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Programming Guide

Advanced 2D Image Scanner

This Programming Guide is intended for:

- **2D Image Engine: Z-5212 Plus**
- **Fixed Industrial Scanner: ZX-1010**
- **2D Image Handheld Scanner: Z-3102**

Revision History

Changes to the original manual are listed below:

Version	Date	Description of Version
1.0	2024/03/07	Initial release
1.1	2024/5/21	Include Z-3102 as an intended model

Important Notice

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For CE-countries
This scanner is in conformity with CE standards. Please note that an approved, CE-marked power supply unit should be used in order to maintain CE conformance.

Guidance for Printing

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

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System Settings

Default Parameters

The table provides an overview of the default configurations for each symbology. The default settings will be restored whenever the "Reset" programming label is scanned and the scanner is in programming mode.

Symbologies	Default
Data Matrix	Enable
QR	Enable
Micro QR	Enable
EAN-13	Enable
EAN-8	Enable
UPC-A	Enable
UPC-E	Enable
Code 128	Enable
Code 39	Enable
Code 32	Disable
Code 93	Enable
Codabar	Enable
Plessey	Disable
MSI-Plessey	Enable
Interleaved 2 of 5	Enable
Code 11	Disable
Pharmacode	Disable
GS1 DataBar 14	Enable
GS1 DataBar Expanded	Enable
GS1 DataBar Limited	Enable
PDF417	Enable
Micro PDF417	Enable
Aztec	Disable
MaxiCode	Disable
DotCode	Disable

Scan Mode

Enter Programming Mode

Level Trigger Mode

A trigger pull activates a decode session. The decode session continues until a barcode is decoded or you release the trigger.

Sense Mode (Image Change)

The engine activates a decode session every time it detects a barcode presented to it. The decode session continues until a barcode is decoded or the decode session timeout expires.

Continuous Mode

The engine automatically starts one decode session after another. To suspend/resume barcode reading, simply press the trigger.

Level Trigger Mode **

Sense Mode (Image Change)

Exit Programming Mode

Enter Programming Mode

Continuous Mode

Exit Programming Mode

Enter Programming Mode

Sense Mode (Image Change) Sensitivity

This parameter sets the sensitivity of image change trigger. You can select an appropriate level of sensitivity that fits your application environment. This feature is only applicable to the Sense mode.

Low Sensitivity

Medium Sensitivity **

High Sensitivity

Exit Programming Mode

Aiming

Enter Programming Mode

Trigger

The scanner projects an aiming pattern only during image decoding.

Always On

Aiming pattern is constantly on after the scanner is powered on.

Off

Aiming pattern is off all the time.

Always On **

Trigger

Off

Exit Programming Mode

Illumination

Enter Programming Mode

Illumination Mode

Trigger: Illumination LEDs are turned on during image decoding.

Always On: Illumination LEDs keep on after the scanner is powered on.

Off: Illumination LEDs are off all the time.

Fade Up: Illumination LEDs are dimly lit when in standby mode and gradually increase their brightness during image decode.

Trigger **

Always On

Exit Programming Mode

Enter Programming Mode

Fade Up

Off

Exit Programming Mode

Enter Programming Mode

Illumination Level

This parameter sets the brightness of illumination.tt

Minimum brightness

Intermediate brightness

Maximum brightness **

Exit Programming Mode

Beep Sound

Enter Programming Mode

Good Read Beep

Scanning the Off barcode can turn off the beep that indicates successful decode; scanning the On barcode can turn it on.

On **

Off

Exit Programming Mode

Enter Programming Mode

Good Read Beep Frequency

Extra Low - 800 Hz

Low - 1600 Hz

Medium - 2730 Hz **

High - 4200 Hz

Exit Programming Mode

Decode Settings

Enter Programming Mode

Decode Area

Whole Area Decoding: The scanner attempts to decode barcode(s) within its field of view, from the center to the periphery, and transmits the barcode that has been first decoded.

Aiming Barcode Decoding: The scanner only decodes the barcode aimed squarely by the aiming pattern. For those using a crosshair aiming pattern, only the barcode aimed by the center of crosshair will be decoded.

Whole Area Decoding **

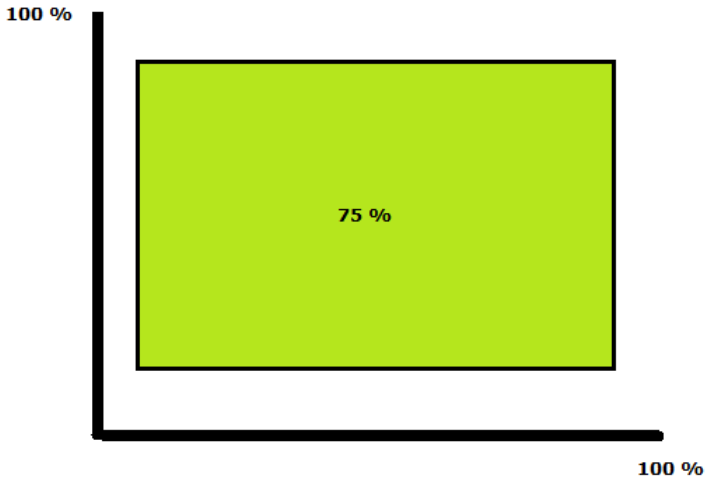
Aiming Barcode Decoding

Exit Programming Mode 

Enter Programming Mode

Specific Area Decoding 75%

This option allows the scanner to narrow its field of view to make sure it reads only those barcodes intended by the user.

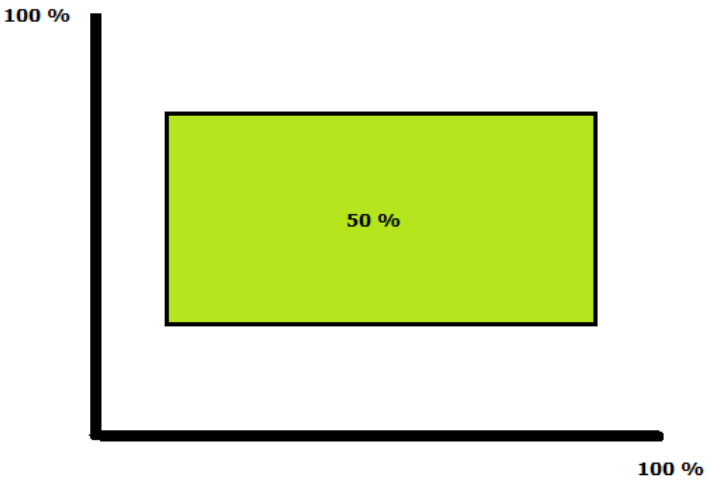


75%

Exit Programming Mode

Enter Programming Mode

Specific Area Decoding 50%

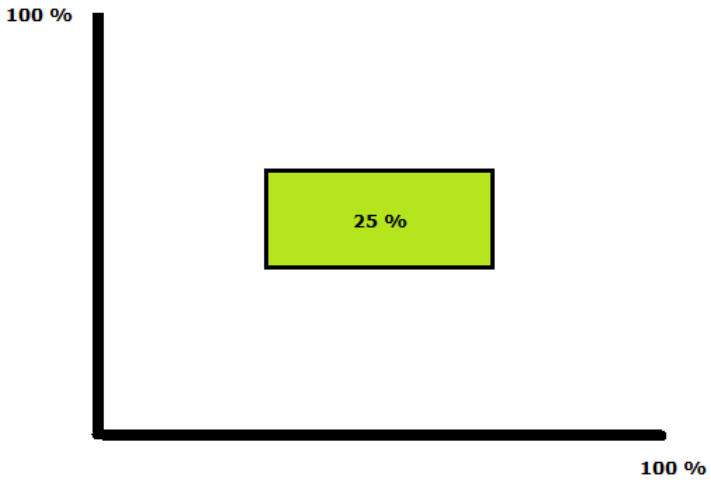


50 %

Exit Programming Mode

Enter Programming Mode

Specific Area Decoding



25 %

Exit Programming Mode

Enter Programming Mode

Decode Redundancy

Disable: All code types just read one time.

