# AsReader

AsReader Gun （ASR-R250G／ASR-L251G）

AsReader Combo （ASR-0240D／ASR-023xD／

ASR-023xD-V2／ASR-023xD-V4）

AsReader DOCK （ASR-022D）

## Barcode Setting Manual

AsReader, Inc.

Ver.1.8

※This information is subject to change without prior notice.

# Disclaimer

Asterisk, Inc. (Asterisk) reserves the right to make changes in specifications and other information contained in this document without prior notice, and the reader should in all cases consult Asterisk to determine whether any such changes have been made. The information in this publication does not represent a commitment on the part of Asterisk.

Asterisk shall not be liable for technical or editorial errors or omissions contained herein; nor for incidental or consequential damages resulting from the furnishing, performance, or use of this material. Asterisk disclaims all responsibility for the selection and use of software and/or hardware to achieve intended results.

This document contains proprietary information that is protected by copyright. All rights are reserved. No part of this document may be photocopied, reproduced, or translated into another language without the prior written consent of Asterisk.

Web Address: www.asreader.com

Other product names or marks mentioned in this document may be trademarks or registered trademarks of other companies and are the property of their respective owners.

# Table of Contents

# 1. Getting Started

## 1.1. About This Manual

This manual provides various setting options and scannable barcode types for AsReader Gun(ASR-R250G/ASR-L251G), AsReader Combo(ASR-0240D/ASR-023xD) and AsReader DOCK(ASR-022D) (hereinafter referred to as "AsReader"). Choose the applicable barcodes of settings you wish and scan them with AsReader*. The settings will be stored in AsReader.

*You need a smartphone and an application to make AsReader work.

Steps to change barcode settings;

1. Connect your smartphone (iOS or Android) to AsReader.

2. Launch an application that can read barcodes on your smartphone.

3. Scan the barcode for the item whose settings you want to change.

* Nothing is displayed on the screen of the smartphone when a setting barcode is read.

* All AsReaders except the ASR-R250G will sound when successfully scanning the setting barcodes.

An asterisk (*) next to an option indicates the default setting.

## 1.2. Resetting the Factory Defaults

This selection resets AsReader to the original factory defaults.

If you aren't sure what programming options are in AsReader, or you've changed some options and want to restore the device to factory default settings, first scan the Remove Custom Defaults bar code, then scan Activate Defaults. This resets the device to the factory default settings.


DEFOVR.
**Remove Custom Defaults**


DEFALT.
**Activate Defaults**

*Note:Be sure to restart the AsReader after activating factory defaults.*

*Note: For AsReader Combo （ASR-0240D/ASR-023xD）, you also have to scan the following barcode to complete the setting.*

**Do NOT scan this barcode when your device (for example: ASR-0230D-V2/ASR-0230D-V4) is other than ASR-0240D or ASR-023xD.**


232BAD5.
9600

## 1.3. Setting Custom Defaults

AsReader allows you to create a set of custom defaults. To do so, scan the Set Custom Defaults bar code below first, then scan your desired setting barcodes on this manual as your custom defaults. When you have scanned all the barcodes you want to save for your

custom defaults, scan the Save Custom Defaults bar code.


MNUCDP.
**Set Custom Defaults**


MNUCDS.
**Save Custom Defaults**

You may have a series of custom settings and want to correct a single setting. To do so, just scan the new setting to overwrite the old one. For example, if you had previously saved the setting for Beeper Volume at Low to your custom defaults, and decide you want the beeper volume set to High, just scan the Set Custom Defaults bar code, then scan the Beeper Volume High menu code, and then Save Custom Defaults. The rest of the custom defaults will remain, but the beeper volume setting will be updated.

*Note: Custom defaults are not applied immediately after scanning the Save Custom Defaults bar code. To activate the custom defaults, you must read the Activate Defaults bar code below.*

## 1.4. Resetting the Custom Defaults

If you want the custom default settings restored to AsReader, scan the Activate Defaults bar code below. This is the recommended default bar code for most users. It resets the device to the custom default settings. If there are no custom defaults, it will reset the device to the factory default settings. Any settings that have not been specified through the custom defaults will be defaulted to the factory default settings.


DEFALT.
**Activate Defaults**

## 1.5. Manual Trigger Modes

When in manual trigger mode, AsReader scans until a bar code is read, or until the trigger is released. Two modes are available, Normal and Enhanced. Normal mode offers good scan speed and the longest working ranges (depth of field). Enhanced mode will give you the highest possible scan speed but slightly less range than Normal mode. Enhanced mode is best used

when you require a very fast scan speed and don't require a long working range. Default = Manual Trigger-Normal.

PAPHHF.
* Manual Trigger - Normal

PAPHHS.
Manual Trigger - Enhanced

### *LED Illumination - Manual Trigger*

If you wish to set the illumination LED brightness, scan one of the bar codes below. This sets the LED illumination for AsReader when the trigger is pressed. Default = High.

*Note: The LEDs are like a flash on a camera. The lower the ambient light in the room, the brighter the LEDs need to be so AsReader can "see" the bar codes.*

PWRNOL0.
Off

PWRNOL100.
Low

PWRNOL120.
Medium

PWRNOL150.
* High

## 1.6. Presentation Mode

Presentation Mode uses ambient light and scan engine illumination to detect bar codes. When in Presentation Mode, the LEDs remain dim until a bar code is presented to AsReader, then the aimer turns on and the LEDs turn up to read the code. If the light level in the room is not high enough, Presentation Mode may not work properly.

Scan the following bar code to program AsReader for Presentation Mode.


TRGMOD3.
**Presentation Mode**

### LED Illumination - Presentation Mode

If you wish to set the illumination LED brightness, scan one of the bar codes below. This sets the LED illumination for AsReader when it is in Presentation Mode. (If AsReader is triggered manually, the LED illumination will switch to the setting for a manual trigger. See "LED Illumination - Manual Trigger" on page 11) Default = High.

*Note: The LEDs are like a flash on a camera. The lower the ambient light in the room, the brighter the LEDs need to be so AsReader can "see" the bar codes.*


PWRLDC0.
**Off**


PWRLDC100.
**Low**


PWRLDC150.
**\* High**

*Note: LED Illumination - Presentation Mode does not apply to CodeGate® or Mobile Phone Read Mode.*

## *Presentation LED Behavior after Decode*

When a scan engine is in presentation mode, the LEDs dim 30 seconds after a bar code is decoded. If you wish to dim the LEDs immediately after a bar code is decoded, scan the LEDs Off bar code, below. Default = LEDs On.

```
TRGPCK1.
* LEDs On
```

```
TRGPCK0.
LEDs Off
```

## *Presentation Sensitivity*

Presentation Sensitivity is a numeric range that increases or decreases the device's reaction time to bar code presentation. To set the sensitivity, scan the Sensitivity bar code, then scan the degree of sensitivity (from 0-20) from the inside back cover, and Save. 0 is the most sensitive setting, and 20 is the least sensitive. Default = 1.

```
TRGPMS.
Sensitivity
```

## *Presentation Centering*

Use Presentation Centering to narrow AsReader's field of view when it is in the stand to make sure AsReader reads only those bar codes intended by the user. For instance, if multiple codes are placed closely together, Presentation Centering will ensure that only the desired codes are read.

Note: To adjust centering when AsReader is in Manual Trigger Mode, see Centering (page 19).

If Presentation Centering is turned on by scanning Presentation Centering On, AsReader only reads codes that pass through the centering window you specify using the Top of Presentation Centering Window, Bottom of Presentation Centering Window, Left, and Right of Presentation Centering Window bar codes.

In the example below, the white box is the centering window. The centering window has been set to 20% left, 30% right, 8% top, and 25% bottom. Since Bar Code 1 passes through the centering window, it will be read. Bar Code 2 does not pass through the centering window, so it will not be read.
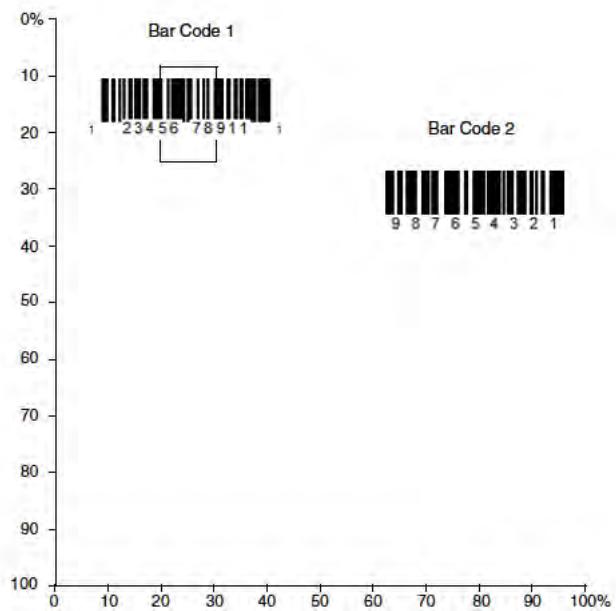
*Note: A bar code needs only to be touched by the centering window in order to be read. It does not need to pass completely through the centering window.*

Scan Presentation Centering On, then scan one of the following bar codes to change the top, bottom, left, or right of the centering window. Then scan the percent you want to shift the centering window using digits on the inside back cover of this manual. Scan Save. Default Presentation Centering = 40% for Top and Left, 60% for Bottom and Right.



PDCWIN1.
**Presentation Centering On**



PDCWIN0.
**\* Presentation Centering Off**



PDCTOP.
**Top of Presentation Centering Window**



PDCBOT.
**Bottom of Presentation Centering Window**



PDCLFT.
**Left of Presentation Centering Window**



PDCRGT.
**Right of Presentation Centering Window**

## 1.7. CodeGate ®

When CodeGate is On, the trigger is used to allow decoded data to be transmitted to the application. AsReader remains on, scanning and decoding bar codes, but the bar code data is not transmitted until the trigger is pressed. When CodeGate is Off, bar code data is transmitted when it is decoded. Default = CodeGate Off Out-of-Stand.

AOSCGD0.
\* CodeGate Off
Out-of-Stand

AOSCGD1.
CodeGate On
Out-of-Stand

## 1.8. Mobile Phone Read Mode

When this mode is selected, AsReader is optimized to read bar codes from mobile phone or other LED displays. However, the speed of scanning printed bar codes may be slightly lower when this mode is enabled. You can enable Mobile Phone Reading for either a hand held device, or for a hands-free (presentation) application.

