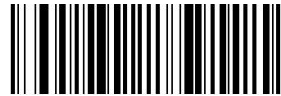
(9160031.)
2 Digit Addenda On



(9160030.)
* 2 Digit Addenda Off



(9160041.)
5 Digit Addenda On



(9160040.)
* 5 Digit Addenda Off

Addenda Required

When **Required** is scanned, the scanner will only read EAN/JAN-8 barcodes that have addenda. Default = Not Required.



(9160051.)
Required



(9160050.)
* Not Required

Addenda Separator

When this feature is **On**, there is a space between the data from the barcode and the data from the addenda. When turned **Off**, there is no space. Default = On.



(9160061.)

* On



(9160060.)

Off

MSI

<Default All MSI Settings>



(917000.)

Default All MSI Settings

On/Off



(9170011.)

On



(9170010.)

* Off

Check Characte

MSI barcodes use different types of check characters. You can configure the barcode scanner to read the MSI barcode using the check character. Default = **Validate MOD 10, but Don't Transmit**

When Check Character is set to **Validate MOD 10 and Transmit**, the scanner will only read MSI barcodes printed with the specified type check character(s), and will transmit the character(s) at the end of the scanned data.

When Check Character is set to **Validate MOD 10, but Don't Transmit**, the unit will only read MSI barcodes printed with the specified type check character(s), but will not transmit the check character(s) with the scanned data.



(9170020.)

* Validate MOD 10, but Don't Transmit



(9170021.)

Validate MOD 10 and Transmit



(9170026.)

Disable MSI Check Characters

Message Length

Scan the barcodes below to change the message length. Refer to [Message Length Description](#) for additional information. Minimum and Maximum lengths = 4-48. Minimum Default = 4, Maximum Default = 48.



(917004.)

Minimum Message Length



(917003.)

Maximum Message Length

GS1 DataBar Omnidirectional

< Default All GS1 DataBar Omnidirectional Settings >



(918000.)

Default All GS1 DataBar Omnidirectional Settings

On/Off



(9180011.)

* On



(9180010.)

Off

GS1 DataBar Limited

< Default All GS1 DataBar Limited Settings >



(919000.)

Default All GS1 DataBar Limited Settings

On/Off



(9190011.)

* On



(9190010.)

Off

GS1 DataBar Expanded

< Default All GS1 DataBar Expanded Settings >



(920000.)

Default All GS1 DataBar Expanded Settings

On/Off



(9200011.)

* On



(9200010.)

Off

Message Length

Scan the barcodes below to change the message length. Refer to [Message Length Description](#) for additional information. Minimum and Maximum lengths = 4-74. Minimum Default = 4, Maximum Default = 74.



(920003.)

Minimum Message Length



(920002.)

Maximum Message Length

PDF417

< Default All PDF417 Settings >



(924000.)

Default All PD417 Settings

On/Off



(9240011.)

* On



(9240010.)

Off

Message Length

Scan the barcodes below to change the message length. Refer to [Message Length Description](#) for additional information. Minimum and Maximum lengths = 1-2750. Minimum Default = 1, Maximum Default = 2750.



(924003.)

Minimum Message Length



(924002.)

Maximum Message Length

QR Code

< Default All QR Code Settings >



(928000.)

Default All QR Code Settings

On/Off

This selection applies to both QR Code and Micro QR Code.



(9280011.)

* On



(9280010.)

Off

Message Length

Scan the barcodes below to change the message length. Refer to [Message Length Description](#) for additional information. Minimum and Maximum lengths = 1-7089. Minimum Default = 1, Maximum Default = 7089.



(928003.)

Minimum Message Length



(928002.)

Maximum Message Length

Data Matrix

< Default All Data Matrix Settings >



(930000.)

Default All Data Matrix Settings

On/Off



(9300011.)

* On



(9300010.)

Off

Message Length

Scan the barcodes below to change the message length. Refer to [Message Length Description](#) for additional information. Minimum and Maximum lengths = 1-3116. Minimum Default = 1, Maximum Default = 3116.



(930002.)

Minimum Message Length



(930003.)

Maximum Message Length

Aztec Code

< Default All Aztec Code Settings >



(931000.)

Default All Aztec Code Settings

On/Off



(9310011.)

* On



(9310010.)

off

Message Length

Scan the barcodes below to change the message length. Refer to [Message Length Description](#) for additional information. Minimum and Maximum lengths= 1-3832. Minimum Default = 1, Maximum Default = 3832.



(931003.)

Minimum Message Length



(931002.)

Maximum Message Length

China Post (Hong Kong 2 of 5)

<Default All China Post (Hong Kong 2 of 5) Settings>



(936000.)