2 Times: All code types must be successfully read two times before being decoded.

3 Times: All code types must be successfully read three times before being decoded.

Disable **

2 Times

3 Times

Exit Programming Mode

Enter Programming Mode

Decoding Timeout

This parameter sets the maximum time decode session continues during a scan attempt. It is programmable in 1ms increments from 1 ms to 3,600,000 ms. When it is set to 0, the timeout is infinite. The default setting is 5,000 ms.

Example: Set the decoding timeout to 1,000 ms:

1. Scan the **Enter Programming Mode** barcode
2. Scan the **Decoding Timeout** barcode
3. Scan the numeric barcodes "**1**" barcode from Numeric Barcodes in Appendix A.
4. Scan the numeric barcodes "**0**" barcode from Numeric Barcodes in Appendix A.
5. Scan the numeric barcodes "**0**" barcode from Numeric Barcodes in Appendix A.
6. Scan the numeric barcodes "**0**" barcode from Numeric Barcodes in Appendix
   Scan the **Exit Programming Mode** barcode

Decoding Timeout (ms)

Exit Programming Mode 

Enter Programming Mode

Timeout between Decodes (Same Barcode)

Timeout between Decodes (Same Barcode) can avoid undesired rereading of same barcode in a given period of time. This feature is only applicable to the Sense and Continuous modes. It is programmable in 1 ms increments from 1ms to 5000 ms. The default setting is 3,00 ms.

< 1000 ms : Do not allow the scanner to re-read same barcode before the timeout between decodes (same barcode) expires.

≧ **1000 ms :** Allow the scanner to re-read same barcode after the timeout between decodes (same barcode) expires..

Example: Set the Timeout between Decodes to250 ms:

1. Scan the **Enter Programming Mode** barcode
2. Scan the **Timeout between Decodes** barcode
3. Scan the numeric barcodes "2" barcode from Numeric Barcodes in Appendix A.
4. Scan the numeric barcodes "**5**" barcode from Numeric Barcodes in Appendix A.
5. Scan the numeric barcodes "**0**" barcode from Numeric Barcodes in Appendix A.
   Scan the **Exit Programming Mode** barcode

Timeout between Decodes (ms)

Exit Programming Mode

Enter Programming Mode

Time To Standby Mode

This parameter sets the time to enter standby mode when the scanner is idle.
The default setting is 10 seconds.

Disable

1 Second

3 Seconds

5 Seconds

10 Seconds

15 Seconds

Exit Programming Mode

Interface Settings

USB HID Keyboard

Enter Programming Mode

USB HID Keyboard Enable

The transmission will be simulated as USB keyboard input. The Host receives keystrokes on the virtual keyboard. It works on a Plug and Play basis and no driver is required.

USB HID Keyboard **

Exit Programming Mode 

Enter Programming Mode

HID Function Key Mapping

ASCII values under 32 are normally sent as control-key sequences. When this parameter is enabled, the keys in bold are sent in place of the standard key mapping (see Appendix C).

Control-Key Mode:
Control Characters (0x00 - 0x1F) are sent as control-key sequences.

Alt + Unicode Mode:
Control Characters (0x00 - 0x1F) are sent as unicode code sequences

Disable **

Control-Key Mode

Alt + Unicode Mode

Exit Programming Mode

Enter Programming Mode

USB Country Keyboard Types

Scan the barcode corresponding to the keyboard type. For a USB host, this setting applies only to the USB Keyboard (HID) device.

US (English) **

UK English

Brazil

Belgium

Exit Programming Mode

Enter Programming Mode

Bulgaria

Croatia

Czech

Czech (QWERTY)

Exit Programming Mode

Enter Programming Mode

Denmark

France

Germany

Hungary

Exit Programming Mode

Enter Programming Mode

Switzerland

Sweden

Slovak

Slovak (QWERTY)

Exit Programming Mode

Enter Programming Mode

Turkish Q

Turkish F

Vietnam

Exit Programming Mode

Enter Programming Mode

Country Code Page

Code pages define the mapping of character codes to characters, select the code page with which the barcodes were created by scanning the appropriate barcode.

Traditional Chinese (Big 5) , Code Page / Excel ; Notepad

Traditional Chinese (Big 5) , Microsoft Office Word

Exit Programming Mode 

Enter Programming Mode

Korean , Code Page / Excel ; Notepad

Korean , Microsoft Office Word

Exit Programming Mode

Enter Programming Mode

SHIFT-JIS , Code Page / Excel ; Notepad

SHIFT-JIS , Microsoft Office Word

Exit Programming Mode

Enter Programming Mode

Thailand

Cyrillic

Turkish

Greek

Exit Programming Mode

Enter Programming Mode

West European Latin

Central and East European Latin

Hebrew

Vietnamese

Exit Programming Mode

Enter Programming Mode

Intercharacter Delay

An intercharacter delay of up to 10000 ms may be placed after transmission of a particular character of scanned.

Disable **

ASCII 00~127 Characters

Specified Character

Exit Programming Mode

Enter Programming Mode

USB CDC

If scanner is connected to the USB port on a host device, the USB CDC feature allows the host device to receive data in the way as a serial port does. A driver is needed when using this feature.

Example: Set the intercharacter delay 100 ms for ASCII 00~127.

1.Scan the **Enter Programming Mode** barcode
2.Scan the **ASCII 00~127 Characters** barcode
3.Scan the numeric barcodes "**1**" barcode from Numeric Barcodes in Appendix A.
4.Scan the numeric barcodes "**0**" barcode from Numeric Barcodes in Appendix A.
5.Scan the numeric barcodes "**0**" barcode from Numeric Barcodes in Appendix A.
6.Scan the **Exit Programming Mode** barcode

Example: Set the intercharacter delay 1500 ms for TAB.

1.Scan the **Enter Programming Mode** barcode
2.Scan the **Specified Character** barcode
3.Scan the **TAB** barcode from ASCII Code Barcodes in Appendix C.
4.Scan the numeric barcodes "**1**" barcode from Numeric Barcodes in Appendix A.
5.Scan the numeric barcodes "**5**" barcode from Numeric Barcodes in Appendix A.
6.Scan the numeric barcodes "**0**" barcode from Numeric Barcodes in Appendix A.
7.Scan the numeric barcodes "**0**" barcode from Numeric Barcodes in Appendix A.
8.Scan the **Exit Programming Mode** barcode

Example: Disable intercharacter delay for codes.

1.Scan the **Enter Programming Mode** barcode
2.Scan the **Disable** barcode
Scan the **Exit Programming Mode** barcode

USB CDC

Exit Programming Mode 

Enter Programming Mode

RS-232

When the scanner is connected to the RS-232 port of a host device, the scanner will automatically enable RS-232 communication.

RS-232

Exit Programming Mode

Enter Programming Mode

Baud Rate

This parameter sets the baud rate of RS-232. Set the baud rate to match the host requirements.

9600 **

19200

38400

57600

115200

230400

Exit Programming Mode

Enter Programming Mode

Data Bits

This parameter allows the digital scanner to interface with devices requiring a 7-bit or 8-bit ASCII protocol.

7 Bit

8 Bit **

Exit Programming Mode 

Enter Programming Mode

Parity Check

A parity check bit is the most significant bit of each ASCII coded character. Select the parity type according to host device requirements.

None **

Odd Parity

Even Parity

Exit Programming Mode

Enter Programming Mode

Stop Bits

The stop bit(s) at the end of each transmitted character marks the end of transmission of one character and prepares the receiving (host) device for the next character in the serial data stream. Set the number of stop bits (one or two) to match host device requirements.

1 Stop Bit **

2 Stop Bits

Exit Programming Mode 

Symbology Settings

Enter Programming Mode

Enable All Symbologies

If the **Enable All Symbologies** feature is enabled, the scanner will be able to read supported symbologies.

Enable All Symbologies

Exit Programming Mode

Enter Programming Mode

Disable All Symbologies

If the **Diable All Symbologies** feature is enabled, the scanner will not be able to read supported symbologies.

Daiable All Symbologies

Exit Programming Mode

Enter Programming Mode

Enable All 1D Symbologies

If the **Enable All 1D Symbologies** feature is enabled, the scanner will be able to read all 1D symbologies and disable 2D symbologies.

Only Enable 1D Symbologies

Exit Programming Mode

Enter Programming Mode

Enable All 2D Symbologies

If the **Enable All 2D Symbologies** feature is enabled, the scanner will be able to read all 2D symbologies and disable 1D symbologies.

