

Programming Guide

Advanced 2D Imager

Revision History

Changes to the original manual are listed below:

Version	Date	Description of Version
1.0	2015/03/03	Initial release
1.1	2015/04/15	Added Cap Locks function
1.2	2015/05/07	Corrected barcode for the letter D
1.3	2015/6/11	Updated interface mode
1.4	2015/7/16	Added Spanish keyboard setting
1.5	2016/7/12	Changed default and descriptions in scan modes

Important Notice

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General Handling Precautions

- Do not dispose the scanner in fire.
- Do not put the scanner directly in the sun or by any heat source.
- Do not use or store the scanner in a very humid place.
- Do not drop the scanner or allow it to collide violently with other objects.
- Do not take the scanner apart without authorization

Guidance for Printing

This manual is in A5 size. Please double check your printer setting before printing it out. When the barcodes are to be printed out for programming, the use of a high-resolution laser printer is strongly suggested for the best scan result.

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Settings and Programming

Scan selected barcodes in this manual to affect setup and programming of your handheld 2D Imager. Decoding options and interface protocols can be tailored to a specific application. Setup parameters are stored in non-volatile memory in the scanner and are retained even when power is off. Setup parameters change only when you reset them. You may need to hide adjacent code patches with your hand when scanning.

Programming Options

This section contains the following two divisions:

1. Default factory device settings.
2. Supported symbologies.

Default Factory Device Settings

User Preferences	
Parameter	Default
Baud Rate	115200 BPS
Word Format	None, 8, 1
Illumination	On
LED-Good Read	On
Number of Beep-Good Read	1
Good Read Delay	200
Same Code Delay	500ms
Scan Mode	Manual Trigger
Manual Mode	30000ms
Presentation	500ms
Centering Windows	Off
Ship Image	JPG/BMP
No Read	Off
Image Reverse	Off
Data Redundant	Off

Interface Mode

Interface Switch

Your imaging barcode scanner supports USB virtual COM, USB-HID and RS232. The USB cable supports both USB virtual COM and USB-HID modes. Please install the driver before using USB Virtual COM.

- To use USB Virtual COM for the first time, scan the USB Virtual COM barcode below then install the driver.
- To switch from USB Virtual Com to USB-HID mode after the virtual COM driver is installed, scan the USB HID barcode below.
- To switch from USB Virtual Com to USB-HID mode if the virtual COM driver is not installed:
 1. Press and hold the trigger.
 2. Unplug and re-plug the USB cable.
 3. Scan the USB HID barcode below.
- To switch to RS232, simply switch the cables and scan the RS232 barcode below.



USB Virtual COM



USB HID
(Default)



RS-232

Spanish Keyboard

Enable Spanish keyboard layout in USB HID interface. Please scan all 3 barcodes below to complete the setting.



Enable Spanish keyboard



Code 128 Code Page: Binary



Code 39 Code Page: Binary

Baud Rate

Baud rate is the number of bits of data transmitted per second. Set the imager's baud rate to match the baud rate setting of the host device. Otherwise, data may not reach the host device or may reach it in distorted form.



1200BPS



2400BPS



4800BPS



9600BPS



19200BPS



38400BPS



57600BPS



115200BPS
(Default)

Word Format: Parity, Data bits, Stop bits

A parity check bit is the most significant bit of each ASCII coded character. Select the parity type according to host device requirements. Parity: checks character bit patterns for validity; Data bits: sets the word length; Stop bits: sets the stop bits.



None,7,1



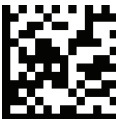
None,7,2



None,8,1
(Default)



Even 7,1



Even 7,2



Even 8,1



Odd 7, 1



Odd 7, 2



Odd 8, 1

User Preferences

System Settings

Scan this barcode to return all parameters to the default values.



Set All Defaults

Scan this barcode to enable AUX Scanner.



Aux Scanner Enable

Scan this barcode to show scanner version.



Show Version

Beeper-Good Read

To enable or disable beeper, scan the following barcodes.



On



Off

Beeper Volume-Good Read

To select a beeper volume, scan the Low Volume, Medium Volume, or High Volume barcode.



Off



Low Volume



Medium Volume



High Volume

Beep During Good Decode

Scan a barcode below to select the duration of the beep signal after a good decode.



Normal



Short

LED Illumination

To enable or disable LED illumination, scan the following barcodes.



On
(Default)



Off

LED-Good Read

To enable or disable LED indicator after a good read, scan the following barcodes.



On
(Default)



Off

Number Of Beep-Good Read

Scan a barcode below to select the number of the beep signal to sound after a good decode.



1
(Default)



2



3



4



5



6



7



8

Good Read Delay

Scan a barcode below to set the minimum amount of time before the imager can read another barcode after a good read.