PAPHHC.
Hand Held Scanning - Mobile
Phone

PAPSPC.
Streaming Presentation -
Mobile Phone

*Note: To turn off Mobile Phone Read Mode, scan a Manual Trigger Mode bar code (see page 1111).*

## 1.9. Poor Quality Codes

### Poor Quality 1D Codes

This setting improves AsReader's ability to read damaged or badly printed linear bar codes. When Poor Quality 1D

Reading On is scanned, poor quality linear bar code reading is improved, but AsReader's snappiness is decreased, making it less aggressive when reading good quality bar codes. This setting does not affect 2D bar code reading. Default = Poor Quality 1D Reading Off.

DECLDI1.
Poor Quality 1D Reading On

DECLDI0.

### Poor Quality PDF Codes

This setting improves AsReader's ability to read damaged or badly printed PDF codes by combining information from multiple images. When Poor Quality PDF On is scanned, poor quality PDF code reading is improved, but AsReader's snappiness is decreased, making it less aggressive when reading good quality bar codes. This setting does not affect 1D bar code reading.

Default = Poor Quality PDF Reading Off.



PDFXPR1

**Poor Quality PDF Reading On**



PDFXPR0

**\* Poor Quality PDF Reading Off**

## 1.10. Hands Free Time-Out

The Scan Stand and Presentation Modes are referred to as "hands free" modes. If AsReader's trigger is pulled when using a hands free mode, AsReader changes to manual trigger mode. You can set the time AsReader should remain in manual trigger mode by setting the Hands Free Time-Out. Once the time-out value is reached, (if there have been no further trigger pulls) AsReader reverts to the original hands free mode.

Scan the Hands Free Time-Out bar code, then scan the time-out duration (from 0-300,000 milliseconds) from the inside back cover, and Save. Default = 5,000 ms.

```
TRGPTO.
```
**Hands Free Time-Out**

## 1.11. Reread Delay

This sets the time period before AsReader can read the same bar code a second time. Setting a reread delay protects against accidental rereads of the same bar code. Longer delays are effective in minimizing accidental rereads. Use shorter delays in applications where repetitive bar code scanning is required. Reread Delay only works when in a Presentation Mode   (see page 12). Default = Medium.

```
DLYRRD500.
```
**Short (500 ms)**

```
DLYRRD750.
```
**\* Medium (750 ms)**

```
DLYRRD1000.
```
**Long (1000 ms)**

```
DLYRRD2000.
```
**Extra Long (2000 ms)**

## 1.12. User-Specified Reread Delay

If you want to set your own length for the reread delay, scan the bar code below, then set the delay (from 0-30,000 milliseconds)   by scanning digits from the inside back cover, then scanning Save.

```
DLYRRD.
```
**User-Specified Reread Delay**

## 1.13. 2D Reread Delay

Sometimes 2D bar codes can take longer to read than other bar codes. If you wish to set a separate Reread Delay for 2D bar codes, scan one of the programming codes that follows. 2D Reread Delay Off indicates that the time set for Reread Delay is used for both 1D and 2D bar codes. Default = 2D Reread Delay Off.

DLY2RR0.
* 2D Reread Delay Off

DLY2RR1000.
Short (1000ms)

DLY2RR2000.
Medium (2000ms)

DLY2RR3000.
Long (3000ms)

DLY2RR4000.
Extra Long (4000ms)

## 1.14. Illumination Lights

If you want the illumination lights on while reading a bar code, scan the Lights On bar code, below. However, if you want to turn just the lights off, scan the Lights Off bar code. Default = Lights On.

Note: This setting does not affect the aimer light. The aiming light can be set using Aimer Mode (page19).

SCNLED1.
* Lights On

SCNLED0.
Lights Off

## 1.15. Aimer Delay

The aimer delay allows a delay time for the operator to aim AsReader before the picture is taken. Use these codes to set the time between when the trigger is pulled and when the picture is taken. During the delay time, the aiming light will appear, but the LEDs won't turn on until the delay time is over. Default = Off.

SCNDLY200.
200 milliseconds

SCNDLY400.
400 milliseconds

SCNDLY0.
* Off (no delay)

### *User-Specified Aimer Delay*

If you want to set your own length for the duration of the delay, scan the bar code below, then set the time-out by scanning digits (0 - 4,000 ms) from the Programming Chart inside the back cover of this manual, then scan Save.

## 1.16. Aimer Mode

This feature allows you to turn the aimer on and off. When the Interlaced bar code is scanned, the aimer is interlaced with the illumination LEDs. Default = Interlaced.

SCNAIM0.
Off

SCNAIM2.
* Interlaced

## 1.17. Centering

Use Centering to narrow AsReader's field of view to make sure that when AsReader is hand-held, it reads only those bar codes intended by the user. For instance, if multiple codes are placed closely together, centering will ensure that only the desired codes are read. (Centering can be used in conjunction with Aimer Delay, page19, for the most error-free operation in applications where multiple codes are spaced closely together. Using the Aimer Delay and Centering features, AsReader can emulate the operation of older systems, such as linear laser bar code scanners.)

If a bar code is not touched by a predefined window, it will not be decoded or output by AsReader. If centering is turned on by scanning Centering On, AsReader only reads codes that pass through the centering window you specify using the Top of Centering Window and Bottom of Centering Window bar codes.

In the example below, the white box is the centering window. The centering window has been set to 8% top and 25% bottom. Since Bar Code 1 passes through the centering window, it will be read. Bar Code 2 does not pass through the centering window, so it will not be read.
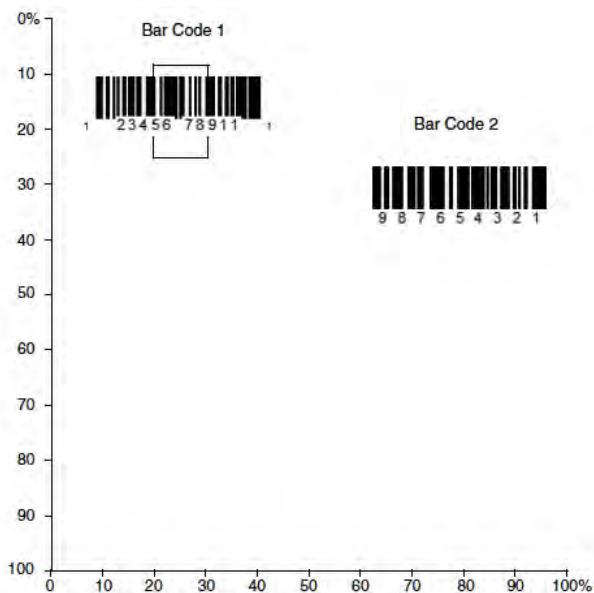


A bar code needs only to be touched by the centering window in order to be read. It does not need to pass completely through the centering window.

Scan Centering On, then scan one of the following bar codes to change the top and bottom of the centering window. Then scan the percent you want to shift the centering window using digits on the inside back cover of this manual. Scan Save. Default Centering = 40% for Top, 60% for Bottom.



DECWIN1.
**Centering On**



DECWIN0.
**\* Centering Off**



DECTOP.
**Top of Centering Window**



DECBOT.
**Bottom of Centering Window**

## 1.18. Multiple Symbols

When this programming selection is turned On, it allows you to read multiple symbols with a single pull of AsReader's trigger.   If you press and hold the trigger, aiming AsReader at a series of symbols, it reads unique symbols once, beeping (if turned on)   for each read. AsReader attempts to find and decode new symbols as long as the trigger is pulled. When this programming selection is turned Off, AsReader will only read the symbol closest to the aiming beam. Default = Off.

SHOTGN1.
**On**

SHOTGN0.
**\* Off**

## 1.19. No Read

With No Read turned On, AsReader notifies you if a code cannot be read. An "NR" appears when a code cannot be read. If No Read is turned Off, the "NR" will not appear. Default = Off.

SHWNRD1.
**On**

SHWNRD0
**\* Off**

## 1.20. Video Reverse

Video Reverse is used to allow AsReader to read bar codes that are inverted. The Video Reverse Off bar code below is an example of this type of bar code. Scan Video Reverse Only to read only inverted bar codes. Scan Video Reverse and Standard Bar Codes to read both types of codes.

*Note: After scanning Video Reverse Only, menu bar codes cannot be read. You must scan Video Reverse Off or Video Reverse and Standard Bar Codes in order to read menu bar codes.*

*Note: Images downloaded from the unit are not reversed. This is a setting for decoding only.*

VIDREV1.
**Video Reverse Only**

VIDREV2
**Video Reverse and Standard Bar Codes**

VIDREV0.
**\* Video Reverse Off**

## 1.21. Working Orientation

Some bar codes are direction-sensitive. For example, KIX codes and OCR can misread when scanned sideways or upside down. Use

the working orientation settings if your direction-sensitive codes will not usually be presented upright to the scanner. Default = Upright.

Upright:

Vertical, Top to Bottom:
(Rotate CW 90°)
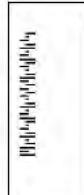
Upside Down:

Vertical, Bottom to Top:
(Rotate CCW 90°)
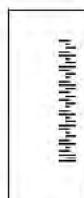
ROTATN0.
* Upright

ROTATN1.
Vertical, Bottom to Top

ROTATN2.
Upside Down

ROTATN3.
Vertical, Top to Bottom

# 2. Data Editing

## 2.1. Prefix/Suffix Overview

When a bar code is scanned, additional information is sent to the application along with the bar code data. This group of bar code data and additional, user-defined data is called a "message string." The selections in this section are used to build the user-defined data into the message string.

Prefix and Suffix characters are data characters that can be sent before and after scanned data. You can specify if they should be sent with all symbologies, or only with specific symbologies. The following illustration shows the breakdown of a message string:
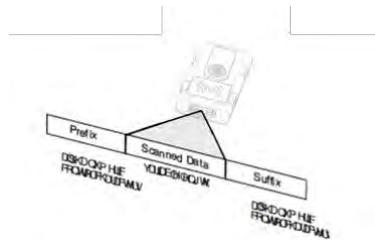


### *Points to Keep In Mind*

- It is not necessary to build a message string. The selections in this chapter are only used if you wish to alter the default settings. Default prefix = None. Default suffix = None.
- A prefix or suffix may be added or cleared from one symbology or all symbologies.
- You can add any prefix or suffix from the ASCII Conversion Chart, beginning on page 78, plus Code I.D. and AIM I.D.
- You can string together several entries for several symbologies at one time.
- Enter prefixes and suffixes in the order in which you want them to appear on the output.
- When setting up for specific symbologies (as opposed to all symbologies), the specific symbology ID value counts as an added prefix or suffix character.
- The maximum size of a prefix or suffix configuration is 200 characters, which includes header information.
- To add prefixes or suffixes for ASR-022D and ASR-L251G, refer to Appendix (beginning on Page 89).