Only Enable 2D Symbologies

Exit Programming Mode

Enter Programming Mode

UPC-A

To enable or disable UPC-A, scan the appropriate barcode below.

Enable UPC-A **

Disable UPC-A

Exit Programming Mode

Enter Programming Mode

UPC-A Preamble

Preamble characters are part of the UPC symbol, and include Country Code and System Character. There are two options for transmitting a UPC-A preamble to the host device: transmit System Character only and transmit no preamble. Select the appropriate option to match the host system.

Transmit System Character **

No Preamble

Exit Programming Mode 

Enter Programming Mode

Transmit UPC-A Check Digit

Scan the appropriate barcode below to transmit the barcode data with or without the UPC-A check digit.

Transmit UPC-A Check Digit **

Do Not Transmit UPC-A Check Digit

Exit Programming Mode 

Enter Programming Mode

Convert UPC-A to EAN-13

Enable this to convert 12-digit UPC-A to EAN-13 format before transmission.

Convert UPC-A to EAN-13

Disable conversion **

Exit Programming Mode

Enter Programming Mode

2-Digit / 5-Digit Add-On Code

Enable 2-Digit / 5-Digit Add-On Code

Disable 2-Digit / 5-Digit Add-On Code **

Exit Programming Mode

Enter Programming Mode

Add-On Code Required

When **UPC-A Add-On Code Required** is selected, the scanner will only read UPC-A barcodes that contain add-on codes.

UPC-A Add-On Code Required

UPC-A Add-On Code Not Required **

Exit Programming Mode

Enter Programming Mode

UPC-E

To enable or disable UPC-E, scan the appropriate barcode below.

Enable UPC-E **

Disable UPC-E

Exit Programming Mode

Enter Programming Mode

UPC-E Preamble

Preamble characters are part of the UPC symbol, and include Country Code and System Character. There are two options for transmitting a UPC-E preamble to the host device: transmit System Character only and transmit no preamble. Select the appropriate option to match the host system.

Transmit System Character **

No Preamble

Exit Programming Mode 

Enter Programming Mode

Transmit UPC-E Check Digit

Scan the appropriate barcode below to transmit the barcode data with or without the UPC-E check digit.

Transmit UPC-E Check Digit **

Do Not Transmit UPC-E Check Digit

Exit Programming Mode

Enter Programming Mode

Convert UPC-E to UPC-A

Enable this to convert UPC-E to UPC-A format before transmission.

Convert UPC-E to UPC-A

Disable conversion **

Exit Programming Mode

Enter Programming Mode

2-Digit / 5-Digit Add-On Code

Enable 2-Digit / 5-Digit Add-On Code

Disable 2-Digit / 5-Digit Add-On Code **

Exit Programming Mode

Enter Programming Mode

Add-On Code Required

When **UPC-A Add-On Code Required** is selected, the scanner will only read UPC-E barcodes that contain add-on codes.

UPC-E Add-On Code Required

UPC-E Add-On Code Not Required **

Exit Programming Mode

Enter Programming Mode

EAN-8

To enable or disable EAN-8, scan the appropriate barcode below.

Enable EAN-8 **

DisableEAN-8

Exit Programming Mode

Enter Programming Mode

Transmit EAN-8 Check Digit

Scan the appropriate barcode below to transmit the barcode data with or without the EAN-8 check digit.

Transmit EAN-8 Check Digit **

Do Not Transmit EAN-8 Check Digit

Exit Programming Mode

Enter Programming Mode

Convert EAN-8 to EAN-13

Enable this to convert EAN-8 to EAN-13 format before transmission.

Convert EAN-8 to EAN-13

Disable conversion **

Exit Programming Mode 

Enter Programming Mode

2-Digit / 5-Digit Add-On Code

Enable 2-Digit / 5-Digit Add-On Code

Disable 2-Digit / 5-Digit Add-On Code **

Exit Programming Mode

Enter Programming Mode

Add-On Code Required

When **EAN-8 Add-On Code Required** is selected, the scanner will only read EAN-8 barcodes that contain add-on codes.

EAN-8 Add-On Code Required

EAN-8 Add-On Code Not Required **

Exit Programming Mode

Enter Programming Mode

EAN-13

To enable or disable EAN-8, scan the appropriate barcode below.

Enable EAN-13 **

DisableEAN-13

Exit Programming Mode

Enter Programming Mode

Transmit EAN-13 Check Digit

Scan the appropriate barcode below to transmit the barcode data with or without the EAN-13 check digit.

Transmit EAN-13 Check Digit **

Do Not Transmit EAN-13 Check Digit

Exit Programming Mode

Enter Programming Mode

EAN-13 ISBN Conversion

Enable / disable conversion of EAN/JAN-13 to Bookland ISBN, scan the appropriate barcode below

Enable ISBN Conversion

Disable ISBN Conversion **

Exit Programming Mode

Enter Programming Mode

ISSN EAN

To enable or disable ISSN EAN, scan the appropriate barcode below

Enable ISSN EAN

Disable ISSN EAN **

Exit Programming Mode

Enter Programming Mode

2-Digit / 5-Digit Add-On Code

Enable 2-Digit / 5-Digit Add-On Code

Disable 2-Digit / 5-Digit Add-On Code **

Exit Programming Mode

Enter Programming Mode

Add-On Code Required

When **EAN-13 Add-On Code Required** is selected, the scanner will only read EAN-13 barcodes that contain add-on codes.

EAN-13 Add-On Code Required

EAN-13 Add-On Code Not Required **

Exit Programming Mode

Enter Programming Mode

Code 128 / GS1 -128

To enable or disable Code 128/GS1-128, scan the appropriate barcode below.

Enable Code 128 / GS1-128 **

Disable Code 128 / GS1-128

Exit Programming Mode

Enter Programming Mode

Set Lengths for Code 128

Set lengths for Code 128 to any length, one or two discrete lengths, or lengths within a specific range. The default is any length.

One Discrete Length:
Select this option to decode Code 128 containing a selected length. For example, to decode Code 128 with 10 characters, scan **One Discrete Length**, then scan 1 followed by 0 in Appendix A, Numeric Barcodes. .

Two Discrete Lengths:
Select this option to decode Code 128 containing either of two selected lengths. For example, to decode only Code 128 symbols containing either 6 or 12 characters, select **Two Discrete Lengths**, then scan **0**, **6**, **1**, and then 2 in Appendix A, Numeric Barcodes.

Length Within Range:
Select this option to decode a Code 128 symbol with a specific length range. For example, to decode Code 128 containing between 3 and 12 characters, first scan **Length Within Range**. Then scan **0**, **3**, **1,** and **2** in Appendix A, Numeric Barcodes.

Any Length:
Select this option to decode Code 128 symbols containing any number of characters within the digital scanner's capability.

One Discrete Length

Two Discrete Lengths

Exit Programming Mode

Enter Programming Mode

Length Within Range

Any Length **

Exit Programming Mode

Enter Programming Mode

Code 39

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

Enable Code 39 **

DisableCode 39

Exit Programming Mode

Enter Programming Mode

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. To enable or disable Code 39 Full ASCII, scan the appropriate barcode below.

Enable Code 39 Full ASCII

Disable Code 39 Full ASCII **

Exit Programming Mode 

Enter Programming Mode

Code 39 Check Digit Verification

Enable this feature to check the integrity of all Code 39 symbols to verify that the data complies with specified check digit algorithm.

Disable Code 39 Check Digit **

Enable and Transmit Check Digit

Enable and Do Not Transmit Check Digit

Exit Programming Mode

Enter Programming Mode

Transmit Start / Stop Character

Scan a barcode below to transmit Code 39 data with or without the Start / Stop Character (*) .

Transmit Start / Stop Character

Do Not Transmit Start / Stop Character **

Exit Programming Mode

Enter Programming Mode

Set Lengths for Code 39

Set lengths for Code 39 to any length, one or two discrete lengths, or lengths within a specific range. The default is any length.

One Discrete Length:
Select this option to decode Code 39 containing a selected length. For example, to decode Code 39 with 10 characters, scan **One Discrete Length**, then scan 1 followed by 0 in Appendix A, Numeric Barcodes. .