Default All China Post (Hong Kong 2 of 5)Settings

On/Off



(9360011.)

On



(9360010.)

* Off

Message Length

Scan the barcodes below to change the message length. Refer to [Message Length Description](#) for additional information. Minimum and Maximum lengths = 2-80. Minimum Default = 4, Maximum Default = 80.



(936003.)

Minimum Message Length



(936002.)

Maximum Message Length

Korea Post

<Default All Korea Post Settings>



(937000.)

Default All Korea Post Settings

On/Off



(9370011.)

On



(9370010.)

* Off

Message Length

Scan the barcodes below to change the message length. Refer to [Message Length Description](#) for additional information. Minimum and Maximum lengths = 2-80. Minimum Default = 4, Maximum Default = 48.



(937003.)

Minimum Message Length



(937002.)

Maximum Message Length

Check Digit

This selection allows you to specify whether the check digit should be transmitted

at the end of the scanned data. Default = Don't Transmit.



(9370041.)

On



(9370040.)

* Off

Chapter 7 Utilities

Show Software Revision

Scan the barcode below to output the current software revision, unit serial number, and other product information.



(809005.)

Show Revision

Chapter 8 Common Problems And Solutions

Problem: The barcode scanner does not work.

possible reason :

1. The barcode scanner is not powered, check the power of the equipment.
2. If you are using an incorrect cable, use the cable that was originally configured.
3. The cable interface is loose and reconnected.
4. Check if the button is normal.

Problem: The barcode scanner scans normally, but the data output is incorrect.

possible reason :

1. The cable interface is loose and reconnected.
2. Barcode scanner may not be configured to display the correct terminal.
3. If you are using a USB to RS232 cable, if the data output is garbled, it may be that the data reception speed of the device does not match the output speed of the barcode scanner.

Problem: Barcode scanner does not decode some barcodes.

possible reason :

1. The barcode is defective. Try to scan the same type of test barcode to see if it can be interpreted.
2. The distance between the barcode scanner and the barcode is not suitable. Please move closer or move away the barcode.
3. For barcodes with poor print quality, the preferred reading distance is 5-10 cm.
4. Confirm that your device is enabled for this barcode type.

Problem: Other conditions cannot be decoded.

possible reason :

1. Turn off the device power; properly connect the device to the barcode scanner; turn on the device and test it.
2. If the problem still cannot be solved, please contact the dealer or the manufacturer.

Chapter 9 Maintenance And Customer Service

Maintenance

1. Stains and dust on the scanning window can sometimes affect the normal operation of the barcode scanner. When cleaning, use a good quality tissue to wipe gently, or use a soft cloth to clean.
If you use a paper with poor paper quality for a long time, it will damage the surface finish of the window and affect the reading effect of the barcode scanner.
2. The outer shell of the barcode scanner can be wiped with a soft, clean cloth. If necessary, add a small amount of detergent to the water, wipe it with a soft cloth and rub it.
3. Do not spray any liquid on the window.
4. The scanning window must be kept clean and the supplier is not liable for damage caused by improper maintenance.

Reference Charts

Symbology Charts

Linear Symbologies

Symbology	AIM		ID	Hex
	ID	Possible Modifiers (m)		
All Symbologies				99
Codabar	]Fm	0-1	a	61
Code 11	]H3		h	68
Code 128	]Cm	0, 1, 2, 4	j	6A
Code 32 Pharmaceutical (PARAF)	]X0		<	3C
Code 39 (supports Full ASCII mode)	]Am	0, 1, 3, 4, 5,7	b	62
TCIF Linked Code 39 (TLC39)	]L2		T	54
Code 93 and 93i	]Gm	0-9, A-Z, a-m	i	69
EAN	]Em	0, 1, 3, 4	d	64
EAN-13 (including Bookland EAN)	]E0		d	64
EAN-13 with Add-On	]E3		d	64
EAN-13 with Extended Coupon Code	]E3		d	64
EAN-8	]E4		D	44
EAN-8 with Add-On	]E3		D	44

Symbology	AIM			
	ID	Possible Modifiers (m)	ID	Hex
GS1				
GS1 DataBar	]em	0	y	79
GS1 DataBar Limited	]em		{	7B
GS1 DataBar Expanded	]em		}	7D
GS1-128	]C1		l	49
2 of 5				
China Post (Hong Kong 2 of 5)	]X0		Q	51
Interleaved 2 of 5	]lm	0, 1, 3	e	65
Matrix 2 of 5	]X0		m	6D
NEC 2 of 5	]X0		Y	59
Straight 2 of 5 IATA	]Rm	0, 1, 3	f	66
Straight 2 of 5 Industrial	]S0		f	66
MSI	]Mm	0, 1	g	67
Telepen	]Bm		t	74
UPC		0, 1, 2, 3, 8, 9, A, B, C		
UPC-A	]E0		c	63
UPC-A with Add-On	]E3		c	63
UPC-A with Extended Coupon Code	]E3		c	63
UPC-E	]E0		E	45
UPC-E with Add-On	]E3		E	45
UPC-E1	]X0		E	45