### *To Add a Prefix or Suffix:*

Step 1. Scan the Add Prefix or Add Suffix symbol (page 26).

Step 2. Determine the 2-digit Hex value from the Symbology Chart (included in the Symbology Charts, beginning on page 76) for the symbology to which you want to apply the prefix or suffix. For example, for Code 128, Code ID is "j" and Hex ID is "6A".

Step 3. Scan the 2 hex digits from the Programming Chart inside the back cover of this manual or scan 9, 9 for all symbologies.

Step 4. Determine the hex value from the ASCII Conversion Chart, beginning on page 78, for the prefix or suffix you wish to enter.

Note: To add the Code I.D., scan 5, C, 8, 0.

To add AIM I.D., scan 5, C, 8, 1.

To add a backslash (\), scan 5, C, 5, C.

To add a backslash (\), you must scan 5C twice – once to create the leading backslash and then to create the backslash itself.

Step 5. Scan the 2-digit hex value from the Programming Chart inside the back cover of this manual.

Step 6. Repeat Steps 4 and 5 for every prefix or suffix character.

Step 7. Scan Save to exit and save, or scan Discard to exit without saving.

Repeat Steps 1-6 to add a prefix or suffix for another symbology.

### *Example: Add a Tab Suffix to All Symbologies*

Step 1. Scan Add Suffix.

Step 2. Scan 9, 9 from the Programming Chart inside the back cover of this manual to apply this suffix to all symbologies.

Step 3. Scan 0, 9 from the Programming Chart inside the back cover of this manual. This corresponds with the hex value for a horizontal tab, shown in the ASCII Conversion Chart, beginning on Page 78.

Scan Save, or scan Discard to exit without saving.

### *To Clear One or All Prefixes or Suffixes*

You can use Clear One Prefix (Suffix) to delete the prefixes/suffixes from a specific symbology. When you scan Clear All Prefixes (Suffixes), the prefixes or suffixes for all the symbologies are deleted.

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

Step 2. Determine the 2-digit Hex value from the Symbology Chart (included in the Symbology Charts, beginning on page 76) for the symbology from which you want to clear the prefix or suffix.

Step 3. Scan the 2-digit hex value from the Programming Chart inside the back cover of this manual or scan 9, 9 for all symbologies.

Step 4. Scan Save to exit and save, or scan Discard to exit without saving.

### *To Add a Carriage Return Suffix to All Symbologies*

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



VSUFCR.
**Add CR Suffix
All Symbologies**

## 2.2.  Prefix Selections



PREBK2.
**Add Prefix**



PRECL2.
**Clear One Prefix**



PRECA2.
**Clear All Prefixes**

## 2.3.  Suffix Selections



SUFBK2.
**Add Suffix**



SUFCL2.
**Clear One Suffix**



SUFCA2.
**Clear All Suffixes**

# 3.  Symbologies

This programming section contains the following menu selections. Refer to Chapter 9 for settings and defaults.

  All Symbologies
• Aztec Code
• China Post (Hong Kong 2 of 5)
• Chinese Sensible (Han Xin) Code
• Codabar
• Codablock A
• Codablock F
• Code 11
• Code 128
• Code 32 Pharmaceutical (PARAF)
• Code 39
• Code 93
• Data Matrix
• EAN/JAN-13
• EAN/JAN-8
• GS1 Composite Codes
• GS1 DataBar Expanded
• GS1 DataBar Limited
• GS1 DataBar Omnidirectional
• GS1 Emulation
• GS1-128

• Interleaved 2 of 5
• Korea Post
• Matrix 2 of 5
• MaxiCode
• MicroPDF417
• MSI
• NEC 2 of 5
• Postal Codes - 2D
• Postal Codes - Linear
• PDF417
• GS1 DataBar Omnidirectional
• QR Code
• Straight 2 of 5 IATA (two-bar start/stop)
• Straight 2 of 5 Industrial (three-bar start/stop)
• TCIF Linked Code 39 (TLC39)
• Telepen
• Trioptic Code
• UPC-A
• UPC-A/EAN-13 with Extended Coupon Code
• UPC-E0
• UPC-E1

## 3.1.  All Symbologies

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

*Note: AsReader performance may reduce by scanning All Symbologies On. Only scan All Symbologies On when needed.*
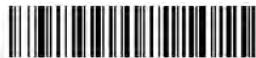

ALLENA1.
**All Symbologies On**


ALLENA0.
**All Symbologies Off**

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

## 3.2.  Message Length Description

You can set the valid reading length of some of the bar code symbologies. You may wish to set the same value for minimum and maximum length to force AsReader to read fixed length bar code data. This helps reduce the chances of a misread.

**EXAMPLE**: Decode only those bar codes with a count of 9-20 characters.
   Min. length = 09Max. length = 20

**EXAMPLE**: Decode only those bar codes with a count of 15 characters.
   Min. length = 15Max. length = 15

For a value other than the minimum and maximum message length defaults, scan the bar codes included in the explanation of the symbology, then scan the digit value of the message length and Save bar codes on the Programming Chart inside the back cover of this manual. The minimum and maximum lengths and the defaults are included with the respective symbologies.

## 3.3.  Codabar

<center><i>&lt;Default All Codabar Settings&gt;</i></center>

<center>

CBRDFT.

</center>

### Codabar On/Off

CBRENA1.
* On

CBRENA0.
Off

### Codabar Start/Stop Characters

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

CBRSSX1.
Transmit

CBRSSX0.
* Don't Transmit

### Codabar Check Character

Codabar check characters are created using different "modulos." You can program AsReader to read only Codabar barcodes with Modulo 16 check characters. Default = No Check Character.

No Check Character indicates that AsReader reads and transmits bar code data with or without a check character.

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

When Check Character is set to Validate, but Don't Transmit, the unit will only read Codabar bar codes printed with a check character, but will not transmit the check character with the scanned data.

CBRCK20.
* No Check Character


CBRCK21.
Validate Modulo 16, but
Don't Transmit


CBRCK22.
Validate Modulo 16
and Transmit

## *Codabar Concatenation*

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


A 1 2 3 4 D   D 5 6 7 8 A

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


CBRCCT1.
On


CBRCCT0.
* Off


CBRCCT2.
Require

## *Codabar Message Length*

Scan the bar codes below to change the message length. Refer to Message Length Description (page29) for additional nformation. Minimum and Maximum lengths = 2-60. Minimum Default = 4, Maximum Default = 60.


CBRMIN.
Minimum Message Length


CBRMAX.
Maximum Message Length

## 3.4. Code 39

*< Default All Code 39 Settings >*

‖‖‖‖‖‖‖‖‖‖‖‖‖
C39DFT.

### *Code 39 On/Off*

‖‖‖‖‖‖‖‖‖‖‖‖‖
C39ENA1.
* On

‖‖‖‖‖‖‖‖‖‖‖‖‖
C39ENA0.
Off

### *Code 39 Start/Stop Characters*

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

‖‖‖‖‖‖‖‖‖‖‖‖‖
C39SSX1.
**Transmit**

‖‖‖‖‖‖‖‖‖‖‖‖‖
C39SSX0.
* **Don't Transmit**

### *Code 39 Check Character*

No Check Character indicates that AsReader reads and transmits bar code data with or without a check character.

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

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

‖‖‖‖‖‖‖‖‖‖‖‖‖
C39CK20.
* **No Check Character**

‖‖‖‖‖‖‖‖‖‖‖‖‖
C39CK21.
**Validate, but Don't Transmit**

‖‖‖‖‖‖‖‖‖‖‖‖‖
C39CK22.
**Validate and Transmit**

## Code 39 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page29) for additional information. Minimum and Maximum lengths = 0-48. Minimum Default = 0, Maximum Default = 48.

```
C39MIN.
```
**Minimum Message Length**

```
C39MAX.
```
**Maximum Message Length**

## Code 39 Append

This function allows AsReader to append the data from several Code 39 bar codes together before transmitting them to the application. When AsReader encounters a Code 39 bar code with the append trigger character(s), it buffers Code39 bar codes until it reads a Code 39 bar code that does not have the append trigger. The data is then transmitted in the order in which the bar codes were read (FIFO). Default = Off.

```
C39APP1.
```
**On**

```
C39APP0.
```
**\* Off**

## Code 32 Pharmaceutical (PARAF)

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

*Note: Trioptic Code (page 56) must be turned off while scanning Code 32 Pharmaceutical codes.*

```
C39B321.
```
**On**

```
C39B320.
```
**\* Off**

## Full ASCII

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

Default = Off.

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

Character pairs /M and /N decode as a minus sign and period respectively.

Character pairs /P through /Y decode as 0 through 9.
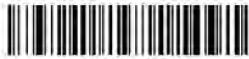


C39ASC1.
**Full ASCII On**



C39ASC0.
**\* Full ASCII Off**

## 3.5.  Interleaved 2 of 5

*< Default All Interleaved 2 of 5 Settings >*



I25DFT.

**Interleaved 2 of 5 On/Off**



I25ENA1.
**\* On**



I25ENA0.
**Off**

## Check Digit

No Check Digit indicates that AsReader reads and transmits bar code data with or without a check digit. When Check Digit is set to Validate, but Don't Transmit, the unit only reads Interleaved 2 of 5 bar codes printed with a check digit, but will not transmit the check digit with the scanned data. When Check Digit is set to Validate and Transmit, AsReader only reads Interleaved 2 of 5 bar

codes printed with a check digit, and will transmit this digit at the end of the scanned data. Default = No Check Digit.

**I25CK20.**
**\* No Check Digit**

**I25CK21.**
**Validate, but Don't Transmit**

**I25CK22.**
**Validate and Transmit**

## *Interleaved 2 of 5 Message Length*

Scan the bar codes below to change the message length. Refer to Message Length Description (page 29) for additional information. Minimum and Maximum lengths = 2-80. Minimum Default = 4, Maximum Default = 80.

**I25MIN.**
**Minimum Message Length**

**I25MAX.**
**Maximum Message Length**

## 3.6. NEC 2 of 5

*< Default All NEC 2 of 5 Settings >*

N25DFT.

### NEC 2 of 5 On/Off

N25ENA1.
* On

N25ENA0.
Off

### Check Digit

No Check Digit indicates that AsReader reads and transmits bar code data with or without a check digit.