Two Discrete Lengths:
Select this option to decode Code 39 containing either of two selected lengths. For example, to decode only Code 39 symbols containing either 6 or 12 characters, select **Two Discrete Lengths**, then scan **0**, **6**, **1**, and then 2 in Appendix A, Numeric Barcodes.

Length Within Range:
Select this option to decode a Code 39 symbol with a specific length range. For example, to decode Code 39 containing between 3 and 12 characters, first scan **Length Within Range**. Then scan **0**, **3**, **1,** and **2** in Appendix A, Numeric Barcodes.

Any Length:
Select this option to decode Code 39 symbols containing any number of characters within the digital scanner's capability.

One Discrete Length

Two Discrete Lengths

Exit Programming Mode

Enter Programming Mode

Length Within Range

Any Length **

Exit Programming Mode

Enter Programming Mode

Convert Code 39 to Code 32

Code 32 is a variant of Code 39 used by the Italian pharmaceutical industry. Scan the appropriate barcode below to enable or disable converting Code 39 to Code 32.

Enable Convert Code 39 to Code 32

Disable Convert Code 39 to Code 32 **

Exit Programming Mode

Enter Programming Mode

Code 93

To enable or disable Code 93, scan the appropriate barcode below.

Enable Code 93 **

Disable Code 93

Exit Programming Mode

Enter Programming Mode

Set Lengths for Code 93

Set lengths for Code 39 to any length, one or two discrete lengths, or lengths within a specific range. The default is any length.

One Discrete Length:
Select this option to decode Code 93 containing a selected length. For example, to decode Code 93 with 10 characters, scan **One Discrete Length**, then scan 1 followed by 0 in Appendix A, Numeric Barcodes. .

Two Discrete Lengths:
Select this option to decode Code 93 containing either of two selected lengths. For example, to decode only Code 93 symbols containing either 6 or 12 characters, select **Two Discrete Lengths**, then scan **0**, **6**, **1**, and then 2 in Appendix A, Numeric Barcodes.

Length Within Range:
Select this option to decode a Code 93 symbol with a specific length range. For example, to decode Code 93 containing between 3 and 12 characters, first scan **Length Within Range**. Then scan **0**, **3**, **1,** and **2** in Appendix A, Numeric Barcodes.

Any Length:
Select this option to decode Code 93 symbols containing any number of characters within the digital scanner's capability.

One Discrete Length

Two Discrete Lengths

Exit Programming Mode

Enter Programming Mode

Length Within Range

Any Length **

Exit Programming Mode

Enter Programming Mode

Code 11

To enable or disable Code 11, scan the appropriate barcode below.

Enable Code 11

Disable Code 11 **

Exit Programming Mode

Enter Programming Mode

Check Digit Verification

Enable this feature to check the Code 11 Check Digit to verify that the data complies with the specified check digit algorithm.

Disable **

1-digit checksum checking

2-digit checksum checking

Exit Programming Mode

Enter Programming Mode

Transmit Code 11 Check Digit

Scan the appropriate barcode below to transmit the barcode data with or without the Code 11 check digit.

Transmit Code 11 Check Digit **

Do Not Transmit Code 11 Check Digit

Exit Programming Mode

Enter Programming Mode

Set Lengths for Code 11

Set lengths for Code 11 to any length, one or two discrete lengths, or lengths within a specific range. The default is any length.

One Discrete Length:
Select this option to decode Code 11 containing a selected length. For example, to decode Code 11 with 10 characters, scan **One Discrete Length**, then scan 1 followed by 0 in Appendix A, Numeric Barcodes. .

Two Discrete Lengths:
Select this option to decode Code 11 containing either of two selected lengths. For example, to decode only Code 11 symbols containing either 6 or 12 characters, select **Two Discrete Lengths**, then scan **0**, **6**, **1**, and then 2 in Appendix A, Numeric Barcodes.

Length Within Range:
Select this option to decode a Code 11 symbol with a specific length range. For example, to decode Code 11 containing between 3 and 12 characters, first scan **Length Within Range**. Then scan **0**, **3**, **1,** and **2** in Appendix A, Numeric Barcodes.

Any Length:
Select this option to decode Code 11 symbols containing any number of characters within the digital scanner's capability.

One Discrete Length

Two Discrete Lengths

Exit Programming Mode

Enter Programming Mode

Length Within Range

Any Length **

Exit Programming Mode

Enter Programming Mode

Codabar

To enable or disable Codabar, scan the appropriate barcode below.

Enable Codabar **

Disable Codabar

Exit Programming Mode

Enter Programming Mode

Check Digit Verification

Enable this feature to check the Codabar Mod 16 Check Digit to verify that the data complies with the specified check digit algorithm.

Disable **

Transmit Check Digit After Verification

Do Not Transmit Check Digit After Verification

Exit Programming Mode

Enter Programming Mode

Transmit Start/Stop Character

Scan the appropriate barcode below to transmit the barcode data with or without the Codabar Start/Stop Character.

Transmit Codabar Start/Stop Character

Do Not Transmit Codabar Start/Stop Character **

Exit Programming Mode

Enter Programming Mode

Set Lengths for Codabar

Set lengths for Codabar to any length, one or two discrete lengths, or lengths within a specific range. The default is any length.

One Discrete Length:
Select this option to decode Codabar containing a selected length. For example, to decode Codabar with 10 characters, scan **One Discrete Length**, then scan 1 followed by 0 in Appendix A, Numeric Barcodes. .

Two Discrete Lengths:
Select this option to decode Codabar containing either of two selected lengths. For example, to decode only Codabar symbols containing either 6 or 12 characters, select **Two Discrete Lengths**, then scan **0**, **6**, **1**, and then 2 in Appendix A, Numeric Barcodes.

Length Within Range:
Select this option to decode a Codabar symbol with a specific length range. For example, to decode Codabar containing between 3 and 12 characters, first scan **Length Within Range**. Then scan **0**, **3**, **1,** and **2** in Appendix A, Numeric Barcodes.

Any Length:
Select this option to decode Codabar symbols containing any number of characters within the digital scanner's capability.

One Discrete Length

Two Discrete Lengths

Exit Programming Mode

Enter Programming Mode

Length Within Range

Any Length **

Exit Programming Mode

Enter Programming Mode

Plessey

To enable or disable Plessey, scan the appropriate barcode below.

Enable Plessey

Disable Plessey **

Exit Programming Mode

Enter Programming Mode

Set Lengths for Plessey

Set lengths for Plessey to any length, one or two discrete lengths, or lengths within a specific range. The default is any length.

One Discrete Length:
Select this option to decode Plessey containing a selected length. For example, to decode Plessey with 10 characters, scan **One Discrete Length**, then scan 1 followed by 0 in Appendix A, Numeric Barcodes. .

Two Discrete Lengths:
Select this option to decode Plessey containing either of two selected lengths. For example, to decode only Plessey symbols containing either 6 or 12 characters, select **Two Discrete Lengths**, then scan **0**, **6**, **1**, and then 2 in Appendix A, Numeric Barcodes.

Length Within Range:
Select this option to decode a Plessey symbol with a specific length range. For example, to decode Plessey containing between 3 and 12 characters, first scan **Length Within Range**. Then scan **0**, **3**, **1,** and **2** in Appendix A, Numeric Barcodes.

Any Length:
Select this option to decode Plessey symbols containing any number of characters within the digital scanner's capability.

One Discrete Length

Two Discrete Lengths

Exit Programming Mode

Enter Programming Mode

Length Within Range

Any Length **

Exit Programming Mode

Enter Programming Mode

MSI

To enable or disable MSI, scan the appropriate barcode below.

Enable MSI **

Disable MSI

Exit Programming Mode

Enter Programming Mode

Transmit MSI Check Digit(s)

Scan a barcode below to transmit MSI data with or without the check digit.

Transmit MSI Check Digit(s) **

Do Not Transmit MSI Check Digit(s)

Exit Programming Mode

Enter Programming Mode

MSI Check Digit Algorithm

Check characters are optional for MSI and can be added as the last one or two characters, which are calculated values used to verify the integrity of the data. Scan a barcode below to transmit MSI data with or without the check digit.