No Delay



200ms
(Default)



500ms



2000ms



*Specified

*To set your own length for the good read delay, scan the “Specified” barcode, then set the delay by scanning digits from the Appendix, then scan “Save”.

Same Code Delay

Scan a barcode below to set the minimum amount of time before the imager can read the same barcode a second time.



No Delay



500ms
(Default)



2000ms

Scan Mode

Scan a barcode below to set the imager to trigger manually or continue scanning until a barcode has been read.



Trigger Mode
(Default for handheld scanner)



Auto Scan Mode
(Default for hands-free scanner)

Manual Mode Timeout

To set a timeout for the imager's trigger when using Manual Trigger, scan the following "Timeout" barcode, then set the delay by scanning digits from the Appendix, then scan "Save" (Default: 30000).



Timeout (0-300,000ms)

Presentation Timeout

This option is used in Presentation mode to prevent multiple reads of a symbol left in the device's field of view. To set the minimum amount of time before the imager can read the same barcode a second time, scan the following "Timeout" barcode then set the delay by scanning digits from the Appendix, then scan "Save" (Default: 500).



Reread Timeout (0-300,000ms)

Centering Windows

To change the field of view of your imager, scan “On” to enable the feature, and then scan one of the following barcodes to change the top, bottom, left, or right of the centering window.



On



Off
(Default)



Left of centering window 40%



Right of centering window 60%



Top of centering window 40%



Bottom of centering window 60%

Ship Image

To ship the image stored in the imager memory, scan the follow barcode.



JPG/BMP

No Read

Enable this function to transmit a No Read message when a code can not be read.



On



Off
(Default)

Image Reverse

Enable this function to allow the imager to read barcodes that are inverted.



On



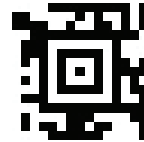
Off
(Default)

Data Redundant

This function sets the imager to read the barcode multiple times before accepting data.



Data Redundant Check = Off
(Default)



Data Redundant Check = 1



Data Redundant Check = 2



Data Redundant Check = 3

Data Editing

Prefix / Suffix

Prefix and Suffix are additional characters that can be sent before and after the scanned data.



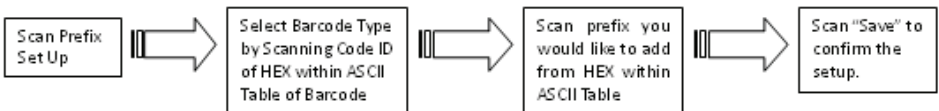
Prefix



Suffix

To set up Prefix/Suffix:

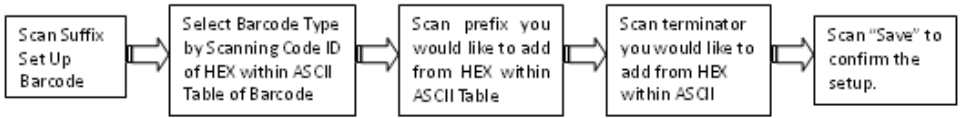
Prefix Set Up Flow



Ex. If we wish to add “3” as prefix for all barcode type, then follow procedure as below, Scanning [prefix] to enter setup. Then we select barcode by scanning code ID (ID table in the back) of all barcode which is [9] [9], then we scan [3] [3] as 3 of ASCII HEX. At the end, we scan [Save] to completed setup. So for full process, you scan [prefix] -> [9] [9] -> [3] [3] -> [Save].

Note: When adding a backslash (“\” or 5 C in Hex ID), please scan 5 C twice (5C5C): once to create the leading backslash and once to create the backslash itself.

Suffix Set Up Flow



Ex. If we wish to add "36" as suffix for all barcode type, then follow procedure as below, Scanning [suffix] to enter setup. Then we select barcode by scanning code ID of all barcode which is [9] [9], then we scan [3] [3] as 3 of ASCII HEX and [3] [6] as 6. Before we save, we scan command to setup terminator. If we wish to have Insert (01 from ASCII) & Enter (0A from ASCII) as terminator, we scan [0] [1] [0] [A]. To complete setup, we scan [Save]. So for full process, you scan [Suffix] -> [9] [9] -> [3] [3] -> [3] [6] -> [0] [1] -> [0] [A] -> [Save].

Note: For Suffix setup, terminator set up is required within suffix set up. If terminator is not set before save, terminator will automatically set to null.

Data Format

To change the output format, scan the following barcodes.



Data followed by <Enter>
(Default)



No message after data



Data followed by <Enter>
+ new line



Data followed by new line



Data followed by TAB

Cap Locks

To change the capital lock preferences, scan the following barcodes.



Cap Locks On



Cap Locks Off

Symbologies

Introduction

This chapter describes symbology features and provides the programming barcodes for selecting these features.