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

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

N25CK20.
* No Check Digit

N25CK21.
Validate, but Don't Transmit

N25CK22.
Validate and Transmit

### NEC 2 of 5 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page29) for additional information. Minimum and Maximum lengths = 2-80. Minimum Default = 4, Maximum Default = 80.

N25MIN.
Minimum Message Length

N25MAX.
Maximum Message Length

## 3.7. Code 93

*< Default All Code 93 Settings >*

```
C93DFT.
```

### Code 93 On/Off

```
C93ENA1.
* On
```

```
C93ENA0.
Off
```

### Code 93 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page29) for additional information. Minimum and Maximum lengths = 0-80. Minimum Default = 0, Maximum Default = 80.

```
C93MIN.
Minimum Message Length
```

```
C93MAX.
Maximum Message Length
```

### Code 93 Append

This function allows AsReader to append the data from several Code 93 bar codes together before transmitting them to the application. When this function is enabled, AsReader stores those Code 93 bar codes that start with a space (excluding the start and stop symbols), and does not immediately transmit the data. AsReader stores the data in the order in which the bar codes are read, deleting the first space from each. AsReader transmits the appended data when it reads a Code 93 bar code that starts with a character other than a space. Default = Off.

```
C93APP1.
On
```

```
C93APP0.
* Off
```

### Code 93 Code Page

Code pages define the mapping of character codes to characters. If the data received does not display with the proper characters, it may be because the bar code being scanned was created using a code page that is different from the one the application is expecting. If this is the case, scan the bar code below, select the code page with which the bar codes were created (see ISO 2022/ISO 646 Character Replacements on page 82), and scan the value and the Save bar code from the Programming Chart on the inside the back cover of this manual. The data characters should then appear properly.

```
C93DCP.
Code 93 Code Page
```

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

*<Default All Straight 2 of 5 Industrial Settings>*

R25DFT.

### Straight 2 of 5 Industrial On/Off

R25ENA1.
**On**

R25ENA0.
⁺ **Off**

### Straight 2 of 5 Industrial Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page29) for additional information. Minimum and Maximum lengths = 1-48. Minimum Default = 4, Maximum Default = 48.

R25MIN.
**Minimum Message Length**

R25MAX.
**Maximum Message Length**

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

*<Default All Straight 2 of 5 IATA Settings>*

A25DFT.

### *Straight 2 of 5 IATA On/Off*

A25ENA1.
**On**

A25ENA0.
**\* Off**

### *Straight 2 of 5 IATA Message Length*

Scan the bar codes below to change the message length. Refer to Message Length Description (page29) for additional information. Minimum and Maximum lengths = 1-48. Minimum Default = 4, Maximum Default = 48.

A25MIN.
**Minimum Message Length**

A25MAX.
**Maximum Message Length**

## 3.10. Matrix 2 of 5

***<Default All Matrix 2 of 5 Settings>***

X25DFT.

### *Matrix 2 of 5 On/Off*

X25ENA1.
**On**

X25ENA0.
**\* Off**

### *Matrix 2 of 5 Message Length*

Scan the bar codes below to change the message length. Refer to Message Length Description (page29) for additional information. Minimum and Maximum lengths = 1-80. Minimum Default = 4, Maximum Default = 80.

X25MIN.
**Minimum Message Length**

X25MAX.
**Maximum Message Length**

## 3.11. Code 11

*<Default All Code 11 Settings>*

C11DFT.

### *Code 11 On/Off*

C11ENA1.
**On**

C11ENA0.
**\* Off**

### *Check Digits Required*

This option sets whether 1 or 2 check digits are required with Code 11 bar codes. Default = Two Check Digits.

C11CK20.
**One Check Digit**

C11CK21.
**\* Two Check Digits**

### *Code 11 Message Length*

Scan the bar codes below to change the message length. Refer to Message Length Description (page29) for additional information. Minimum and Maximum lengths = 1-80. Minimum Default = 4, Maximum Default = 80.

C11MIN.
**Minimum Message Length**

C11MAX.
**Maximum Message Length**

## 3.12. Code 128

<Default All Code 128 Settings>

```
128DFT.
```

### Code 128 On/Off

```
128ENA1.
* On
```

```
128ENA0.
Off
```

### ISBT 128 Concatenation

In 1994 the International Society of Blood Transfusion (ISBT) ratified a standard for communicating critical blood information in a uniform manner. The use of ISBT formats requires a paid license. The ISBT 128 Application Specification

describes 1) the critical data elements for labeling blood products, 2) the current recommendation to use Code 128 due to its high degree of security and its space-efficient design, 3) a variation of Code 128 that supports concatenation of neighboring symbols, and 4) the standard layout for bar codes on a blood product label. Use the bar codes below to turn concatenation on or off. Default =Off.

```
ISBENA1.
On
```

```
ISBENA0.
* Off
```

### Code 128 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page29) for additional information. Minimum and Maximum lengths = 0-80. Minimum Default = 0, Maximum Default = 80.

```
128MIN.
Minimum Message Length
```

```
128MAX.
Maximum Message Length
```

## *Code 128 Append*

This function allows AsReader to append the data from several Code 128 bar codes together before transmitting them to the application. When AsReader encounters a Code 128 bar code with the append trigger character(s), it buffers Code 128 bar codes until it reads a Code 128 bar code that does not have the append trigger. The data is then transmitted in the order in which the bar codes were read (FIFO). Default = On.



128APP1.
* On



128APP0.
Off

## *Code 128 Code Page*

Code pages define the mapping of character codes to characters. If the data received does not display with the proper characters, it may be because the bar code being scanned was created using a code page that is different from the one the application is expecting. If this is the case, scan the bar code below, select the code page with which the bar codes were created (see ISO 2022/ISO 646 Character Replacements on page 82), and scan the value and the Save bar code from the Programming Chart on the inside the back cover of this manual. The data characters should then appear properly.



128DCP.
**Code 128 Code Page**

## 3.13. GS1-128

*<Default All GS1-128 Settings>*

```
GS1DFT.
```

### *GS1-128 On/Off*

```
GS1ENA1.
* On
```

```
GS1ENA0.
Off
```

### *GS1-128 Message Length*

Scan the bar codes below to change the message length. Refer to Message Length Description (page29) for additional information. Minimum and Maximum lengths = 1-80. Minimum Default = 1, Maximum Default = 80.

```
GS1MIN.
Minimum Message Length
```

```
GS1MAX.
Maximum Message Length
```

## Telepen

### <Default All Telepen Settings>

||||||||||||||||||||||
TELDFT.

### Telepen On/Off

||||||||||||||||||||||
TELENA1.
On

||||||||||||||||||||||
TELENA0.
* Off

### Telepen Output

Using AIM Telepen Output, AsReader reads symbols with start/stop pattern 1 and decodes them as standard full ASCII (start/stop pattern 1). When Original Telepen Output is selected, AsReader reads symbols with start/stop pattern 1 and decodes them as compressed numeric with optional full ASCII (start/stop pattern 2). Default = AIM Telepen Output.

||||||||||||||||||||||
TELOLD0.
* AIM Telepen Output

||||||||||||||||||||||
TELOLD1.
Original Telepen Output

### Telepen Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page29) for additional information. Minimum and Maximum lengths = 1-60. Minimum Default = 1, Maximum Default = 60.

||||||||||||||||||||||
TELMIN.
Minimum Message Length

||||||||||||||||||||||
TELMAX.
Maximum Message Length

## 3.14. UPC-A

### *<Default All UPC-A Settings>*

||||||||||||||||||||||||||||||||||||
UPADFT.

### *UPC-A On/Off*

||||||||||||||||||||||||||||||||
UPBENA1.
* On

||||||||||||||||||||||||||||||||
UPBENA0.
Off

### *UPC-A Check Digit*

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

||||||||||||||||||||||||||||||||
UPACKX1.
* On

||||||||||||||||||||||||||||||||
UPACKX0.
Off

### *UPC-A Number System*

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

||||||||||||||||||||||||||||||||
UPANSX1.
* On

||||||||||||||||||||||||||||||||
UPANSX0.
Off

## UPC-A Addenda

This selection adds 2 or 5 digits to the end of all scanned UPC-A data.

Default = Off for both 2 Digit and 5 Digit Addenda.

UPAAD21.
**2 Digit Addenda On**

UPAAD20.
**\* 2 Digit Addenda Off**

UPAAD51.
**5 Digit Addenda On**

UPAAD50.
**\* 5 Digit Addenda Off**

## UPC-A Addenda Required

When Required is scanned, AsReader will only read UPC-A bar codes that have addenda. You must then turn on a 2 or 5 digit addenda listed on page 46. Default = Not Required.

UPAARQ1.
**Required**

UPAARQ0.
**\* Not Required**

## Addenda Timeout

You can set a time during which AsReader looks for an addenda. If an addenda is not found within this time period, the data can be either transmitted or discarded, based on the setting you are using for UPC-A Addenda Required (page46).

Set the length (in milliseconds) for this timeout by scanning the bar code below, then setting the timeout (from 0-65535 milliseconds) by scanning digits from the Programming Chart, then scanning Save. Default = 100.

DLYADD.
**Addenda Timeout**

## UPC-A Addenda Separator

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

UPAADS1.
**\* On**

UPAADS0.
**Off**

## 3.15. UPC-A/EAN-13
## with Extended Coupon Code

Use the following codes to enable or disable UPC-A and EAN-13 with Extended Coupon Code. When left on the default setting (Off), AsReader treats Coupon Codes and Extended Coupon Codes as single bar codes.

If you scan the Allow Concatenation code, when AsReader sees the coupon code and the extended coupon code in a single scan, it transmits both as one symbologies. Otherwise, it transmits the first coupon code it reads.

If you scan the Require Concatenation code, AsReader must see and read the coupon code and extended coupon code in a single read to transmit the data. No data is output unless both codes are read. Default = Off.

CPNENA0.
* Off

CPNENA1.
Allow Concatenation

CPNENA2.
Require Concatenation

## 3.16. Coupon GS1 DataBar Output

If you scan coupons that have both UPC and GS1 DataBar codes, you may wish to scan and output only the data from the GS1 DataBar code. Scan the GS1 Output On code below to scan and output only the GS1 DataBar code data. Default = GS1 Output Off.

CPNGS10.
* GS1 Output Off

CPNGS11.
GS1 Output On

## 3.17. UPC-E0

### *<Default All UPC-E Settings>*

||||||||||||||||||||
UPEDFT.