Disable

One Check Character, MOD10 **

Two Check Characters, MOD10/MOD10

Two Check Characters, MOD10/MOD11

Exit Programming Mode

Enter Programming Mode

Set Lengths for MSI

Set lengths for MSI to any length, one or two discrete lengths, or lengths within a specific range. The default is any length.

One Discrete Length:
Select this option to decode MSI containing a selected length. For example, to decode MSI with 10 characters, scan **One Discrete Length**, then scan 1 followed by 0 in Appendix A, Numeric Barcodes. .

Two Discrete Lengths:
Select this option to decode MSI containing either of two selected lengths. For example, to decode only MSI symbols containing either 6 or 12 characters, select **Two Discrete Lengths**, then scan **0**, **6**, **1**, and then 2 in Appendix A, Numeric Barcodes.

Length Within Range:
Select this option to decode a MSI symbol with a specific length range. For example, to decode MSI containing between 3 and 12 characters, first scan **Length Within Range**. Then scan **0**, **3**, **1,** and **2** in Appendix A, Numeric Barcodes.

Any Length:
Select this option to decode MSI symbols containing any number of characters within the digital scanner's capability.

One Discrete Length

Two Discrete Lengths

Exit Programming Mode

Enter Programming Mode

Length Within Range

Any Length **

Exit Programming Mode

Enter Programming Mode

Interleaved 2 of 5

To enable or disable Interleaved 2 of 5, scan the appropriate barcode below.

Enable Interleaved 2 of 5 **

Disable Interleaved 2 of 5

Exit Programming Mode

Enter Programming Mode

Check Character Verification

A check character is optional for Interleaved 2 of 5 and can be added as the last character. It is a calculated value used to verify the integrity of the data.

Disable **

Transmit Check Character After Verification

Do Not Transmit Check Character After Verification

Exit Programming Mode

Enter Programming Mode

Set Lengths for Interleaved 2 of 5

Set lengths for Interleaved 2 of 5to any length, one or two discrete lengths, or lengths within a specific range. The default is any length.

One Discrete Length:
Select this option to decode Interleaved 2 of 5containing a selected length. For example, to decode Interleaved 2 of 5 with 10 characters, scan **One Discrete Length,** then scan 1 followed by 0 in Appendix A, Numeric Barcodes. .

Two Discrete Lengths:
Select this option to decode Interleaved 2 of 5containing either of two selected lengths. For example, to decode only Interleaved 2 of 5 symbols containing either 6 or 12 characters, select **Two Discrete Lengths**, then scan **0**, **6**, **1**, and then 2 in Appendix A, Numeric Barcodes.

Length Within Range:
Select this option to decode a Interleaved 2 of 5 symbol with a specific length range. For example, to decode Interleaved 2 of 5containing between 3 and 12 characters, first scan **Length Within Range**. Then scan **0**, **3**, **1,** and **2** in Appendix A, Numeric Barcodes.

Any Length:
Select this option to decode Interleaved 2 of 5 symbols containing any number of characters within the digital scanner's capability.

One Discrete Length

Two Discrete Lengths

Exit Programming Mode

Enter Programming Mode

Length Within Range

Any Length **

Exit Programming Mode

Enter Programming Mode

Matrix 2 of 5

To enable or disable Matrix 2 of 5, scan the appropriate barcode below.

Enable Matrix 2 of 5

Disable Matrix 2 of 5 **

Exit Programming Mode 

Enter Programming Mode

Set Lengths for Matrix 2 of 5

Set lengths for Matrix 2 of 5 to any length, one or two discrete lengths, or lengths within a specific range. The default is any length.

One Discrete Length:
Select this option to decode Matrix 2 of 5 containing a selected length. For example, to decode Matrix 2 of 5 with 10 characters, scan **One Discrete Length**, then scan 1 followed by 0 in Appendix A, Numeric Barcodes. .

Two Discrete Lengths:
Select this option to decode Matrix 2 of 5 containing either of two selected lengths. For example, to decode only Matrix 2 of 5 symbols containing either 6 or 12 characters, select **Two Discrete Lengths**, then scan **0**, **6**, **1**, and then 2 in Appendix A, Numeric Barcodes.

Length Within Range:
Select this option to decode a Matrix 2 of 5 symbol with a specific length range. For example, to decode Matrix 2 of 5 containing between 3 and 12 characters, first scan **Length Within Range**. Then scan **0**, **3**, **1,** and **2** in Appendix A, Numeric Barcodes.

Any Length:
Select this option to decode Matrix 2 of 5 symbols containing any number of characters within the digital scanner's capability.

One Discrete Length

Two Discrete Lengths

Exit Programming Mode

Enter Programming Mode

Length Within Range

Any Length **

Exit Programming Mode

Enter Programming Mode

IATA 2 of 5

To enable or disable IATA 2 of 5, scan the appropriate barcode below.

Enable IATA 2 of 5

Disable IATA 2 of 5 **

Exit Programming Mode

Enter Programming Mode

Straight 2 of 5

To enable or disable Straight 2 of 5, scan the appropriate barcode below.

Enable Straight 2 of 5

Disable Straight 2 of 5 **

Exit Programming Mode

Enter Programming Mode

Pharmacode

To enable or disable Pharmacode, scan the appropriate barcode below.

Enable Pharmacode

Disable Pharmacode **

Exit Programming Mode

Enter Programming Mode

GS1 DataBar 14

To enable or disable GS1 DataBar 14, scan the appropriate barcode below.

Enable GS1 DataBar 14 **

Disable GS1 DataBar 14

Exit Programming Mode

Enter Programming Mode

GS1 DataBar 14 Stacked

To enable or disable GS1 DataBar 14 Stacked, scan the appropriate barcode below.

Enable GS1 DataBar 14 Stacked

Disable GS1 DataBar 14 Stacked **

Exit Programming Mode

Enter Programming Mode

Transmit GS1 DataBar 14 AI（01）Digit

Scan the appropriate barcode below to transmit the barcode data with or without the GS1 DataBar 14AI (01) digit.

Transmit AI（01）Digit **

Do Not Transmit AI（01）Digit

Exit Programming Mode

Enter Programming Mode

GS1 DataBar Expanded

To enable or disable GS1 DataBar Expanded, scan the appropriate barcode below.

Enable GS1 DataBar Expanded **

Disable GS1 DataBar Expanded

Exit Programming Mode

Enter Programming Mode

GS1 DataBar Expanded Stacked

To enable or disable GS1 DataBar Expanded Stacked, scan the appropriate barcode below.

Enable GS1 DataBar Expanded Stacked

Disable GS1 DataBar Expanded Stacked **

Exit Programming Mode 

Enter Programming Mode

Transmit GS1 DataBar Expanded AI（01）Digit

Scan the appropriate barcode below to transmit the barcode data with or without the GS1 DataBar Expanded AI (01) digit.

Transmit AI（01）Digit **

Do Not Transmit AI（01）Digit

Exit Programming Mode

Enter Programming Mode

GS1 DataBar Limited

To enable or disable GS1 DataBar 14 Limites, scan the appropriate barcode below

Enable GS1 DataBar Limited**

DisableGS1 DataBar Limited

Exit Programming Mode

Enter Programming Mode

Transmit GS1 DataBar Limited AI（01）Digit

Scan the appropriate barcode below to transmit the barcode data with or without the GS1 DataBar Limited AI (01) digit.

Transmit AI（01）Digit **

Do Not Transmit AI（01）Digit

Exit Programming Mode

Enter Programming Mode

Composite Code-A

To enable or disable Composite Code-A, scan the appropriate barcode below.

Enable Composite Code-A

Disable Composite Code-A **

Exit Programming Mode

Enter Programming Mode

Composite Code-B

To enable or disable Composite Code-B, scan the appropriate barcode below.

Enable Composite Code-B

Disable Composite Code-B **

Exit Programming Mode

Enter Programming Mode

Composite Code-C

To enable or disable Composite Code-C, scan the appropriate barcode below.

Enable Composite Code-C

Disable Composite Code-C **

Exit Programming Mode

Enter Programming Mode

PDF417

To enable or disable PDF417, scan the appropriate barcode below.

Enable PDF417 **

Disable PDF417

Exit Programming Mode

Enter Programming Mode

Micro PDF417

To enable or disable Micro PDF417, scan the appropriate barcode below.