The device is shipped with the settings shown in the Symbology Default Table. If the default values suit requirements, programming is not necessary.

There are two ways to change a parameter value:

- Scan the appropriate barcodes in this guide. These new values replace the standard default values in memory.
- For serial hosts, send a “parameter send” command from the host system. For complete descriptions and examples of each serial programming command, refer to the corresponding programming barcode in this manual.

Note: Most computer monitors allow scanning the barcodes directly on the screen. When scanning from the screen, be sure to set the document magnification to a level where the barcode can be seen clearly and bars and/or spaces are not merging.

Message Length

The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s) the code contains.

To set the length of a barcode symbology:

1. Scan the “Minimum” or “Maximum” barcode to enter program mode.
2. Scan the digit(s) from the ASCII table in Appendix.
3. Scan “Save” to save the change.

Note: When setting lengths for different barcode types by scanning single digit numbers, single digit numbers must always be preceded by a leading zero.

Codabar

Codabar Enable/Disable

To set Codabar to its default settings, scan Default; to enable or disable Codabar, scan On or Off.



Default



On
(Default)



Off

Codabar Stop/Start Characters

Stop/Start Characters set the leading and trailing ends of the barcode.



Don't Transmit
(Default)



Transmit

Codabar Check Characters

Scan a barcode below to set the Codabar check character preferences.



No Check Character
(Default)



Validate But Don't Transmit



Validate And Transmit

Codabar Message Length

Please see [Message Length](#) on setting the message length.



Maximum
(Default: 60)



Minimum
(Default: 4)

Code 39

Code 39 Enable/Disable

To set Code 39 to its default settings, scan Default; to enable or disable Code 39, scan On or Off.



Default



On
(Default)



Off

Code 39 Full ASCII Conversion

Code 39 Full ASCII is a variant of Code 39 which pairs characters to encode the full ASCII character set. Scan the appropriate barcode below to enable or disable it.



Off
(Default)



On

Code 39 Append

To set the imager to append Code 39 data before transmitting to the host, scan the appropriate barcode below.



On



Off
(Default)

Code 39 Check Characters

Scan a barcode below to set the Code 39 check character preferences.



No Check Character
(Default)



Validate But Don't Transmit



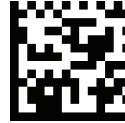
Validate And Transmit

Code 39 Start/Stop Characters

Start/Stop Characters set the leading and trailing ends of the barcode.



Transmit



Don't Transmit
(Default)

Code 32 Pharmaceutical

To enable/ disable Code 39 Pharmaceutical, scan the appropriate barcode below.



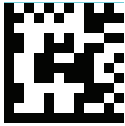
On



Off
(Default)

Code 39 Message Length

Please see [Message Length](#) on setting the message length.



Minimum
(Default: 0)



Maximum
(Default: 48)

Trioptic

To enable/ disable Trioptic code, scan the appropriate barcode below.



On

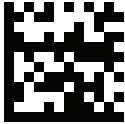


Off
(Default)

Interleaved 2 of 5

Interleaved 2 of 5 Enable/Disable

To set Interleaved 2 of 5 to its default settings, scan Default; to enable or disable Interleaved 2 of 5, scan On or Off.



Default



On
(Default)



Off

Interleaved 2 of 5 Check Characters

Scan a barcode below to set the Interleaved 2 of 5 check character preferences.



No Check Character
(Default)



Validate But Don't Transmit



Validate And Transmit

Interleaved 2 of 5 Message Length

Please see [Message Length](#) on setting the message length.



Maximum
(Default: 80)

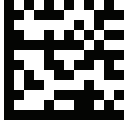


Minimum
(Default: 4)

NEC 25

NEC 25 Enable/Disable

To set NEC 25 to its default settings, scan Default; to enable or disable NEC 25, scan On or Off.



Default



On
(Default)



Off

NEC 25 Check Characters

Scan a barcode below to set the NEC 25 check character preferences.



No Check Character
(Default)



Validate But Don't Transmit



Validate And Transmit

Straight 2 of 5 Industrial

Straight 2 of 5 Industrial Enable/Disable

To set Straight 2 of 5 Industrial to its default settings, scan Default; to enable or disable Straight 2 of 5 Industrial, scan On or Off.



Default



On



Off
(Default)

Straight 2 of 5 Message Length

Please see [Message Length](#) on setting the message length.



Maximum
(Default: 48)

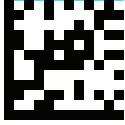


Minimum
(Default: 4)

Matrix 2 of 5

Matrix 2 of 5 Enable/Disable

To set Matrix 2 of 5 to its default settings, scan Default; to enable or disable Matrix 2 of 5, scan On or Off.



Default



On



Off
(Default)

Matrix 2 of 5 Message Length

Please see [Message Length](#) on setting the message length.