### *UPC-E0 On/Off*

Most U.P.C. bar codes lead with the 0 number system. To read these codes, use the UPC-E0 On selection. If you need to read codes that lead with the 1 number system, use UPC-E1 (page 50). Default = On.

||||||||||||||||||||
UPEEN01.
* UPC-E0 On

||||||||||||||||||||
UPEEN00.
UPC-E0 Off

### *UPC-E0 Expand*

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

||||||||||||||||||||
UPEEXP1.
On

||||||||||||||||||||
UPEEXP0.
* Off

### *UPC-E0 Addenda Required*

When Required is scanned, AsReader will only read UPC-E bar codes that have addenda. Default = Not Required.

||||||||||||||||||||
UPEARQ1.
Required

||||||||||||||||||||
UPEARQ0.
* Not Required

### *UPC-E0 Addenda Separator*

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

||||||||||||||||||||
UPEADS1.
* On

||||||||||||||||||||
UPEADS0.
Off

## UPC-E0 Check Digit

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

UPECKX1.
* On

UPECKX0
Off

## UPC-E0 Leading Zero

This feature allows the transmission of a leading zero (0) at the beginning of scanned data. To prevent transmission, scan Off. Default = On.

UPENSX1.
* On

UPENSX0.
Off

## UPC-E0 Addenda

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

UPEAD21.
2 Digit Addenda On

UPEAD20.
* 2 Digit Addenda Off

UPEAD51.
5 Digit Addenda On

UPEAD50.
* 5 Digit Addenda Off

## 3.18. UPC-E1

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

UPEEN11.
**UPC-E1 On**

UPEEN10.
**\* UPC-E1 Off**

## 3.19. EAN/JAN-13

*<Default All EAN/JAN Settings>*

E13DFT.

### EAN/JAN-13 On/Off

E13ENA1.
**\* On**

E13ENA0.
**Off**

### Convert UPC-A to EAN-13

When UPC-A Converted to EAN-13 is selected, UPC-A bar codes are converted to 13 digit EAN-13 codes by adding a zero to the front. When Do not Convert UPC-A is selected, UPC-A codes are read as UPC-A.

UPAENA0.
**UPC-A Converted to EAN-13**

UPAENA1.
**\* Do not Convert UPC-A**

### EAN/JAN-13 Check Digit

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

E13CKX1.
**\* On**

E13CKX0.
**Off**

## EAN/JAN-13 Addenda

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

E13AD21.
**2 Digit Addenda On**

E13AD20.
**\* 2 Digit Addenda Off**

E13AD51.
**5 Digit Addenda On**

E13AD50.
**\* 5 Digit Addenda Off**

## EAN/JAN-13 Addenda Required

When Required is scanned, AsReader will only read EAN/JAN-13 bar codes that have addenda. Default = Not Required.

E13ARQ1.
**Required**

E13ARQ0.
**\* Not Required**

## EAN/JAN-13 Addenda Separator

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

E13ADS1.
**\* On**

E13ADS0.
**Off**

*Note: If you want to enable or disable EAN13 with Extended Coupon Code, refer to UPC-A/EAN-13 with Extended Coupon Code .*

## ISBN Translate

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

E13ISB1.
**On**

E13ISB0.
**\* Off**

## 3.20. EAN/JAN-8

### *&lt;Default All EAN/JAN-8 Settings&gt;*

||||| || ||| || ||||| |||| |||
EA8DFT.

### *EAN/JAN-8 On/Off*

||||| ||| || |||| ||| ||||
EA8ENA1.
* On

||||| ||| || |||| ||| ||||
EA8ENA0.
Off

### *EAN/JAN-8 Check Digit*

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

||||| ||| || |||| ||| ||||
EA8CKX1.
* On

||||| ||| || |||| ||| ||||
EA8CKX0.
Off

### *EAN/JAN-8 Addenda*

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

||||| ||| || |||| ||| ||||
EA8AD21.
2 Digit Addenda On

||||| ||| || |||| ||| ||||
EA8AD20.
* 2 Digit Addenda Off

||||| ||| || |||| ||| ||||
EA8AD51.
5 Digit Addenda On

||||| ||| || |||| ||| ||||
EA8AD50.
* 5 Digit Addenda Off

### EAN/JAN-8 Addenda Required

When Required is scanned, AsReader will only read EAN/JAN-8 bar codes that have addenda. Default = Not Required.

EA8ARQ1.
Required

EA8ARQ0.
* Not Required

### EAN/JAN-8 Addenda Separator

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

EA8ADS1.
* On

EA8ADS0.
Off

## 3.21. MSI

*<Default All MSI Settings>*

||| ||| || ||| ||| || ||| |||
MSIDFT.

### *MSI On/Off*

||| ||| || ||| ||| |||
MSIENA1
**On**

||| ||| || ||| ||| |||
MSIENA0
**\* Off**

### *MSI Check Character*

Different types of check characters are used with MSI bar codes. You can program AsReader to read MSI bar codes with Type 10 check characters. Default = Validate Type 10, but Don't Transmit.

When Check Character is set to Validate Type 10/11 and Transmit, AsReader will only read MSI bar codes printed with the specified type check character(s), and will transmit the character(s) at the end of the scanned data.

When Check Character is set to Validate Type 10/11, but Don't Transmit, the unit will only read MSI bar codes printed with the specified type check character(s), but will not transmit the check character(s) with the scanned data.

||| ||| || ||| ||| |||
MSICHK0.
**\* Validate Type 10, but Don't Transmit**

||| ||| || ||| ||| |||
MSICHK1.
**Validate Type 10 and Transmit**

||| ||| || ||| ||| |||
MSICHK2.
**Validate 2 Type 10 Characters, but Don't Transmit**

||| ||| || ||| ||| |||
MSICHK3.
**Validate 2 Type 10 Characters and Transmit**

||| ||| || ||| ||| |||
MSICHK4.
**Validate Type 10 then Type 11 Character, but Don't Transmit**

||| ||| || ||| ||| |||
MSICHK5.
**Validate Type 10 then Type 11 Character and Transmit**

||| ||| || ||| ||| |||
MSICHK6.
**Disable MSI Check Characters**

### *MSI Message Length*

Scan the bar codes below to change the message length. Refer to Message Length Description (page29) for additional information. Minimum and Maximum lengths = 4-48. Minimum Default = 4, Maximum Default = 48.


MSIMIN.
**Minimum Message Length**


MSIMAX.
**Maximum Message Length**

## 3.22. GS1 DataBar Omnidirectional

### *< Default All GS1 DataBar Omnidirectional Settings >*


RSSDFT.

### *GS1 DataBar Omnidirectional On/Off*


RSSENA1.
* On


RSSENA0.
Off

## 3.23. GS1 DataBar Limited

### *< Default All GS1 DataBar Limited Settings >*


RSLDFT.

### *GS1 DataBar Limited On/Off*


RSLENA1.
* On


RSLENA0.
Off

## 3.24. GS1 DataBar Expanded

*< Default All GS1 DataBar Expanded Settings >*


RSEDFT.

### *GS1 DataBar Expanded On/Off*


RSEENA1.
* On


RSEENA0.
Off

### *GS1 DataBar Expanded Message Length*

Scan the bar codes below to change the message length. Refer to Message Length Description (29) for additional information. Minimum and Maximum lengths = 4-74. Minimum Default = 4, Maximum Default = 74.


RSEMIN.
**Minimum Message Length**


RSEMAX.
**Maximum Message Length**

## 3.25. Trioptic Code

Note: If you are going to scan Code 32 Pharmaceutical codes, Trioptic Code must be off.

Trioptic Code is used for labeling magnetic storage media.


TRIENA1.
On


TRIENA0.
* Off

## 3.26. Codablock A

*<Default All Codablock A Settings>*


CBADFT.

### *Codablock A On/Off*


CBAENA1.
On


CBAENA0.
* Off

### *Codablock A Message Length*

Scan the bar codes below to change the message length. Refer to Message Length Description (page29) for additional information. Minimum and Maximum lengths = 1-600. Minimum Default = 1, Maximum Default = 600.


CBAMIN.
**Minimum Message Length**


CBAMAX.
**Maximum Message Length**

## 3.27. Codablock F

*<Default All Codablock F Settings>*

||||||||||||||||||||||
CBFDFT.

### *Codablock F On/Off*

||||||||||||||||||||||
CBFENA1.
**On**

||||||||||||||||||||||
CBFENA0.
**\* Off**

### *Codablock F Message Length*

Scan the bar codes below to change the message length. Refer to Message Length Description (page29) for additional information. Minimum and Maximum lengths = 1-2048. Minimum Default = 1, Maximum Default = 2048.

||||||||||||||||||||||
CBFMIN.
**Minimum Message Length**

||||||||||||||||||||||
CBFMAX.
**Maximum Message Length**

## 3.28. Label Code

The standard Label Code is used in libraries. Default = Off.

||||||||||||||||||||||
LBLENA1.
**On**

||||||||||||||||||||||
LBLENA0.
**\*Off**

## 3.29. PDF417

### < Default All PDF417 Settings >


PDFDFT.

### *PDF417 On/Off*


PDFENA1.
* On


PDFENA0.
Off

### *PDF417 Message Length*

Scan the bar codes below to change the message length. Refer to Message Length Description (page 29) for additional information. Minimum and Maximum lengths = 1-2750. Minimum Default = 1, Maximum Default = 2750.


PDFMIN.
Minimum Message Length


PDFMAX.
Maximum Message Length

### *PDF417 Code Page*

Code pages define the mapping of character codes to characters. If the data received does not display with the proper characters, it may be because the bar code being scanned was created using a code page that is different from the one the application is expecting. If this is the case, scan the bar code below, select the code page with which the bar codes were created (see ISO 2022/ISO 646 Character Replacements on page 82), and scan the value and the Save bar code from the Programming Chart on the inside the back cover of this manual. The data characters should then appear properly.

## 3.30. MacroPDF417

MacroPDF417 is an implementation of PDF417 capable of encoding very large amounts of data into multiple PDF417 bar codes. When this selection is enabled, these multiple bar codes are assembled into a single data string. Default = On.


PDFMAC1.
* On


PDFMAC0.
Off

## 3.31. MicroPDF417

MPDDFT.

### MicroPDF417 On/Off

MPDENA1.
On

MPDENA0.
* Off

### MicroPDF417 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page29) for additional information. Minimum and Maximum lengths = 1-366. Minimum Default = 1, Maximum Default = 366.

MPDMIN.
**Minimum Message Length**

MPDMAX.
**Maximum Message Length**

## 3.32. GS1 Composite Codes

Linear codes are combined with a unique 2D composite component to form a new class called GS1 Composite symbology. GS1 Composite symbologies allow for the co-existence of symbologies already in use. Default = Off.

