



# DPM Barcode Scanner User's Manual V1.1

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# **Chapter 1 System Settings**

## **Scan 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.



Enter Programming Mode



Level Trigger Mode \*\*



Sense Mode (Image Change)

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





Enter Programming Mode

## Illumination

Combo Illumination: Direct + Diffuse

Direct Illumination: White LED:

Diffuse Illumination Red LED / Blue LED



Combo Illumination \*\*



White LED



Red LED



Blue LED

Exit Programming Mode





Enter Programming Mode

## Aiming

**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





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 Bar Code 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 Bar Code Decoding

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 3,600,000ms. When it is set to 0, the timeout is infinite. The default setting is 8,500ms.

**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 Bar Codes in Appendix A.
4. Scan the numeric barcodes "0" barcode from Numeric Bar Codes in Appendix A.
5. Scan the numeric barcodes "0" barcode from Numeric Bar Codes in Appendix A.
6. Scan the numeric barcodes "0" barcode from Numeric Bar Codes in Appendix A.  
Scan the [Exit Programming Mode](#) barcode



Decoding Timeout (ms)

Exit Programming Mode



# Chapter 2 Interface



Enter Programming Mode

## USB HID Keyboard

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



Italy



Japan



Norway



Portugal

Exit Programming Mode







Enter Programming Mode



Poland



Russia



Romania



Spain

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

## 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.



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



# Chapter 3 Symbologies

## Supported Symbologies

|                           |                  |
|---------------------------|------------------|
| <b>UPC-A</b>              | <b>Enable **</b> |
| <b>UPC-E</b>              | <b>Enable **</b> |
| <b>EAN-8</b>              | <b>Enable **</b> |
| <b>EAN-13</b>             | <b>Enable **</b> |
| <b>Code 128 / GS1-128</b> | <b>Enable **</b> |
| <b>Code 39</b>            | <b>Enable **</b> |
| Code 93                   | Disable          |
| Codabar                   | Disable          |
| Plessey                   | Disable          |
| MSI                       | Disable          |
| <b>Interleaved 2 of 5</b> | <b>Enable **</b> |
| <b>Data Matrix</b>        | <b>Enable **</b> |
| <b>QR</b>                 | <b>Enable **</b> |
| Micro QR                  | Disable          |



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



Disable 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

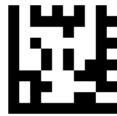




Enter Programming Mode

## 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

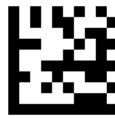




Enter Programming Mode

## 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





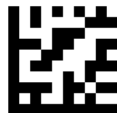
Enter Programming Mode

## 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

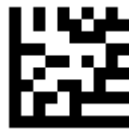




Enter Programming Mode

## 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



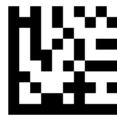




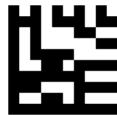
Enter Programming Mode

## 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 \*\*



Disable EAN-13

Exit Programming Mode

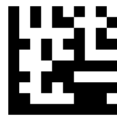




Enter Programming Mode

## 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





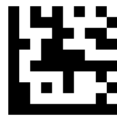
Enter Programming Mode

## Bookland EAN

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



Enable Bookland EAN



Disable Bookland EAN \*\*

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



## 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 Bar Codes. .

### **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 Bar Codes.

### **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 Bar Codes.

### **Any Length:**

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



Enter Programming Mode



One Discrete Length



Two Discrete Lengths



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





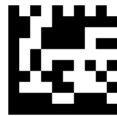
Enter Programming Mode

## 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







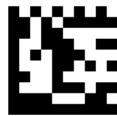
Enter Programming Mode

## Transmit Code 39 Start/Stop Character

Scan the appropriate barcode below to transmit the barcode data with or without the Code 39 Start/Stop Character.



Transmit Code 39 Start/Stop Character



Do Not Transmit Code 39 Start/Stop Character \*\*

Exit 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 Bar Codes. .