Enable Micro PDF417 **

Disable Micro PDF417

Exit Programming Mode 

Enter Programming Mode

Data Matrix

To enable or disable Data Matrix, scan the appropriate barcode below.

Enable Data Matrix **

Disable Data Matrix

Exit Programming Mode

Enter Programming Mode

Rectangular Data Matrix

To enable or disable Rectangular Data Matrix, scan the appropriate barcode below.

Enable Rectangular Data Matrix **

DisableRectangular Data Matrix

Exit Programming Mode

Enter Programming Mode

Data Matrix Mirrored

Select a mirror image Data Matrix setting:
•**Non-Mirrored Only** - Scanner decodes non-mirrored Data Matrix barcodes only.
•**Mirrored Auto detect** - Scanner decodes both mirrored and non-mirrored Data Matrix barcodes.

Mirrored Auto detect **

Non-Mirrored Only

Exit Programming Mode 

Enter Programming Mode

QR

To enable or disable QR, scan the appropriate barcode below.

Enable QR **

Disable QR

Exit Programming Mode

Enter Programming Mode

QR Mirrored

Select a mirror image QR setting:
•**Non-Mirrored Only** - Scanner decodes non-mirrored QR barcodes only.
•**Mirrored Auto detect** - Scanner decodes both mirrored and non-mirrored QR barcodes.

Mirrored Auto detect **

Non-Mirrored Only

Exit Programming Mode

Enter Programming Mode

Micro QR

To enable or disable Micro QR, scan the appropriate barcode below.

Enable Micro QR **

Disable Micro QR

Exit Programming Mode

Enter Programming Mode

Aztec

To enable or disable Aztec, scan the appropriate barcode below.

Enable Aztec

Disable Aztec **

Exit Programming Mode

Enter Programming Mode

Aztec Mirrored

Select a mirror image Aztec setting:
•**Non-Mirrored Only** - Scanner decodes non-mirrored Aztec barcodes only.
•**Mirrored Auto detect** - Scanner decodes both mirrored and non-mirrored Aztec barcodes.

Mirrored Auto detect **

Non-Mirrored Only

Exit Programming Mode

Enter Programming Mode

MaxiCode

To enable or disable MaxiCode, scan the appropriate barcode below.

Enable MaxiCode

Disable MaxiCode **

Exit Programming Mode

Enter Programming Mode

DotCode

To enable or disable DotCode, scan the appropriate barcode below.

Enable DotCode

Disable DotCode **

Exit Programming Mode

Prefix & Suffix

AIM ID Settings

Enter Programming Mode

AIM ID

AIM (Automatic Identification Manufacturers) ID defines symbology identifier (For the details, see the “AIM ID Table”). If AIM ID prefix is enabled, the scanner will add the symbology identifier before the scanned data
after decoding.

Disable AIM ID**

Enable AIM ID

Exit Programming Mode 

AIM ID Table

Symbology	ID	Modifier	Description
UPC / EAN	E	0	Standard EAN/UPC (13 digits).
		3	EAN/UPC with 2/5-digit supplemental appended.
		4	EAN-8 .
Code 128	C	0	Standard.
		1	Function code 1 in first character position.
		2	Function code 1 in second character position.

Symbology	ID	Modifier	Description
Code 39	A	0	No checksum checking or Full ASCII conversion.
		1	Check character checked and included in decode string.
		3	Check character checked and stripped from decode string.
		4	No check character with Full ASCII conversion.
		5	Same as '1' with Full ASCII conversion.
		7	Same as '3' with Full ASCII conversion.
Code 93	G	0	Standard.
Code 11	H	0	1-digit or 2-digit check characters checked and included in decode string.
		2	Check character(s) checked and stripped from decode string .

Symbology	ID	Modifier	Description
Codabar	F	0	No checksum checking.
		2	Check character checked and included in decode string.
		6	Check character checked and stripped from decode string.
Plessey	P	0	Standard Plessey.
MSI	M	0	No checksum checking
		1	Mod 10 checked and included in decode string.
		2	Mod 11 and Mod 10 checked and included in decode string.
		3	Two Mod 10 checked and included in decode string.
		5	Mod 10 checked and stripped from decode string.
		6	Mod 11 and Mod 10 checked and stripped from decode string.
		7	Two Mod 10 checked and stripped from decode string.

Symbology	ID	Modifier	Description
I 2 of 5	I	0	No checksum checking.
		1	Check character checked and included in decode string.
		3	Check character checked and stripped from decode string.
IATA 2 of 5	R	0	Standard.
Straight 2 of 5	S	0	Standard.
Matrix 2 of 5	X	M	No checksum checking (non-standard).
		0	Check character checked and included in decode string.
		1	Check character checked and stripped from decode string.
Pharmacode	X	P	Non-standard.
GS1 DataBar	e	0	For all types of GS1 DataBar symbols.
Composite	e	0	CC-A, CC-B, CC-C.

Symbology	ID	Modifier	Description
PDF417	L	0	Reader set to conform to 1994 PDF417 Spec.
		1	Support ECI. All characters 92 are doubled.
		2	Basic Channel operation. Char 92 not doubled.
Micro PDF417	L	0	Reader set to conform to 1994 PDF417 Spe.c
		1	Support ECI. All characters 92 are doubled.
		2	Basic Channel operation. Char 92 not doubled.
		3	Code 128 emulation: implied FNC1 in first position.
		4	Code 128 emulation: implied FNC1 after initial letter or pair of digits.
		5	Code 128 emulation: no implied FNC1.

Symbology	ID	Modifier	Description
Data Matrix	d	0	ECC 000 – 140 , not supported.
		1	ECC 200.
		2	ECC 200, FNC1 in first or fifth position.
		3	ECC 200, FNC1 in second or sixth position.
		4	ECC 200, ECI protocol implemented.
		5	ECC 200, FNC1 in first or fifth position, ECI protocol implemented
		6	ECC 200, FNC1 in second or sixth position, ECI protocol implemented

Symbology	ID	Modifier	Description
QR / Micro QR	Q	0	AIM ISS 97-001 (Model 1) symbol.
		1	QR 2005 (Model 2), ECI protocol not implemented.
		2	QR 2005, ECI protocol implemented.
		3	QR 2005, ECI protocol not implemented, FNC1 implied in first position.
		4	QR 2005, ECI protocol implemented, FNC1 implied in first position.
		5	QR 2005, ECI protocol not implemented, FNC1 implied in second position.
		6	QR 2005, ECI protocol implemented, FNC1 implied in second position
MaxiCode	U	0	Standard

Symbology	ID	Modifier	Description
Aztec	z	0	No Options.
		1	FNC1 in first position.
		2	FNC1 after initial letter or pair of digits.
		3	ECI protocol implemented.
		4	ECI protocol implemented, FNC1 in first position
		5	ECI protocol implemented , FNC1 after initial letter or pair of digits
		6	Stuctured Append header included
		7	Stuctured Append header included, FNC1 in first position.
		8	Stuctured Append header included, FNC1 after initial letter or pair of digits

Symbology	ID	Modifier	Description
		9	Stuctured Append header included, ECI protocol implemented.
		A	Stuctured Append header included, FNC1 in first position, ECI protocol implemented.
		B	Stuctured Append header included, FNC1 after initial letter or pair of digits, ECI protocol implemented.
		C	Aztec Rune symbol.
Dot Code	J	0	Generic data, neither Case A nor Case B below.
		1	Case A – GS1-formatted data.
		2	Case B – application –specific data indicated by opening letter or digits.
		3	Neither Case A nor Case B, with an ECI in the segment and “\”s doubled.
		4	Case A with an ECI in the segment and “\”s doubled.
		5	Case B with an ECI in the segment and “\”s doubled.

Prefix Settings

Enter Programming Mode

Prefix for All Symbologies

If **Prefix for All Symbologies** is enabled, you are allowed to append to the data a user-defined prefix for all symbologies.