COMENA1.
On

COMENA0.
* Off

## UPC/EAN Version

Scan the UPC/EAN Version On bar code to decode GS1 Composite symbols that have a U.P.C. or an EAN linear component. (This does not affect GS1 Composite symbols with a GS1-128 or GS1 linear component.) Default = UPC/EAN Version Off.

COMUPC1.
**UPC/EAN Version On**

COMUPC0.
**\* UPC/EAN Version Off**

*Note: If you scan coupons that have both UPC and GS1 DataBar codes, you may wish to scan and output only the data from the GS1 DataBar code. See Coupon GS1 DataBar Output (page47) for further information.*

## GS1 Composite Code Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page29) for additional information. Minimum and Maximum lengths = 1-2435. Minimum Default = 1, Maximum Default = 2435.

COMMIN.
**Minimum Message Length**

COMMAX.
**Maximum Message Length**

## 3.33. GS1 Emulation

AsReader can automatically format the output from any GS1 data carrier to emulate what would be encoded in an equivalent GS1-128 or GS1 DataBar symbol. GS1 data carriers include UPC-A and UPC-E, EAN-13 and EAN-8, ITF-14, GS1-128, and GS1-128 DataBar and GS1 Composites. (Any application that accepts GS1 data can be simplified since it only needs to recognize one data carrier type.)

If GS1-128 Emulation is scanned, all retail codes (U.P.C., UPC-E, EAN8, EAN13) are expanded out to 16 digits. If the AIM ID is enabled, the value will be the GS1-128 AIM ID, ]C1 (see Symbology Charts on page 76).

If GS1 DataBar Emulation is scanned, all retail codes (U.P.C., UPC-E, EAN8, EAN13) are expanded out to 16 digits. If the AIM ID is enabled, the value will be the GS1-DataBar AIM ID, ]em (see Symbology Charts on page 76).

If GS1 Code Expansion Off is scanned, retail code expansion is disabled, and UPC-E expansion is controlled by the UPC-E0 Expand (page 48) setting. If the AIM ID is enabled, the value will be the GS1-128 AIM ID, ]C1 (see Symbology Charts on page 76).

If EAN8 to EAN13 Conversion is scanned, all EAN8 bar codes are converted to EAN13 format.

Default = GS1 Emulation Off.

EANEMU1.
**GS1-128 Emulation**

EANEMU2.
**GS1 DataBar Emulation**

EANEMU3.
**GS1 Code Expansion Off**

EANEMU4.
**EAN8 to EAN13 Conversion**

EANEMU0.
**\* GS1 Emulation Off**
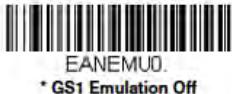
## 3.34. TCIF Linked Code 39 (TLC39)

This code is a composite code since it has a Code 39 linear component and a MicroPDF417 stacked code component. All bar code readers are capable of reading the Code 39 linear component. The MicroPDF417 component can only be decoded if TLC39 On is selected. The linear component may be decoded as Code 39 even if TLC39 is off. Default = Off.

T39ENA1.
On

T39ENA0.
* Off

## 3.35. QR Code

### < Default All QR Code Settings >

QRCDFT.

### QR Code On/Off

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

QRCENA1.
* On

QRCENA0.
Off

### QR Code Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page29) for additional information. Minimum and Maximum lengths = 1-7089. Minimum Default = 1, Maximum Default = 7089.

QRCMIN.
Minimum Message Length

QRCMAX.
Maximum Message Length

## QR Code Append

This function allows AsReader to append the data from several QR Code bar codes together before transmitting them to the application. When AsReader encounters an QR Code bar code with the append trigger character(s), it buffers AsReader of QR Code bar codes determined by information encoded in those bar codes. Once the proper number of codes is reached, the data is output in the order specified in the bar codes. Default = On.

QRCAPP1.
* On

QRCAPP0.
Off

## QR Code Page

QR Code pages define the mapping of character codes to characters. If the data received does not display with the proper characters, it may be because the bar code being scanned was created using a code page that is different from the one the application is expecting. If this is the case, scan the bar code below, select the code page with which the bar codes were created (see ISO 2022/ISO 646 Character Replacements on page 82), and scan the value and the Save bar code from the Programming Chart on the inside the back cover of this manual. The data characters should then appear properly.

QRCDCP.
QR Code Page

## 3.36. Data Matrix

**< Default All Data Matrix Settings >**



IDMDFT.

### Data Matrix On/Off



IDMENA1.
* On



IDMENA0.
Off

### Data Matrix Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page29) for additional information. Minimum and Maximum lengths = 1-3116. Minimum Default = 1, Maximum Default = 3116.



IDMMIN.
**Minimum Message Length**



IDMMAX.
**Maximum Message Length**

### Data Matrix Append

This function allows AsReader to append the data from several Data Matrix bar codes together before transmitting them to the application. When AsReader encounters an Data Matrix bar code with the append trigger character(s), it buffers the number of Data Matrix bar codes determined by information encoded in those bar codes. Once the proper number of codes is reached, the data is output in the order specified in the bar codes. Default = On.



IDMAPP1.
* On



IDMAPP0.
Off

### Data Matrix Code Page

Data Matrix Code pages define the mapping of character codes to characters. If the data received does not display with the proper characters, it may be because the bar code being scanned was created using a code page that is different from the one the application is expecting. If this is the case, scan the bar code below, select the code page with which the bar codes were created (see ISO 2022/ISO 646 Character Replacements on page 82), and scan the value and the Save bar code from the Programming Chart on the inside the back cover of this manual. The data characters should then appear properly.



IDMDCP.
**Data Matrix Code Page**

## 3.37. MaxiCode

*< Default All MaxiCode Settings >*

||||||| |||| |||| |||| |||
MAXDFT.

### *MaxiCode On/Off*

||||||| |||| |||| |||| |||
MAXENA1.
**On**

||||||| |||| |||| |||| |||
MAXENA0.
**\* Off**

### *MaxiCode Message Length*

Scan the bar codes below to change the message length. Refer to Message Length Description (page29) for additional information. Minimum and Maximum lengths = 1-150. Minimum Default = 1, Maximum Default = 150.

||||||| |||| |||| |||| |||
MAXMIN.
**Minimum Message Length**

||||||| |||| |||| |||| |||
MAXMAX.
**Maximum Message Length**

## 3.38. Aztec Code

*< Default All Aztec Code Settings >*


AZTDFT.

### *Aztec Code On/Off*


AZTENA1.
* On


AZTENA0.
Off

### *Aztec Code Message Length*

Scan the bar codes below to change the message length. Refer to Message Length Description (page29) for additional information. Minimum and Maximum lengths = 1-3832. Minimum Default = 1, Maximum Default = 3832.


AZTMIN.
Minimum Message Length


AZTMAX.
Maximum Message Length

### *Aztec Append*

This function allows AsReader to append the data from several Aztec bar codes together before transmitting them to the application. When AsReader encounters an Aztec bar code with the append trigger character(s), it buffers the number of Aztec bar codes determined by information encoded in those bar codes. Once the proper number of codes is reached, the data is output in the order specified in the bar codes. Default = On.


AZTAPP1.
* On


AZTAPP0.
Off

### *Aztec Code Page*

Aztec Code pages define the mapping of character codes to characters. If the data received does not display with the proper characters, it may be because the bar code being scanned was created using a code page that is different from the one the application is expecting. If this is the case, scan the bar code below, select the code page with which the barcodes were created (see ISO 2022/ISO 646 Character Replacements on page 82), and scan the value and the Save bar code from the Programming Chart on the inside the back cover of this manual. The data characters should then appear properly.


AZTDCP.
Aztec Code Page

## 3.39. Chinese Sensible (Han Xin) Code

*< Default All Han Xin Settings >*

HX_DFT.

### *Han Xin Code On/Off*

HX_ENA1.
**On**

HX_ENA0.
**\* Off**

### *Han Xin Code Message Length*

Scan the bar codes below to change the message length. Refer to Message Length Description (page29) for additional information. Minimum and Maximum lengths = 1-7833. Minimum Default = 1, Maximum Default = 7833.

HX_MIN.
**Minimum Message Length**

HX_MAX.
**Maximum Message Length**

## 3.40. Postal Codes - 2D

The following lists the possible 2D postal codes, and 2D postal code combinations that are allowed. Only one 2D postal code selection can be active at a time. If you scan a second 2D postal code selection, the first selection is overwritten. Default = 2D Postal Codes Off.

POSTAL0.
* 2D Postal Codes Off

### *Single 2D Postal Codes:*

POSTAL1.
Australian Post On

POSTAL7.
British Post On

POSTAL30.
Canadian Post On

POSTAL10.
Intelligent Mail Bar Code On

POSTAL3.
Japanese Post On

POSTAL4.
KIX Post On

POSTAL5.
Planet Code On
Also see *Planet Code Check Digit*, page 6-47.

POSTAL9.
Postal-4i On

POSTAL6.
Postnet On
Also see *Postnet Check Digit*, page 6-47.

POSTAL11.
Postnet with B and B' Fields On

POSTAL2.
InfoMail On

**Combination 2D Postal Codes:**

POSTAL8.
InfoMail and British
Post On

POSTAL14.
Postnet and
Postal-4i On

POSTAL17.
Postal-4i and
Intelligent Mail Bar Code On

POSTAL12.
Planet Code and
Postnet On

POSTAL13.
Planet Code and
Postal-4i On

POSTAL21.
Planet Code,
Postnet, and
Postal-4i On

POSTAL23.
Planet Code,
Postal-4i, and
Intelligent Mail Bar Code On

POSTAL20.
Intelligent Mail Bar Code and
Postnet with B and B' Fields On

POSTAL16.
Postnet and
Intelligent Mail Bar Code On

POSTAL19.
Postal-4i and
Postnet with B and B' Fields On

POSTAL18.
Planet Code and
Postnet with B and B' Fields On

POSTAL15.
Planet Code and
Intelligent Mail Bar Code On

POSTAL22.
Planet Code,
Postnet, and
Intelligent Mail Bar Code On

POSTAL24.
Postnet,
Postal-4i, and
Intelligent Mail Bar Code On


POSTAL25.
Planet Code,
Postal-4i, and
Postnet with B and B' Fields On


POSTAL26.
Planet Code,
Intelligent Mail Bar Code, and
Postnet with B and B' Fields On


POSTAL27.
Postal-4i,
Intelligent Mail Bar Code, and
Postnet with B and B' Fields On


POSTAL28.
Planet Code,
Postal-4i,
Intelligent Mail Bar Code, and
Postnet On


POSTAL29.
Planet Code,
Postal-4i,
Intelligent Mail Bar Code, and
Postnet with B and B' Fields On

## *Planet Code Check Digit*

This selection allows you to specify whether the check digit should be transmitted at the end of Planet Code data. Default = Don't Transmit.