### **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 Bar Codes.

### **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 Bar Codes.

### **Any Length:**

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



Enter Programming Mode



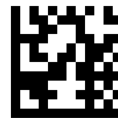
One Discrete Length



Two Discrete Lengths



Length Within Range



Any Length \*\*

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



## 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 Bar Codes. .

### **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 Bar Codes.

### **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 Bar Codes.

### **Any Length:**

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



Enter Programming Mode



One Discrete Length



Two Discrete Lengths



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



## 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 Bar Codes. .

### **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 Bar Codes.

### **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 Bar Codes.

### **Any Length:**

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



Enter Programming Mode



One Discrete Length



Two Discrete Lengths



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



## 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 Bar Codes. .

### **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 Bar Codes.

### **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 Bar Codes.

### **Any Length:**

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



Enter Programming Mode



One Discrete Length



Two Discrete Lengths



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



## 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 Bar Codes. .

### **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 Bar Codes.

### **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 Bar Codes.

### **Any Length:**

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



Enter Programming Mode



One Discrete Length



Two Discrete Lengths



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

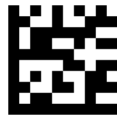




Enter Programming Mode

## 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

Exit Programming Mode



## Set Lengths for Interleaved 2 of 5

Set lengths for Interleaved 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 Interleaved 2 of 5 containing 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 Bar Codes. .

### **Two Discrete Lengths:**

Select this option to decode Interleaved 2 of 5 containing 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 Bar Codes.

### **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 5 containing between 3 and 12 characters, first scan **Length Within Range**. Then scan 0, 3, 1, and 2 in Appendix A, Numeric Bar Codes.

### **Any Length:**

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



Enter Programming Mode



One Discrete Length



Two Discrete Lengths



Length Within Range



Any Length \*\*

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 \*\*



Disable Rectangular Data Matrix

Exit Programming Mode



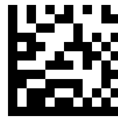


Enter Programming Mode

## 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



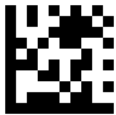
# Chapter 4 Prefix & Suffix



Enter Programming Mode

## AIM ID

AIM (Automatic Identification Manufacturers) ID defines symbology identifier (For the details, see the “AIM ID Table” section in Appendix). 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



Enable OEM ID

Exit Programming Mode



# Prefix

## 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. Prefix can be 8 characters at most.

### 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 Bar Codes in Appendix D
4. Scan the ASCII barcodes "B" barcode from Numeric Bar Codes in Appendix D
5. Scan the ASCII barcodes "C" barcode from Numeric Bar Codes in Appendix D
6. Scan the ASCII barcodes "D" barcode from Numeric Bar Codes in Appendix D
7. Scan the **Exit Programming Mode** barcode

### Example: Disable Prefix for all symbologies

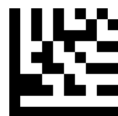
1. Scan the **Enter Programming Mode** barcode
2. Scan the **Disable Prefix for All Symbologies** barcode
3. Scan the **Exit Programming Mode** barcode



Enter Programming Mode



Disable Prefix for All Symbologies \*\*



Set Prefix for All Symbologies

Exit 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. Prefix can be 8 characters at most.

## 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 Bar Codes in Appendix B
4. Scan the numeric barcodes "8" barcode from Numeric Bar Codes in Appendix A
5. Scan the numeric barcodes "0" barcode from Numeric Bar Codes 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 Bar Codes in Appendix B.
4. Scan the **Exit Programming Mode** barcode



Enter Programming Mode



Disable Symbology Prefix



Set Symbology Prefix

Exit Programming Mode



# Suffix

## 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. Suffix can be 8 characters at most.

### 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 Bar Codes in Appendix C
4. Scan the ASCII barcodes "Y" barcode from Numeric Bar Codes in Appendix C
5. Scan the ASCII barcodes "Z" barcode from Numeric Bar Codes in Appendix C
6. Scan the **Exit Programming Mode** barcode

### Example: Disable Suffix for all symbologies

1. Scan the **Enter Programming Mode** barcode
2. Scan the **Disable Suffix for All Symbologies** barcode
3. Scan the **Exit Programming Mode** barcode



Enter Programming Mode



Disable Suffix for All Symbologies \*\*



Set Suffix for All Symbologies

Exit 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. Suffix can be 8 characters at most.