Maximum
(Default: 80)



Minimum
(Default: 4)

Code 11

Code 11 Enable/Disable

To set Code 11 to its default settings, scan Default; to enable or disable Code 11, scan On or Off.



Default



On



Off
(Default)

Code 11 Check Characters

Scan a barcode below to set the Code 11 check character preferences.



2 Check Digit
(Default)



1 Check Digit

Code 11 Message Length

Please see [Message Length](#) on setting the message length.



Minimum
(Default: 4)



Maximum
(Default: 80)

Code 128

Code 128 Enable/Disable

To set Code 128 to its default settings, scan Default; to enable or disable Code 128, scan On or Off.



Default



On
(Default)



Off

Code 128 Message Length

Please see [Message Length](#) on setting the message length.



Maximum
(Default: 80)



Minimum
(Default: 0)

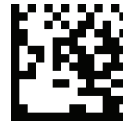
Code 93

Code 93 Enable/Disable

To set Code 93 to its default settings, scan Default; to enable or disable Code 93, scan On or Off.



Default



On
(Default)



Off

Code 93 Message Length

Please see [Message Length](#) on setting the message length.



Maximum
(Default: 80)



Minimum
(Default: 0)

MSI

MSI Enable/Disable

To set MSI to its default settings, scan Default; to enable or disable MSI, scan On or Off.



Default



On



Off
(Default)

MSI Check Characters

Scan a barcode below to set the MSI check character preferences.



Validate Type 10, Transmit



Validate Type 10, Don't Transmit
(Default)

MSI Message Length

Please see [Message Length](#) on setting the message length.



Minimum
(Default: 4)

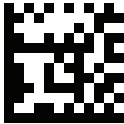


Maximum
(Default: 48)

Telepen

Telepen Enable/Disable

To set Telepen to its default settings, scan Default; to enable or disable Telepen, scan On or Off.



Default



On



Off
(Default)

Telepen Output

Scan a barcode below to set the Telepen Output preferences.



Original Output



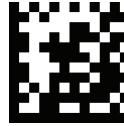
AIM Output
(Default)

Telepen Message Length

Please see [Message Length](#) on setting the message length.



Minimum
(Default: 1)



Maximum
(Default: 60)

UPC/EAN/JAN

UPC-A Enable/Disable

To set UPC-A to its default settings, scan Default; to enable or disable UPC-A, scan On or Off.



Default



On
(Default)



Off

UPC-A Check Characters

Scan a barcode below to set the UPC-A check character preferences.



Off



On
(Default)

UPC-A Number System

Scan a barcode below to set the UPC-A Number System preferences.



On
(Default)



Off

UPC-A 2 Digit

Scan a barcode below to set the UPC-A 2 Digit preferences.



On



Off
(Default)

UPC-A 5 Digit

Scan a barcode below to set the UPC-A 5 Digit preferences.



On



Off
(Default)

UPC-A Addenda Required

Scan a barcode below to set the UPC-A Addenda Required preferences.



On



Off
(Default)

UPC-A Addenda Separator

Scan a barcode below to set the UPC-A Addenda Separator preferences.



On
(Default)



Off

UPC-E0

To set UPC-E0 to its default settings, scan Default; to enable or disable UPC-E0, scan On or Off.



Default



On
(Default)



Off

UPC-E1

Scan a barcode below to set the UPC-E1 preferences.



On



Off
(Default)

UPC-E0 Expand

Scan a barcode below to set the UPC-E0 Expand preferences.



On



Off
(Default)

UPC-E0 Check Digit

Scan a barcode below to set the UPC-E0 Check Digit preferences.



On
(Default)



Off

UPC-E0 Number System

Scan a barcode below to set the UPC-E0 Number System preferences.



On
(Default)



Off

UPC-E0 Addenda 2 Digit

Scan a barcode below to set the UPC-E0 Addenda 2 Digit preferences.



On



Off
(Default)

UPC-E0 Addenda 5 Digit

Scan a barcode below to set the UPC-E0 Addenda 5 Digit preferences.



On



Off
(Default)

UPC-E0 Addenda Required

Scan a barcode below to set the UPC-A Addenda Required preferences.



Not Required
(Default)



Required

UPC-E0 Addenda Separator

Scan a barcode below to set the UPC-A Addenda Separator preferences.



On
(Default)



Off

EAN/JAN-13

To set EAN/JAN-13 to its default settings, scan Default; to enable or disable EAN/JAN-13, scan On or Off.



Default



On
(Default)



Off

EAN/JAN-13 Check Digit

Scan a barcode below to set the EAN/JAN-13 Check Digit preferences.



Off



On
(Default)

EAN/JAN-13 2 Check Digit Addenda

Scan a barcode below to set the EAN/JAN-13 2 Check Digit Addenda preferences.