Example: Set Prefix “ABCD”for all symbologies

1.Scan the **Enter Programming Mode** barcode

2.Scan the **Set Prefix for All Symbologies** barcode

3.Scan the ASCII barcodes "A" barcode from ASCII Barcodes in Appendix D

4.Scan the ASCII barcodes "B" barcode from Numeric Barcodes in Appendix D

5.Scan the ASCII barcodes "C" barcode from Numeric Barcodes in Appendix D

6.Scan the ASCII barcodes "D" barcode from Numeric Barcodes in Appendix D

7.Scan the **Exit Programming Mode** barcode

Example: Disable Prefix for all symbologies

1.Scan the **Enter Programming Mode** barcode

2.Scan the **Dsiable Prefix for All Symbologies** barcode

3.Scan the **Exit Programming Mode** barcode

Disable Prefix for All Symbologies **

Exit Programming Mode 

Enter Programming Mode

Set Prefix for All Symbologies

Exit Programming Mode

Enter Programming Mode

Symbology Prefix

If **Symbology Prefix** is enabled, you are allowed to append to the data a user-defined prefix for a specific symbology .

Example: Set Prefix “80”for QR

1.Scan the **Enter Programming Mode** barcode

2.Scan the **Set Symbology Prefix** barcode

3.Scan the **QR** barcode from Symbologies Barcodes in Appendix B

4.Scan the numeric barcodes "**8**" barcode from Numeric Barcodes in Appendix A

5.Scan the numeric barcodes "**0**" barcode from Numeric Barcodes in Appendix A

6.Scan the **Exit Programming Mode** barcode

Example: Disable Prefix for QR

1.Scan the **Enter Programming Mode** barcode

2.Scan the **Disable Symbology Prefix** barcode

3.Scan the **QR** barcode from Symbologies Barcodes in Appendix B.

4.Scan the **Exit Programming Mode** barcode

Disable Symbology Prefix

Exit Programming Mode

Enter Programming Mode

Set Symbology Prefix

Exit Programming Mode

Suffix Settings

Enter Programming Mode

Suffix for All Symbologies

If **Suffix for All Symbologies** is enabled, you are allowed to append to the data a user-defined suffix for all symbologies.

Example: Set Suffix“XYZ”for all symbologies

1.Scan the **Enter Programming Mode** barcode

2.Scan the **Set Suffix for All Symbologies** barcode

3.Scan the ASCII barcodes "**X**" barcode from ASCII Barcodes in Appendix C

4.Scan the ASCII barcodes "**Y**" barcode from Numeric Barcodes in Appendix C

5.Scan the ASCII barcodes "**Z**" barcode from Numeric Barcodes in Appendix C

6.Scan the **Exit Programming Mode** barcode

Example: Disable Suffix for all symbologies

1.Scan the E**nter Programming Mode** barcode

2.Scan the **Dsiable Suffix for All Symbologies** barcode

3.Scan the **Exit Programming Mode** barcode

Disable Suffix for All Symbologies **

Exit Programming Mode

Enter Programming Mode

Set Suffix for All Symbologies

Exit Programming Mode

Enter Programming Mode

Symbology Suffix

If **Symbology Suffix** is enabled, you are allowed to append to the data a user-defined suffix for a specific symbology .

Example: Set Suffix “@1”for QR

1.Scan the **Enter Programming Mode** barcode

2.Scan the **Set Symbology Suffix** barcode

3.Scan the **QR** barcode from Symbologies Barcodes in Appendix B

4.Scan the ASCII barcodes **"@"** barcode from ASCII Barcodes in Appendix C

5.Scan the numeric barcodes "**1**" barcode from Numeric Barcodes in Appendix A

6.Scan the **Exit Programming Mode** barcode

Example: Disable Suffix for QR

Scan the **Enter Programming Mode** barcode

Scan the **Disable Symbology Suffix** barcode

Scan the **QR** barcode from Symbologies Barcodes in Appendix B

Scan the **Exit Programming Mode** barcode

Disable Symbology Suffix

Exit Programming Mode 

Enter Programming Mode

Set Symbology Suffix

Exit Programming Mode

Enter Programming Mode

Terminating Character

A terminating character such as carriage return (CR) or carriage return/line feed pair (CRLF) can only be used to mark the end of data.

None

Set Terminating Character to CR (0x0D) **

Set Terminating Character to CR LF (0x0D,0x0A)

Set Terminating Character to TAB (0x09)

Exit Programming Mode

Data Editing

Enter Programming Mode

Caps Lock

The **Caps Lock On** options can invert upper and lower case characters contained in barcode data.

Disable Caps Lock **

Enable Caps Lock

Exit Programming Mode 

Enter Programming Mode

Case Conversion

Scan the appropriate barcode below to convert all barcode data to your desired case.

No Case Conversion **

Upper Case

Lower Case

Exit Programming Mode

Enter Programming Mode

Convert GS Code to Other ASCII Code

Example: Convert GS to #

1.Scan the **Enter Programming Mode** barcode

2.Scan the **Set GS (0x1D) to Other ASCII Code** barcode

3.Scan the ASCII barcodes **#** barcode from ASCII Barcodes in Appendix C

4.Scan the **Exit Programming Mode** barcode

Example: Disable GS Conversion

Scan the **Enter Programming Mode** barcode

Scan the **Disable GS Code Conversion** barcode

Scan the **Exit Programming Mode** barcode

Disable GS Code Conversion **

Exit Programming Mode 

Enter Programming Mode

Set GS (0x1D) to Other ASCII Code

Exit Programming Mode

Truncate Data

Enter Programming Mode

Truncate Leading Data

This parameter sets the number of leading data to be truncated. It is programmable in 1 increment from 1 to 20 characters. The default setting is 0.

Example: Truncate 8 characters of leading data for all barcodes
Scan the **Enter Programming Mode** barcode
Scan the **Truncate Leading Data For All** Barcodes
Scan the numeric barcodes "**8**" barcode from Numeric Barcodes in Appendix
Scan the **Exit Programming Mode** barcode

Example: Truncate 2 characters of leading data for code 128
Scan the **Enter Programming Mode** barcode
Scan the **Truncate Leading Data For Specified Barcode**
Scan the **Code 128** barcode from Symbologies Barcodes in Appendix
Scan the numeric barcodes "2" barcode from Numeric Barcodes in Appendix
Scan the **Exit Programming Mode** barcode

Example: Disable truncate leading data for all barcodes
Scan the **Enter Programming Mode** barcode
Scan the **Truncate Leading Data For All Barcodes**
Scan the numeric barcodes "**0**" barcode from Numeric Barcodes in Appendix
Scan the **Exit Programming Mode** barcode

Truncate Leading Data For All Barcodes

Exit Programming Mode

Enter Programming Mode

Truncate Leading Data For Specified Barcode

Exit Programming Mode

Enter Programming Mode

Truncate Ending Data

This parameter sets the number of ending data to be truncated. It is programmable in 1 increment from 1 to 20 characters. The default setting is 0.

Example: Truncate 5 characters of leading data for all barcodes
Scan the **Enter Programming Mode** barcode
Scan the **Truncate Ending Data For All** Barcodes
Scan the numeric barcodes "**5**" barcode from Numeric Barcodes in Appendix
Scan the **Exit Programming Mode** barcode

Example: Truncate 1 characters of leading data for code 39
Scan the **Enter Programming Mode** barcode
Scan the **Truncate Ending Data For Specified Barcode**
Scan the **Code 39** barcode from Symbologies Barcodes in Appendix
Scan the numeric barcodes "1" barcode from Numeric Barcodes in Appendix
Scan the **Exit Programming Mode** barcode

Example: Disable truncate leading data for all barcodes
Scan the **Enter Programming Mode** barcode
Scan the **Truncate Ending Data For All Barcodes**
Scan the numeric barcodes "**0**" barcode from Numeric Barcodes in Appendix
Scan the **Exit Programming Mode** barcode

Truncate Ending Data For All Barcodes

Exit Programming Mode 

Enter Programming Mode

Truncate Ending Data For Specified Barcode

Exit Programming Mode

Default Settings

Enter Programming Mode

Factory Defaults

Scan the **Set Factory Defaults** barcode below to set the scanner to factory default values

Set Factory Defaults

Exit Programming Mode

Enter Programming Mode

Custom Defaults

Write to Custom Defaults
Custom default parameters can be configured to set unique default values for all parameters. After changing all parameters to the desired default values, scan the **Write to Custom Defaults**
barcode below to configure custom defaults.

Restore Custom Defaults
If custom default values were configured (see **Write to Custom Defaults**), the custom default values are set for all parameters each time the **Restore Defaults** barcode below is scanned.