## 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 Bar Codes in Appendix B
4. Scan the ASCII barcodes **"@"** barcode from ASCII Bar Codes in Appendix C
5. Scan the numeric barcodes **"1"** barcode from Numeric Bar Codes 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 Bar Codes in Appendix B

Scan the **Exit Programming Mode** barcode



Enter Programming Mode



Disable Symbology Suffix



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



# Chapter 5 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 bar code data to your desired case.



No Case Conversion \*\*



Upper Case



Lower Case

Exit 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 Bar Codes 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



Enter Programming Mode



Disable GS Code Conversion \*\*



Set GS (0x1D) to Other ASCII Code

Exit Programming Mode



# Truncate Data

## 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

Scan the [Enter Programming Mode](#) barcode

Scan the [Truncate Leading Data](#) barcode

Scan the numeric barcodes "8" barcode from Numeric Bar Codes in Appendix

Scan the [Exit Programming Mode](#) barcode

### Example: Disable Truncate Leading Data

Scan the [Enter Programming Mode](#) barcode

Scan the [Disable Truncate Leading Data](#) barcode

Scan the [Exit Programming Mode](#) barcode



Enter Programming Mode



Disable Truncate Leading Data \*\*



Truncate Leading Data

Exit 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 2 characters of ending data

Scan the [Enter Programming Mode](#) barcode

Scan the [Truncate Ending Data](#) barcode

Scan the numeric barcodes "2" barcode from Numeric Bar Codes in Appendix

Scan the [Exit Programming Mode](#) barcode

## Example: Disable Truncate Ending Data

Scan the [Enter Programming Mode](#) barcode

Scan the [Disable Truncate Ending Data](#) barcode

Scan the [Exit Programming Mode](#) barcode



Enter Programming Mode



Disable Truncate Ending Data \*\*



Truncate Ending Data

Exit Programming Mode



# Chapter 6 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 A - Numeric Bar Codes



0



1



2



3



4



5



6



7



8



9

# Appendix B - Symbologies Bar Codes



UPC-A



UPC-E



EAN-8



EAN-13



Code 128



Code 39



Code 93



Code 32

# Symbologies Bar Codes -Continued



Code 11



Codabar



Plessey



MSI



Interleaved 2 of 5



IATA 2 of 5



Matrix 2 of 5



Straight 2 of 5

# Symbologies Bar Codes -Continued



Pharmacode



GS1 DataBar 14



GS1 DataBar Expanded



GS1 DataBar Limited



GS1 DataBar 14 Stacked



GS1 DataBar Expanded Stacked



Composite Code-A



Composite Code-B

# Symbologies Bar Codes -Continued



Composite Code-C



PDF417



Micro PDF417



Data Matrix



QR



Micro QR










Aztec







MaxiCode





# Appendix C - ASCII Code Bar Codes





| HEX      | Decimal | ASCII  | Function Key Mapping |             |             |
|----------|---------|--|----------------------|-------------|-------------|
|          |         |  | Disable              | Control-Key | Alt+Unicode |
| 00 (NUL) | 0       | <br>NUL   | Disable              | Ctrl+@      | Alt + 000   |
| 01 (SOH) | 1       | <br>SOH   | Home                 | Ctrl+A      | Alt + 001   |
| 02 (STX) | 2       | <br>STX | End                  | Ctrl+B      | Alt + 002   |
| 03 (ETX) | 3       | <br>ETX | Up Arrow             | Ctrl+C      | Alt + 003   |





| HEX      | Decimal | ASCII  | Function Key Mapping |             |             |
|----------|---------|--|----------------------|-------------|-------------|
|          |         |  | Disable              | Control-Key | Alt+Unicode |
| 04 (EOT) | 4       | <br>EOT   | Down Arrow           | Ctrl+D      | Alt + 004   |
| 05 (ENQ) | 5       | <br>ENQ   | Left Arrow           | Ctrl+E      | Alt + 005   |
| 06 (ACK) | 6       | <br>ACK | Right Arrow          | Ctrl+F      | Alt + 006   |
| 07 (BEL) | 7       | <br>BEL | Null                 | Ctrl+G      | Alt + 007   |











| HEX     | Decimal | ASCII   | Function Key Mapping |             |             |
|---------|---------|---|----------------------|-------------|-------------|
|         |         |   | Disable              | Control-Key | Alt+Unicode |
| 08      | 8       | <br>BS   | Backspace            | Backspace   | Alt + 008   |
| 09      | 9       | <br>TAB  | TAB                  | TAB         | Alt + 009   |
| 0A (LF) | 10      | <br>LF | Null                 | Ctrl+J      | Alt + 010   |
| 0B (VT) | 11      | <br>VT | Null                 | Ctrl+K      | Alt + 011   |