On



Off
(Default)

EAN/JAN-13 5 Check Digit Addenda

Scan a barcode below to set the EAN/JAN-13 5 Check Digit Addenda preferences.



On



Off
(Default)

EAN/JAN-13 Addenda Required

Scan a barcode below to set the UPC-A Addenda Required preferences.



Not Required
(Default)



Required

EAN/JAN-13 Addenda Separator

Scan a barcode below to set the UPC-A Addenda Separator preferences.



On
(Default)



Off

IBSN Translate

Scan a barcode below to set the IBSN Translate preferences.



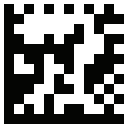
On



Off
(Default)

EAN-8

To set EAN -8 to its default settings, scan Default; to enable or disable EAN-8, scan On or Off.



Default



On
(Default)



Off

EAN-8 Check Digit

Scan a barcode below to set the EAN-8 Check Digit preferences.



On
(Default)



Off

EAN-8 Check Digit Addenda

Scan a barcode below to set the EAN-8 Check Digit Addenda preferences.



On



Off
(Default)

EAN-8 2 Check Digit Addenda

Scan a barcode below to set the EAN-8 2Check Digit Addenda preferences.



On



Off
(Default)

EAN-8 5 Check Digit Addenda

Scan a barcode below to set the EAN-8 5 Check Digit Addenda preferences.



On



Off
(Default)

EAN-8 Addenda Required

Scan a barcode below to set the EAN-8 Addenda Required preferences.



Not Required
(Default)



Required

EAN-8 Addenda Separator

Scan a barcode below to set the EAN-8 Addenda Separator preferences.



On
(Default)



Off

UPC-A/EAN-13 Extend Coupon Code

Scan a barcode below to set the UPC-A/EAN-13 Extend Coupon Code preferences.



On



Off
(Default)

EAN.UCC Emulation

Scan a barcode below to set the EAN.UCC Emulation preferences.



Off
(Default)



EAN.UCC-128 Emulation



RSS. Emulation

Postal Code

Note: For best performance when reading a postal code, please enable only one postal symbology and disable the rest.

To enable or disable a postal code, please scan the following barcode first to enter programming mode, then scan the On or Off barcode for your postal code.



Postal Code

China Postal Code

To set China Postal Code to its default settings, scan Default; to enable or disable China Postal Code, scan On or Off.



Default



On



Off
(Default)

China Postal Code Message Length

Please see [Message Length](#) on setting the message length.



Minimum
(Default: 4)



Maximum
(Default: 80)

Han Xin Code

To set Han Xin Code to its default settings, scan Default; to enable or disable Han Xin Code, scan On or Off.



Default



On



Off
(Default)

Han Xin Code Message Length

Please see [Message Length](#) on setting the message length.



Minimum
(Default: 1)



Maximum
(Default: 7873)

Korean Postal Code

To set Korean Postal Code to its default settings, scan Default; to enable or disable Korean Postal Code, scan On or Off.



Default



On



Off
(Default)

Korean Postal Code Message Length

Please see [Message Length](#) on setting the message length.



Minimum
(Default: 4)



Maximum
(Default: 48)

PostNet

Scan a barcode below to enable or disable PostNet.



On



Off
(Default)

PostNet Check Digit

Scan a barcode below to set the PostNet Check Digit preferences.



Not Transmit
(Default)



Transmit

Planet Code

Scan a barcode below to enable or disable Planet Code.



On



Off
(Default)

Planet Code Check Digit

Scan a barcode below to set the Planet Code Check Digit preferences.



Don't Transmit
(Default)



Transmit

British Post

Scan a barcode below to enable or disable British Post code.



On



Off
(Default)

Japanese Post

Scan a barcode below to enable or disable Japanese Post code.



On



Off
(Default)

Canadian Post

Scan a barcode below to enable or disable Canadian Post code.



On



Off
(Default)

Kix Post

Scan a barcode below to enable or disable Kix Post code.



On



Off
(Default)

Australian Post

Scan a barcode below to enable or disable Australian Post code.



On



Off
(Default)

RSS (Reduced Space Symbology)

The variants of RSS are RSS 14, RSS Expanded, and RSS Limited. The limited and expanded versions have stacked variants. Scan the appropriate barcode below to enable or disable each variant of RSS.

RSS-14

To set RSS-14 to its default settings, scan Default; to enable or disable RSS-14, scan On or Off.



Default



On
(Default)



Off

RSS-Limited Code

To set RSS-Limited Code to its default settings, scan Default; to enable or disable RSS-Limited, scan On or Off.



Default



On
(Default)



Off

RSS-Expanded Code

To set RSS-Expanded Code to its default settings, scan Default; to enable or disable RSS-Expanded, scan On or Off.