2D Symbologies

Symbology	AIM		ID	Hex
	ID	Possible Modifiers (m)		
All Symbologies				99
Aztec Code	]zm	0-9, A-C	z	7A
Chinese Sensible Code (Han Xin Code)	]X0		H	48
Codablock A	]O6	0, 1, 4, 5, 6	V	56
Codablock F	]Om	0, 1, 4, 5, 6	q	71
Code 49	]Tm	0, 1, 2, 4	l	6C
Data Matrix	]dm	0-6	w	77
GS1	]em	0-3	y	79
GS1 Composite	]em	0-3	y	79
GS1 DataBar Omnidirectional	]em	0-3	y	79
MaxiCode	]Um	0-3	x	78
PDF417	]Lm	0-2	r	72
MicroPDF417	]Lm	0-5	R	52
QR Code	]Qm	0-6	s	73
Micro QR Code	]Qm		s	73

Postal Symbologies

Symbology	AIM		ID	Hex
	ID	Possible Modifiers (m)		
<i>All Symbologies</i>				99
Australian Post	]X0		A	41
British Post	]X0		B	42
Canadian Post	]X0		C	43

Symbology	AIM		ID	Hex
	ID	Possible Modifiers (m)		
China Post	]X0		Q	51
InfoMail	]X0		,	2c
Intelligent Mail Barcode	]X0		M	4D
Japanese Post	]X0		J	4A
KIX (Netherlands) Post	]X0		K	4B
Korea Post	]X0		?	3F
Planet Code	]X0		L	4C
Postal-4i	]X0		N	4E
Postnet	]X0		P	50

ASCII Conversion Chart

Hex	Dec	Char
00	0	NUL (Null char.)
01	1	SOH (Start of Header)
02	2	STX (Start of Text)
03	3	ETX (End of Text)
04	4	EOT (End of Transmission)
05	5	ENQ (Enquiry)
06	6	ACK (Acknowledgment)
07	7	BEL (Bell)
08	8	BS (Backspace)
09	9	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)

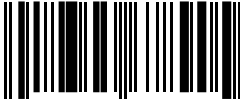
24	36	\$ (Dollar Sign)
25	37	% (Percent)
26	38	& (Ampersand)
27	39	` (Single Quote)
28	40	((Right / Closing Parenthesis)
29	41	) (Right / Closing Parenthesis)
2a	42	* (Asterisk)
2b	43	+ (Plus)
2c	44	, (Comma)
2d	45	- (Minus / Dash)
2e	46	. (Dot)
2f	47	/ (Forward Slash)
30	48	0
31	49	1
32	50	2
33	51	3
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)

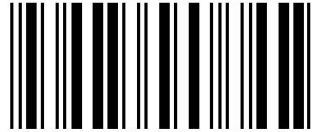
Sample Symbols

UPC-A



01234567890

Interleaved 2 of 5



12345678

Code 128



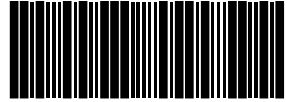
12345678

Code 93



123456-9\$

Straight 2 of 5 Industrial



123456

Matrix 2 of 5



6543210

GS1DataBar



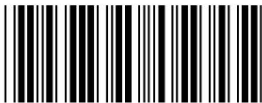
0100123456789012

PDF417



12345678

Codabar



BC321

Data Matrix



TestSymbol

QRCode



Numbers

Aztec



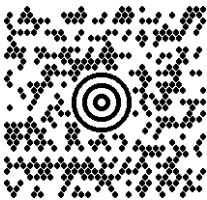
12345678

Micro PDF417



Test Message

MaxiCode



Test Message

Programming Charts



(S0S.)
0



(S1S.)
1



(S2S.)
2



(S3S.)
3



(S4S.)
4



(S5S.)
5



(S6S.)
6



(S7S.)
7



(S8S.)
8



(S9S.)
9



(SAS.)
A



(SBS.)
B



(SCS.)
C



(SDS.)
D



(SES.)
E



(SFS.)
F



(800002.)
Save



(800000.)
Discard

Note: If an error occurs while scanning a letter or number (before scanning the **"Save"** barcode), scan the **"Discard"** barcode, rescan the correct letter or number, and then scan the **"Save"** barcode.