PLNCKX1.
Transmit Check Digit


PLNCKX0.
* Don't Transmit Check Digit

## *Postnet Check Digit*

This selection allows you to specify whether the check digit should be transmitted at the end of Postnet data. Default = Don't Transmit.


NETCKX1.
Transmit Check Digit


NETCKX0.
* Don't Transmit Check Digit

### *Australian Post Interpretation*

This option controls what interpretation is applied to customer fields in Australian 4-State symbols. Bar Output lists the bar patterns in "0123" format.

Numeric N Table causes that field to be interpreted as numeric data using the N Table.

Alphanumeric C Table causes the field to be interpreted as alphanumeric data using the C Table. Refer to the Australian Post Specification Tables.

Combination C and N Tables causes the field to be interpreted using either the C or N Tables.

AUSINT0.
* Bar Output

AUSINT1.
Numeric N Table

AUSINT2.
Alphanumeric C Table

AUSINT3.
Combination C and N Tables

## 3.41. Postal Codes - Linear

The following lists linear postal codes. Any combination of linear postal code selections can be active at a time.

### *China Post (Hong Kong 2 of 5)*

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

CPCDFT.

### *China Post (Hong Kong 2 of 5) On/Off*

CPCENA1
On

CPCENA0.
* Off

### *China Post (Hong Kong 2 of 5) Message Length*

Scan the bar codes below to change the message length. Refer to Message Length Description (page29) for additional information. Minimum and Maximum lengths = 2-80. Minimum Default = 4, Maximum Default = 80.

CPCMIN.
Minimum Message Length

CPCMAX.
Maximum Message Length

## 3.42. Korea Post

*<Default All Korea Post Settings>*

KPCDFT.

### *Korea Post*

KPCENA1.
**On**

KPCENA0.
**\* Off**

### *Korea Post Message Length*

Scan the bar codes below to change the message length. Refer to Message Length Description (page29) for additional information. Minimum and Maximum lengths = 2-80. Minimum Default = 4, Maximum Default = 48.

KPCMIN.
**Minimum Message Length**

KPCMAX.
**Maximum Message Length**

### *Korea Post Check Digit*

This selection allows you to specify whether the check digit should be transmitted at the end of the scanned data. Default = Don't Transmit.

KPCCHK1.
**Transmit Check Digit**

KPCCHK0.
**\* Don't Transmit Check Digit**

# 4. Utilities

## 4.1. To Add a Test Code I.D. Prefix to All Symbologies

This selection allows you to turn on transmission of a Code I.D. before the decoded symbology. (See the Symbology Charts, beginning on page 76) for the single character code that identifies each symbology.) This action first clears all current prefixes, then programs a Code I.D. prefix for all symbologies. This is a temporary setting that will be removed when the unit is power cycled.



PRECA2,BK2995C80!
**Add Code I.D. Prefix to
All Symbologies (Temporary)**

## 4.2. Show Decoder Revision

Scan the bar code below to output the decoder revision.



REV_DR.
**Show Decoder Revision**

## 4.3. Show Software Revision

Scan the bar code below to output the current software revision, unit serial number, and other product information for both AsReader and base.



REVINF.
**Show Software Revision**

## 4.4. Show Data Format

Scan the bar code below to show current data format settings.



DFMBK3?.
**Data Format Settings**

## 4.5.  Test Menu

When you scan the Test Menu On code, then scan a programming code in this manual, AsReader displays the content of a programming code. The programming function will still occur, but in addition, the content of that programming code is output to the terminal.

*Note: This feature should not be used during normal scan engine operation.*


TSTMNU1.
**On**


TSTMNU0.
**\* Off**
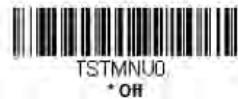
## 4.6.  Application Plug-Ins (Apps)

Any apps that you are using can be turned off or on by scanning the following bar codes. Apps are stored in groups: Decoding, and Formatting. You can enable and disable these groups of apps by scanning that group's On or Off bar code below. You can also scan the List Apps bar code to output a list of all your apps.


PLGDCE1.
**\* Decoding Apps On**


PLGDCE0.
**Decoding Apps Off**


PLGFOE1.
**\* Formatting Apps On**


PLGFOE0.
**Formatting Apps Off**


PLGINF.
**List Apps**

*Note: You must reset AsReader in order for the apps setting to take effect.*

# 5. Reference Charts

## 5.1. Symbology Charts

*Note: "m" represents the AIM modifier character. Refer to International Technical Specification, Symbology Identifiers, for AIM modifier character details.*
*Prefix/Suffix entries for specific symbologies override the universal (All Symbologies, 99) entry.*

### *Linear Symbologies*

| Symbology | AIM ID | AIM Possible modifiers (*m*) | AsReader ID | AsReader Hex |
|---|---|---|---|---|
| *All Symbologies* | | | | 99 |
| Codabar | ]F*m* | 0-1 | a | 61 |
| Code 11 | ]H3 | | h | 68 |
| Code 128 | ]C*m* | 0, 1, 2, 4 | j | 6A |
| Code 32 Pharmaceutical (PARAF) | ]X0 | | < | 3C |
| Code 39 (supports Full ASCII mode) | ]A*m* | 0, 1, 3, 4, 5, 7 | b | 62 |
| TCIF Linked Code 39 (TLC39) | ]L2 | | T | 54 |
| Code 93 and 93i | ]G*m* | 0-9, A-Z, a-m | i | 69 |
| EAN | ]E*m* | 0, 1, 3, 4 | d | 64 |
| EAN-13 (including Bookland EAN) | ]E0 | | d | 64 |
| EAN-13 with Add-On | ]E3 | | d | 64 |
| EAN-13 with Extended Coupon Code | ]E3 | | d | 64 |
| EAN-8 | ]E4 | | D | 44 |
| EAN-8 with Add-On | ]E3 | | D | 44 |
| GS1 | | | | |
| GS1 DataBar | ]e*m* | 0 | y | 79 |
| GS1 DataBar Limited | ]e*m* | | { | 7B |
| GS1 DataBar Expanded | ]e*m* | | } | 7D |
| GS1-128 | ]C1 | | I | 49 |
| 2 of 5 | | | | |
| China Post (Hong Kong 2 of 5) | ]X0 | | Q | 51 |
| Interleaved 2 of 5 | ]I*m* | 0, 1, 3 | e | 65 |
| Matrix 2 of 5 | ]X0 | | m | 6D |
| NEC 2 of 5 | ]X0 | | Y | 59 |
| Straight 2 of 5 IATA | ]R*m* | 0, 1, 3 | f | 66 |
| Straight 2 of 5 Industrial | ]S0 | | f | 66 |
| MSI | ]M*m* | 0, 1 | g | 67 |
| Telepen | ]B*m* | | t | 74 |
| UPC | | 0, 1, 2, 3, 8, 9, A, B, C | | |

| Symbology | AIM | | AsReader | |
|---|---|---|---|---|
| | ID | Possible modifiers (*m*) | ID | Hex |
| UPC-A | ]E0 | | c | 63 |
| UPC-A with Add-On | ]E3 | | c | 63 |
| UPC-A with Extended Coupon Code | ]E3 | | c | 63 |
| UPC-E | ]E0 | | E | 45 |
| UPC-E with Add-On | ]E3 | | E | 45 |
| UPC-E1 | ]X0 | | E | 45 |

| | | | | |
|---|---|---|---|---|
| Add AsReader Code ID | | | | 5C80 |
| Add AIM Code ID | | | | 5C81 |
| Add Backslash | | | | 5C5C |
| Batch mode quantity | | | 5 | 35 |

## 2D Symbologes

| Symbology | AIM | | AsReader | |
|---|---|---|---|---|
| | ID | Possible modifiers (*m*) | ID | Hex |
| *All Symbologies* | | | | 99 |
| Aztec Code | ]z*m* | 0-9, A-C | z | 7A |
| Chinese Sensible Code (Han Xin Code) | ]X0 | | H | 48 |
| Codablock A | ]O6 | 0, 1, 4, 5, 6 | V | 56 |
| Codablock F | ]O*m* | 0, 1, 4, 5, 6 | q | 71 |
| Code 49 | ]T*m* | 0, 1, 2, 4 | l | 6C |
| Data Matrix | ]d*m* | 0-6 | w | 77 |
| GS1 | ]e*m* | 0-3 | | |
| GS1 Composite | ]e*m* | 0-3 | y | 79 |
| GS1 DataBar Omnidirectional | ]e*m* | | y | 79 |
| MaxiCode | ]U*m* | 0-3 | x | 78 |
| PDF417 | ]L*m* | 0-2 | r | 72 |
| MicroPDF417 | ]L*m* | 3-5 | R | 52 |
| QR Code | ]Q*m* | 0-6 | s | 73 |
| Micro QR Code | ]Q*m* | | s | 73 |

### *Postal Symbologies*

| Symbology | AIM | | AsReader | |
|---|---|---|---|---|
| | ID | Possible modifiers (*m*) | ID | Hex |
| *All Symbologies* | | | | 99 |
| Australian Post | ]X0 | | A | 41 |
| British Post | ]X0 | | B | 42 |
| Canadian Post | ]X0 | | C | 43 |
| China Post | ]X0 | | Q | 51 |
| InfoMail | ]X0 | | , | 2c |
| Intelligent Mail Bar Code | ]X0 | | M | 4D |
| Japanese Post | ]X0 | | J | 4A |
| KIX (Netherlands) Post | ]X0 | | K | 4B |
| Korea Post | ]X0 | | ? | 3F |
| Planet Code | ]X0 | | L | 4C |
| Postal-4i | ]X0 | | N | 4E |
| Postnet | ]X0 | | P | 50 |