Default



On
(Default)



Off

RSS-Expanded Code Message Length

Please see [Message Length](#) on setting the message length.



Maximum



Minimum

2D Symbolologies

PDF417

To set PDF417 to its default settings, scan Default; to enable or disable PDF417, scan On or Off.



Default



On
(Default)



Off

PDF417 Message Length

Please see [Message Length](#) on setting the message length.



Maximum
(Default: 2750)



Minimum
(Default: 1)

Micro PDF417

To set Micro PDF417 to its default settings, scan Default; to enable or disable Micro PDF417, scan On or Off.



Default



On



Off
(Default)

Micro PDF417 Message Length

Please see [Message Length](#) on setting the message length.



Maximum
(Default: 366)



Minimum
(Default: 1)

TLC39

Scan a barcode below to enable or disable TLC39.



On



Off
(Default)

Codablock F

To set Codablock F to its default settings, scan Default; to enable or disable Codablock F, scan On or Off.



Default



On



Off
(Default)

Codablock F Message Length

Please see [Message Length](#) on setting the message length.



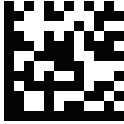
Maximum
(Default: 2048)



Minimum
(Default: 1)

Aztec

To set Aztec to its default settings, scan Default; to enable or disable Aztec, scan On or Off.



Default



On
(Default)



Off

Aztec Message Length

Please see [Message Length](#) on setting the message length.



Maximum
(Default: 3832)



Minimum
(Default: 1)

Maxicode

To set Maxicode to its default settings, scan Default; to enable or disable Maxicode, scan On or Off.



Default



On



Off

Maxicode Message Length

Please see [Message Length](#) on setting the message length.



Maximum
(Default: 150)



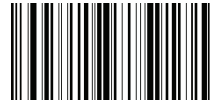
Minimum
(Default: 1)

Data Matrix

To set Data Matrix to its default settings, scan Default; to enable or disable Data Matrix, scan On or Off.



Default



On
(Default)



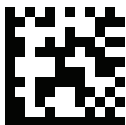
Off

Data Matrix Message Length

Please see [Message Length](#) on setting the message length.



Maximum
(Default: 3116)



Minimum
(Default: 1)

QR Code

To set QR Code to its default settings, scan Default; to enable or disable QR Code, scan On or Off.



Default



On
(Default)



Off

QR Code Message Length

Please see [Message Length](#) on setting the message length.



Maximum
(Default: 7089)



Minimum
(Default: 1)

Maintenance

Cleaning the scan window is the only maintenance required. A dirty window may affect scanning accuracy.

Never use any abrasive material or solvents on the window. Do not spray water or other cleaning liquids directly onto the window.

Remove dirt by wiping gently with a damp cloth or tissue moistened with water and/or ammonia.

Troubleshoot

Follow the table below for ways to switch interface when the cable is missing.

	USB mode to RS232 mode	USB mode to USB Virtual COM	RS232 to USB mode
Z-3172	Default Multi-interfaces Mode already cover both USB & RS-232 interfaces	No power, (hold the trigger, re-plug USB cable, power on to scan mode switch barcode commands and working properly)	Default Multi-interfaces Mode already cover both USB & RS-232 interfaces
Z-6172	Power On, No decode, User can directly scan RS232 mode to switch interfaces	No power, (hold the trigger, re-plug USB cable, power on to scan mode switch barcode commands and working properly)	No power, (hold the trigger, re-plug RS-232 cable, power on to scan USB mode barcode commands to switch mode)

Appendix A

Standard Default Parameters

Symbology	Default
Codabar	Enable
Code 39	Enable
Code 39 Full ASCII	Disable
Code 39 Append	Disable
Code 39 Check Char	No check char
Code 39 start/stop char	Don't transmit
Code 32 Pharmaceutical	Disable
Code 39 Message Length	0~48
Interleaved 2 of 5	Enable
Interleaved 2 of 5 Check Char	No check char
Interleaved 2 of 5 Message Length	4~80
NEC 25	Enable
NEC 25 Check Char	No check char
Straight 2 of 5 Industrial	Disable
Straight 2 of 5 Industrial Message	4~48
Straight 2 of 5 Industrial IATA	Disable
Straight 2 of 5 Industrial IATA Message Length	4~48
Matrix 2 of 5	Disable
Matrix 2 of 5 Message Length	4~80
Code 11	Disable
Code 11 Message Length	4~80
Code 11 Check Char	2 check digits
Code 128	Enable