Write to Custom Defaults

Restore Custom Defaults

Exit Programming Mode 

Appendix

Appendix A - Numeric Barcodes

0

1

2

3

4

5

6

7

8

9

Appendix B - Symbologies Barcodes

UPC-A

UPC-E

EAN-8

EAN-13

Code 128

Code 39

Code 93

Code 32

Code 11

Codabar

Plessey

MSI

Interleaved 2 of 5

IATA 2 of 5

Matrix 2 of 5

Straight 2 of 5

Pharmacode

GS1 DataBar 14

GS1 DataBar Expanded

GS1 DataBar Limited

GS1 DataBar 14 Stacked

GS1 DataBar Expanded Stacked

Composite Code-A

Composite Code-B

Composite Code-C

PDF417

Micro PDF417

Data Matrix

QR

Micro QR

Aztec

MaxiCode

Appendix C - ASCII Code Barcodes

HEX	Decimal	**ASCII**	**Function Key Mapping**		
			Disable	Control-Key	**Alt+Unicode**
00 (NUL)	0	 NUL	Null	Ctrl+@	Alt + 000
01 (SOH)	1	 SOH	Home	Ctrl+A	Alt + 001
02 (STX)	2	 STX	Alt	Ctrl+B	Alt + 002

HEX	Decimal	**ASCII**	**Function Key Mapping**		
			Disable	Control-Key	**Alt+Unicode**
03 (ETX)	3	 ETX	Up Arrow	Ctrl+C	Alt + 003
04 (EOT)	4	 EOT	Null	Ctrl+D	Alt + 004
05 (ENQ)	5	 ENQ	Ctrl	Ctrl+E	Alt + 005

HEX	Decimal	**ASCII**	**Function Key Mapping**		
			Disable	Control-Key	**Alt+Unicode**
06 (ACK)	6	 ACK	Right Arrow	Ctrl+F	Alt + 006
07 (BEL)	7	 BEL	Null	Ctrl+G	Alt + 007
	8	 BS	Left Arrow	Ctrl+H	Alt + 008

HEX	Decimal	**ASCII**	**Function Key Mapping**		
			Disable	Control-Key	**Alt+Unicode**
09	9	 TAB	TAB	Ctrl+I	Alt + 009
0A (LF)	10	 LF	Down Arrow	Ctrl+J	Alt + 010
0B (VT)	11	 VT	Null	Ctrl+K	Alt + 011

HEX	Decimal	ASCII	Function Key Mapping		
			Disable	Control-Key	Alt+Unicode
0C (FF)	12	 FF	Null	Ctrl+L	Alt + 012
0D (CR)	13	 **CR**	**Enter**	**Enter**	**Enter**
0E (SO)	14	 SO	Page Up	Ctrl+N	Alt + 014

HEX	Decimal	**ASCII**	**Function Key Mapping**		
			Disable	Control-Key	**Alt+Unicode**
0F (SI)	15	 SI	Page Down	Ctrl+O	Alt + 015
10 (DLE)	16	 DLE	F11	Ctrl+P	Alt + 016
11 (DC1)	17	 DC1	Null	Ctrl+Q	Alt + 017

HEX	Decimal	**ASCII**	**Function Key Mapping**		
			Disable	Control-Key	**Alt+Unicode**
12 (DC2)	18	 DC2	Null	Ctrl+R	Alt + 018
13 (DC3)	19	 DC3	Null	Ctrl+S	Alt + 019
14 (DC4)	20	 DC4	Null	Ctrl+T	Alt + 020

HEX	Decimal	**ASCII**	**Function Key Mapping**		
			Disable	Control-Key	**Alt+Unicode**
15 (NAK)	21	 NAK	F12	Ctrl+U	Alt + 021
16 (SYN)	22	 SYN	F1	Ctrl+V	Alt + 022
17 (ETB)	23	 ETB	F2	Ctrl+W	Alt + 023

HEX	Decimal	**ASCII**	**Function Key Mapping**		
			Disable	**Control-Key**	**Alt+Unicode**
18 (CAN)	24	 CAN	F3	Ctrl+X	Alt + 024
19 (CAN)	25	 EM	F4	Ctrl+Y	Alt + 025
1A (SUB)	26	 SUB	F5	Ctrl+Z	Alt + 026

HEX	Decimal	**ASCII**	**Function Key Mapping**		
			Disable	Control-Key	**Alt+Unicode**
1B (ESC)	27	 ESC	F6	Ctrl+[	Alt + 027
1C (FS)	28	 FS	F7	Ctrl+\	Alt + 028
1D (GS)	29	 GS	F8	Ctrl+]	Alt + 029

HEX	Decimal	**ASCII**	**Function Key Mapping**		
			Disable	Control-Key	**Alt+Unicode**
1E (US)	30	 RS	F9	Ctrl+6	Alt + 030
1F (US)	31	 US	F10	Ctrl+-	Alt + 031

HEX	Decimal	**ASCII**	
20	32	**SPACE**	
21	33	**!**	
22	34	**"**	
23	35	**#**	

HEX	Decimal	**ASCII**	
24	36	$	
25	37	%	
26	38	&	
27	39	'	

HEX	Decimal	**ASCII**	
28	40	(	
29	41	)	
2A	42	*	
2B	43	+	

HEX	Decimal	**ASCII**	
2C	44	,	
2D	45	-	
2E	46	.	
2F	47	/	

HEX	Decimal	**ASCII**	
30	48	**0**	
31	49	**1**	
32	50	**2**	
33	51	**3**	

HEX	Decimal	**ASCII**	
34	52	**4**	
35	53	**5**	
36	54	**6**	
37	55	**7**	

HEX	Decimal	**ASCII**	
38	56	**8**	
39	57	**9**	
3A	58	**:**	
3B	59	**;**	

HEX	Decimal	**ASCII**	
3C	60	**<**	
3D	61	**=**	
3E	62	**>**	
3F	63	**?**	

HEX	Decimal	**ASCII**	
40	64	@	
41	65	**A**	
42	66	**B**	
43	67	**C**	

HEX	Decimal	**ASCII**	
44	68	D	
45	69	**E**	
46	70	**F**	
47	71	**G**	

HEX	Decimal	**ASCII**	
48	72	H	
49	73	**I**	
4A	74	**J**	
4B	75	**K**	

HEX	Decimal	**ASCII**	
4C	76	L	
4D	77	M	
4E	78	N	
4F	79	**O**	

HEX	Decimal	**ASCII**	
50	80	**P**	
51	81	**Q**	
52	82	**R**	
53	83	**S**	

HEX	Decimal	**ASCII**	
54	84	**T**	
55	85	**U**	
56	86	**V**	
57	87	**W**	

HEX	Decimal	**ASCII**	
58	88	**X**	
59	89	**Y**	
5A	90	**Z**	
5B	91	[	

HEX	Decimal	**ASCII**	
5C	92	\	
5D	93	]	
5E	94	^	
5F	95	_	

HEX	Decimal	**ASCII**	
60	96	`	
62	97	**a**	
62	98	**b**	
63	99	**c**	

HEX	Decimal	**ASCII**	
64	100	**d**	
65	101	**e**	
66	102	**f**	
67	103	**g**	

HEX	Decimal	**ASCII**	
68	104	**h**	
69	105	**i**	
6A	106	**j**	
6B	107	**k**	

HEX	Decimal	**ASCII**	
6C	108	**l**	
6D	109	**m**	
6E	110	**n**	
6F	111	**o**	

HEX	Decimal	**ASCII**	
70	112	**p**	
71	113	**q**	
72	114	**r**	
73	115	**s**	

HEX	Decimal	**ASCII**	
74	116	**t**	
75	117	**u**	
76	118	**v**	
77	119	**w**	

HEX	Decimal	**ASCII**	
78	120	**x**	
79	121	**y**	
7A	122	**z**	
7B	123	{	

HEX	Decimal	**ASCII**	
7C	124	|	
7D	125	}	
7E	126	~	
7F	127	Delete	

Appendix D - Function Key Barcodes

Insert

Delete

Home

End

Up Arrow

Down Arrow

Left Arrow

Right Arrow

Shift

ESC

Ctrl

Alt

Page Up

Page Down

F1

F2

F3

F4

F5

F6

F7

F8

F9

F10

F11

F12