| HEX     | Decimal | ASCII   | Function Key Mapping |             |             |
|---------|---------|---|----------------------|-------------|-------------|
|         |         |   | Disable              | Control-Key | Alt+Unicode |
| 0C (FF) | 12      | <br>FF   | Null                 | Ctrl+L      | Alt + 012   |
| 0D (CR) | 13      | <br>CR   | Enter                | Enter       | Enter       |
| 0E (SO) | 14      | <br>SO | Page Up              | Ctrl+N      | Alt + 014   |
| 0F (SI) | 15      | <br>SI | Page Down            | Ctrl+O      | Alt + 015   |





| HEX      | Decimal | ASCII  | Function Key Mapping |             |             |
|----------|---------|--|----------------------|-------------|-------------|
|          |         |  | Disable              | Control-Key | Alt+Unicode |
| 10 (DLE) | 16      | <br>DLE   | F11                  | Ctrl+P      | Alt + 016   |
| 11 (DC1) | 17      | <br>DC1   | Null                 | Ctrl+Q      | Alt + 017   |
| 12 (DC2) | 18      | <br>DC2 | Null                 | Ctrl+R      | Alt + 018   |
| 13 (DC3) | 19      | <br>DC3 | Null                 | Ctrl+S      | Alt + 019   |

| HEX      | Decimal | ASCII  | Function Key Mapping |             |             |
|----------|---------|--|----------------------|-------------|-------------|
|          |         |  | Disable              | Control-Key | Alt+Unicode |
| 14 (DC4) | 20      | <br>DC4   | Null                 | Ctrl+T      | Alt + 020   |
| 15 (NAK) | 21      | <br>NAK   | F12                  | Ctrl+U      | Alt + 021   |
| 16 (SYN) | 22      | <br>SYN | F1                   | Ctrl+V      | Alt + 022   |
| 17 (ETB) | 23      | <br>ETB | F2                   | Ctrl+W      | Alt + 023   |

| HEX      | Decimal | ASCII  | Function Key Mapping |             |             |
|----------|---------|--|----------------------|-------------|-------------|
|          |         |  | Disable              | Control-Key | Alt+Unicode |
| 18 (CAN) | 24      | <br>CAN   | F3                   | Ctrl+X      | Alt + 024   |
| 19 (CAN) | 25      | <br>EM    | F4                   | Ctrl+Y      | Alt + 025   |
| 1A (SUB) | 26      | <br>SUB | F5                   | Ctrl+Z      | Alt + 026   |
| 1B (ESC) | 27      | <br>ESC | F6                   | Ctrl+[      | Alt + 027   |





| HEX     | Decimal | ASCII   | Function Key Mapping |             |             |
|---------|---------|---|----------------------|-------------|-------------|
|         |         |   | Disable              | Control-Key | Alt+Unicode |
| 1C (FS) | 28      | <br>FS   | F7                   | Ctrl+\      | Alt + 028   |
| 1D (GS) | 29      | <br>GS   | F8                   | Ctrl+]      | Alt + 029   |
| 1E (US) | 30      | <br>RS | F9                   | Ctrl+^      | Alt + 030   |
| 1F (US) | 31      | <br>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 Bar Codes



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

# Appendix E - AIM ID Table

| Symbology            | OEM ID | AIM ID |
|----------------------|--------|--------|
| UPC-A                | A      | E      |
| UPC-E                | E      | E      |
| EAN-8                | FF     | E      |
| EAN-13               | F      | E      |
| Code 128             | K      | C      |
| Code 39              | M      | A      |
| Code 93              | L      | G      |
| Code 32              | M      | A      |
| Code 11              | O      | H      |
| Codabar              | N      | F      |
| Plessey              | P      | P      |
| MSI / Plessey        | a      | M      |
| Interleaved 2 of 5   | l      | l      |
| IATA 2 of 5          | Z      | R      |
| Matrix 2 of 5        | G      | X      |
| Straight 2 of 5      | S      | S      |
| Pharmacode           | H      | X      |
| GS1 DataBar 14       | RS     | e      |
| GS1 DataBar Expanded | RX     | e      |
| GS1 DataBar Limited  | RL     | e      |
| Composite CC-A       | m      | e      |
| Composite CC-B       | n      | e      |
| Composite CC-C       | i      | e      |
| PDF417               | r      | L      |
| Micro PDF417         | s      | L      |
| Data Matrix          | t      | d      |
| QR                   | u      | Q      |
| Micro QR             | j      | Q      |
| Aztec                | e      | Z      |
| MaxiCode             | v      | U      |