Code 128 Message Length	0~80
Code 93	Enable
Code 93 Message Length	0~80
MSI	Disable
MSI Message Length	4~48
MSI Check Char	Validate Type 10, Don't Transmit
Telepen	Disable
Telepen Output	AIM output
Telepen Message Length	1~60
UPC-A	Enable
UPC-A Check char	Enable
UPC-A Number System	Enable
UPC-A 2 digit	Disable
UPC-A 5 digit	Disable
UPC-A Addenda Required	Disable
UPC-A Addenda Separator	Enable
UPC-E0	Enable
UPC-E1	Disable
UPC-E0 Expand	Disable
UPC-E0 Check digit	Enable
UPC-E0 Number System	Enable
UPC-E0 Addenda 2 digit	Disable
UPC-E0 Addenda 5 digit	Disable
UPC-E0 Addenda Required	Not required
UPC-E0 Addenda Separator	Enable
EAN/JAN-13	Enable
EAN/JAN-13 Check Digit	Enable

EAN/JAN-13 2 Check Digit Addenda	Disable
EAN/JAN-13 5 Check Digit Addenda	Disable
EAN/JAN-13 Addenda Required	Not required
EAN/JAN-13 Addenda Separator	Enable
IBSN Translate	Disable
EAN-8	Enable
EAN-8 Check Digit	Enable
EAN-8 2 Check Digit Addenda	Disable
EAN-8 5 Check Digit Addenda	Disable
EAN-8 Addenda Required	Not required
EAN-8 Addenda Separator	Enable
UPC-A/EAN-13 Extend Coupon Code	Disable
EAN.UCC Emulation	Disable
China Postal Code	Disable
China Postal Code Message Length	4~80
RSS-14	Enable
RSS-Limited Code	Enable
RSS-Expanded Code	Enable
RSS-Expanded Code Message Length	4~74
Trioptic Code	Disable
PDF417	Enable
PDF417 Message Length	1~2750
Micro PDF417	Disable
Micro PDF417 Message Length	1~366
TLC39	Disable

Codablock F	Disable
Codablock F Message Length	1~2048
Aztec	Enable
Aztec Message Length	1~3832
Maxicode	Enable
Maxicode Message Length	1~150
Data Matrix	Enable
Data Matrix Message Length	1~3116
QR	Enable
QR Message Length	1~7089
Han Xin Code	Disable
Han Xin Code Message Length	1~7873
Korean Postal Code	Disable
Korean Postal Code Message Length	4~48
PostNet	Disable
PostNet Check Digit	Don't transmit
Planet Code	Disable
Planet Code Check Digit	Don't transmit
British Post	Disable
Japanese Post	Disable
Canadian Post	Disable
Kix Post	Disable
Australian Post	Disable

Appendix B

Code ID Table

Symbology	Code ID	Code ID in HEX
Code 128	j	6A
GS1-128(UCC/EAN-128)	j	6A
AIM-128	f	66
EAN-8	d	64
EAN-13	d	64
ISSN	n	6E
ISBN	B	42
UPC-E	c	63
UPC-A	c	63
Interleaved 2 of 5	e	65
ITF-6	e	65
ITF-14	e	65
Matrix 2 of 5	v	76
Industrial 2 of 5	D	44
Standard 2 of 5	s	73
Code 39	b	62
Codabar	a	61
Code 93	i	69
Code 11	H	48
GS1 Databar	R	52
PDF417	r	72
QR Code	Q	51
Data Matrix	u	75
All		99

Appendix C

Sample Barcodes

Canada Post 4-State



01,K1A0B1,7010,

Japan Post 4-State



80342716666

US POSTNET



8034271888

Australian Post



8034271999

Dutch Post - Royal TPG Post KIX 4-State



1231FZ13XHS

USPS PLANET Barcode



4012345235636

British Royal Mail 4-State BPO



1234567895

Infomail Mail 4-State



12345 67 2 2505 13 234567



213868 99 3 3112 49 249999

Sweden Post 4-State



0 89383 886 777



1 103 298 7 215155

China Post



123457

USPS 4-state (Intelligent Mail)



Barcode ID.....82
 Service Type ID....152
 Mailer ID.....568794
 Serial Number.....748970563
 ZIP Code.....12789600178



Barcode ID.....00
 Service Type ID....311
 Mailer ID.....000479
 Serial Number.....612518080
 ZIP Code.....20724170703



Barcode ID.....20
 Service Type ID....301
 Mailer ID.....901212001
 Serial Number.....311323
 ZIP Code.....20724170703

Appendix D

Numeric Barcodes

For parameters requiring specific numeric values, scan the appropriately numbered barcode(s).



0



1



2



3



4



5



6



7



8



9



A



B



C



D



E



F

Save

To save the setting, scan the barcode below.



Save

Discard

To correct an error or change a selection, scan the barcode below.



Discard

Appendix E

Full ASCII Table

ASCII	Hexacode	ASCII	Hexacode
Full ASCII ---NUL Function key-----“Shift”	00	Full ASCII ---SI Function key-----“Shift”	0F
Full ASCII ---SOH Function key-----“Ins”	01	Full ASCII ---DLE Function key-----“5(num)”	10
Full ASCII ---STX Function key-----“Del”	02	Full ASCII ---DC1 Function key-----“F1”	11
Full ASCII ---ETX Function key-----“Home”	03	Full ASCII ---DC2 Function key-----“F2”	12
Full ASCII ---EOT Function key-----“End”	04	Full ASCII ---DC3 Function key-----“F3”	13
Full ASCII ---ENQ Function key-----“Up arrow”	05	Full ASCII ---DC4 Function key-----“F4”	14
Full ASCII ---ACK Function key-----“Down arrow”	06	Full ASCII ---NAK Function key-----“F5”	15
Full ASCII ---BEL Function key-----“Left arrow”	07	Full ASCII ---SYN Function key-----“F6”	16
Full ASCII ---BS Function key-----“Backspace”	08	Full ASCII ---ETB Function key-----“F7”	17
Full ASCII ---HT Function key-----“TAB”	09	Full ASCII ---CAN Function key-----“F8”	18
Full ASCII ---LF Function key-----“Enter (alpha numeric)”	0A	Full ASCII ---EN Function key-----“F9”	19
Full ASCII ---VT Function key-----“right arrow”	0B	Full ASCII ---SUB Function key-----“F10”	1A
Full ASCII ---FF Function key-----“PgUp”	0C	Full ASCII ---ESC Function key-----“F11”	1B
Full ASCII ---CR Function key-----“Enetr(num.)”	0D	Full ASCII ---FS Function key-----“F12”	1C
Full ASCII ---SO Function key-----“PgDn”	0E	Full ASCII ---GS Function key-----“ESC”	1D

Full ASCII ---RS Function key-----“CTL(L)”	1E	Full ASCII ----	2D
Full ASCII ---US Function key-----“ALT(L)”	1F	Full ASCII ---.	2E
Full ASCII ---SP	20	Full ASCII ---/	2F
Full ASCII ---!	21	Full ASCII ---0	30
Full ASCII ---“	22	Full ASCII ---1	31
Full ASCII ---#	23	Full ASCII ---2	32
Full ASCII ---\$	24	Full ASCII ---3	33
Full ASCII ---%	25	Full ASCII ---4	34
Full ASCII ---&	26	Full ASCII ---5	35
Full ASCII ---’	27	Full ASCII ---6	36
Full ASCII --- (28	Full ASCII ---7	37
Full ASCII ---)	29	Full ASCII ---8	38
Full ASCII ---*	2A	Full ASCII ---9	39
Full ASCII ---+	2B	Full ASCII ---:	3A
Full ASCII ---,	2C	Full ASCII ---;	3B
Full ASCII ---<	3C	Full ASCII ---K	4B
Full ASCII ---=	3D	Full ASCII ---L	4C
Full ASCII --->	3E	Full ASCII ---M	4D
Full ASCII ---?	3F	Full ASCII ---N	4E

Full ASCII ---@	40	Full ASCII ---O	4F
Full ASCII ---A	41	Full ASCII ---P	50
Full ASCII ---B	42	Full ASCII ---Q	51
Full ASCII ---C	43	Full ASCII ---R	52
Full ASCII ---D	44	Full ASCII ---S	53
Full ASCII ---E	45	Full ASCII ---T	54
Full ASCII ---F	46	Full ASCII ---U	55
Full ASCII ---G	47	Full ASCII ---V	56
Full ASCII ---H	48	Full ASCII ---W	57
Full ASCII ---I	49	Full ASCII ---X	58
Full ASCII ---J	4A	Full ASCII ---Y	59
Full ASCII ---Z	5A	Full ASCII ---i	69
Full ASCII ---[5B	Full ASCII ---j	6A
Full ASCII ---\	5C	Full ASCII ---k	6B
Full ASCII ---]	5D	Full ASCII ---l	6C
Full ASCII ---^	5E	Full ASCII ---m	6D
Full ASCII ---_	5F	Full ASCII ---n	6E
Full ASCII ---`	60	Full ASCII ---o	6F
Full ASCII ---a	61	Full ASCII ---p	70

Full ASCII ---b	62	Full ASCII ---q	71
Full ASCII ---c	63	Full ASCII ---r	72
Full ASCII ---d	64	Full ASCII ---s	73
Full ASCII ---e	65	Full ASCII ---t	74
Full ASCII ---f	66	Full ASCII ---u	75
Full ASCII ---g	67	Full ASCII ---v	76
Full ASCII ---h	68	Full ASCII ---w	77
Full ASCII ---x	78	Full ASCII ---	7C
Full ASCII ---y	79	Full ASCII ---}	7D
Full ASCII ---z	7A	Full ASCII ---~	7E
Full ASCII ---{	7B	Full ASCII ---DEL	7F