## ASCII Conversion Chart

| Non-printable | ASCII control characters | | Keyboard Control + ASCII (CTRL+X) Mode | | |
|---|---|---|---|---|---|
| | | | Control + X Mode Off (KBDCAS0) | Windows Mode Control + X Mode On (KBDCAS2) | |
| DEC | HEX | Char | | CTRL + X | CTRL + X function |
| 0 | 0 | NUL | Reserved | CTRL+ @ | |
| 1 | 1 | SOH | NP Enter | CTRL+ A | Select all |
| 2 | 2 | STX | Caps Lock | CTRL+ B | Bold |
| 3 | 3 | ETX | ALT Make | CTRL+ C | Copy |
| 4 | 4 | EOT | ALT Break | CTRL+ D | Bookmark |
| 5 | 5 | ENQ | CTRL Make | CTRL+ E | Center |
| 6 | 6 | ACK | CTRL Break | CTRL+ F | Find |
| 7 | 7 | BEL | Enter / Ret | CTRL+ G | |
| 8 | 8 | BS | *(Apple Make)* | CTRL+ H | History |
| 9 | 9 | HT | Tab | CTRL+ I | Italic |
| 10 | 0A | LF | *(Apple Break)* | CTRL+ J | Justify |
| 11 | 0B | VT | Tab | CTRL+ K | hyperlink |
| 12 | 0C | FF | Delete | CTRL+ L | list, left align |
| 13 | 0D | CR | Enter / Ret | CTRL+ M | |
| 14 | 0E | SO | Insert | CTRL+ N | New |
| 15 | 0F | SI | ESC | CTRL+ O | Open |
| 16 | 10 | DLE | F11 | CTRL+ P | Print |
| 17 | 11 | DC1 | Home | CTRL+ Q | Quit |
| 18 | 12 | DC2 | PrtScn | CTRL+ R | |

| Non-printable | ASCII control characters | | Keyboard Control + ASCII (CTRL+X) Mode | | |
|---|---|---|---|---|---|
| | | | Control + X Mode Off (KBDCAS0) | Windows Mode Control + X Mode On (KBDCAS2) | |
| DEC | HEX | Char | | CTRL + X | CTRL + X function |
| 19 | 13 | DC3 | Backspace | CTRL+ S | Save |
| 20 | 14 | DC4 | Back Tab | CTRL+ T | |
| 21 | 15 | NAK | F12 | CTRL+ U | |
| 22 | 16 | SYN | F1 | CTRL+ V | Paste |
| 23 | 17 | ETB | F2 | CTRL+ W | |
| 24 | 18 | CAN | F3 | CTRL+ X | |
| 25 | 19 | EM | F4 | CTRL+ Y | |
| 26 | 1A | SUB | F5 | CTRL+ Z | |
| 27 | 1B | ESC | F6 | CTRL+ [ | |
| 28 | 1C | FS | F7 | CTRL+ ¥ | |
| 29 | 1D | GS | F8 | CTRL+ ] | |
| 30 | 1E | RS | F9 | CTRL+ ^ | |
| 31 | 1F | US | F10 | CTRL+ - | |
| 127 | 7F | ⌂ | NP Enter | | |

## 5.2. Lower ASCII Reference Table

| Printable Characters | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| DEC | HEX | Character | DEC | HEX | Character | DEC | HEX | Character |
| 32 | 20 | <SPACE> | 64 | 40 | @ | 96 | 60 | ` |
| 33 | 21 | ! | 65 | 41 | A | 97 | 61 | a |
| 34 | 22 | " | 66 | 42 | B | 98 | 62 | b |
| 35 | 23 | # | 67 | 43 | C | 99 | 63 | c |
| 36 | 24 | $ | 68 | 44 | D | 100 | 64 | d |
| 37 | 25 | % | 69 | 45 | E | 101 | 65 | e |
| 38 | 26 | & | 70 | 46 | F | 102 | 66 | f |
| 39 | 27 | ' | 71 | 47 | G | 103 | 67 | g |
| 40 | 28 | ( | 72 | 48 | H | 104 | 68 | h |
| 41 | 29 | ) | 73 | 49 | I | 105 | 69 | i |
| 42 | 2A | * | 74 | 4A | J | 106 | 6A | j |
| 43 | 2B | + | 75 | 4B | K | 107 | 6B | k |
| 44 | 2C | , | 76 | 4C | L | 108 | 6C | l |
| 45 | 2D | - | 77 | 4D | M | 109 | 6D | m |
| 46 | 2E | . | 78 | 4E | N | 110 | 6E | n |
| 47 | 2F | / | 79 | 4F | O | 111 | 6F | o |
| 48 | 30 | 0 | 80 | 50 | P | 112 | 70 | p |
| 49 | 31 | 1 | 81 | 51 | Q | 113 | 71 | q |
| 50 | 32 | 2 | 82 | 52 | R | 114 | 72 | r |
| 51 | 33 | 3 | 83 | 53 | S | 115 | 73 | s |
| 52 | 34 | 4 | 84 | 54 | T | 116 | 74 | t |
| 53 | 35 | 5 | 85 | 55 | U | 117 | 75 | u |
| 54 | 36 | 6 | 86 | 56 | V | 118 | 76 | v |
| 55 | 37 | 7 | 87 | 57 | W | 119 | 77 | w |
| 56 | 38 | 8 | 88 | 58 | X | 120 | 78 | x |
| 57 | 39 | 9 | 89 | 59 | Y | 121 | 79 | y |
| 58 | 3A | : | 90 | 5A | Z | 122 | 7A | z |

| | | | Printable Characters (Continued) | | | | | |
|---|---|---|---|---|---|---|---|---|
| DEC | HEX | Character | DEC | HEX | Character | DEC | HEX | Character |
| 59 | 3B | ; | 91 | 5B | [ | 123 | 7B | { |
| 60 | 3C | < | 92 | 5C | ¥ | 124 | 7C | \| |
| 61 | 3D | = | 93 | 5D | ] | 125 | 7D | } |
| 62 | 3E | > | 94 | 5E | ^ | 126 | 7E | ~ |
| 63 | 3F | ? | 95 | 5F | _ | 127 | 7F | ⌂ |

| | | | Extended ASCII Characters | | |
|---|---|---|---|---|---|
| DEC | HEX | CP 1252 | ASCII | Alternate Extended | PS2 Scan Code |
| 128 | 80 | € | Ç | up arrow ↑ | 0x48 |
| 129 | 81 | | ü | down arrow ↓ | 0x50 |
| 130 | 82 | , | é | right arrow → | 0x4B |
| 131 | 83 | ƒ | â | left arrow ← | 0x4D |
| 132 | 84 | „ | ä | Insert | 0x52 |
| 133 | 85 | … | à | Delete | 0x53 |
| 134 | 86 | † | å | Home | 0x47 |
| 135 | 87 | ‡ | ç | End | 0x4F |
| 136 | 88 | ^ | ê | Page Up | 0x49 |
| 137 | 89 | ‰ | ë | Page Down | 0x51 |
| 138 | 8A | Š | è | Right ALT | 0x38 |
| 139 | 8B | ‹ | ï | Right CTRL | 0x1D |
| 140 | 8C | Œ | î | Reserved | n/a |
| 141 | 8D | | ì | Reserved | n/a |
| 142 | 8E | Ž | Ä | Numeric Keypad Enter | 0x1C |
| 143 | 8F | | Å | Numeric Keypad / | 0x35 |
| 144 | 90 | | É | F1 | 0x3B |
| 145 | 91 | ' | æ | F2 | 0x3C |
| 146 | 92 | ' | Æ | F3 | 0x3D |
| 147 | 93 | " | ô | F4 | 0x3E |
| 148 | 94 | " | ö | F5 | 0x3F |
| 149 | 95 | • | ò | F6 | 0x40 |
| 150 | 96 | – | û | F7 | 0x41 |
| 151 | 97 | — | ù | F8 | 0x42 |
| 152 | 98 | ~ | ÿ | F9 | 0x43 |
| 153 | 99 | ™ | Ö | F10 | 0x44 |
| 154 | 9A | š | Ü | F11 | 0x57 |
| 155 | 9B | › | ¢ | F12 | 0x58 |
| 156 | 9C | œ | £ | Numeric Keypad + | 0x4E |
| 157 | 9D | | ¥ | Numeric Keypad - | 0x4A |
| 158 | 9E | ž | Pts | Numeric Keypad * | 0x37 |
| 159 | 9F | Ÿ | ƒ | Caps Lock | 0x3A |
| 160 | A0 | | á | Num Lock | 0x45 |
| 161 | A1 | ¡ | í | Left Alt | 0x38 |
| 162 | A2 | ¢ | ó | Left Ctrl | 0x1D |
| 163 | A3 | £ | ú | Left Shift | 0x2A |
| 164 | A4 | ¤ | ñ | Right Shift | 0x36 |
| 165 | A5 | ¥ | Ñ | Print Screen | n/a |
| 166 | A6 | ¦ | ª | Tab | 0x0F |
| 167 | A7 | § | º | Shift Tab | 0x8F |
| 168 | A8 | ¨ | ¿ | Enter | 0x1C |
| 169 | A9 | © | ⌐ | Esc | 0x01 |
| 170 | AA | ª | ¬ | Alt Make | 0x36 |

| Extended ASCII Characters (Continued) | | | | | |
|---|---|---|---|---|---|
| DEC | HEX | CP 1252 | ASCII | Alternate Extended | PS2 Scan Code |
| 171 | AB | « | ½ | Alt Break | 0xB6 |
| 172 | AC | ¬ | ¼ | Control Make | 0x1D |
| 173 | AD |  | ¡ | Control Break | 0x9D |
| 174 | AE | ® | « | Alt Sequence with 1 Character | 0x36 |
| 175 | AF | ‾ | » | Ctrl Sequence with 1 Character | 0x1D |
| 176 | B0 | ° | ░ | | |
| 177 | B1 | ± | ▒ | | |
| 178 | B2 | ² | ▓ | | |
| 179 | B3 | ³ | │ | | |
| 180 | B4 | ´ | ┤ | | |
| 181 | B5 | µ | ╡ | | |
| 182 | B6 | ¶ | ╢ | | |
| 183 | B7 | · | ╖ | | |
| 184 | B8 | ¸ | ╕ | | |
| 185 | B9 | ¹ | ╣ | | |
| 186 | BA | º | ║ | | |
| 187 | BB | » | ╗ | | |
| 188 | BC | ¼ | ╝ | | |
| 189 | BD | ½ | ╜ | | |
| 190 | BE | ¾ | ╛ | | |
| 191 | BF | ¿ | ┐ | | |
| 192 | C0 | À | └ | | |
| 193 | C1 | Á | ┴ | | |
| 194 | C2 | Â | ┬ | | |
| 195 | C3 | Ã | ├ | | |
| 196 | C4 | Ä | ─ | | |
| 197 | C5 | Å | í | | |
| 198 | C6 | Æ | ╞ | | |
| 199 | C7 | Ç | ╟ | | |
| 200 | C8 | È | ╚ | | |
| 201 | C9 | É | ╔ | | |
| 202 | CA | Ê | ╩ | | |
| 203 | CB | Ë | ╦ | | |
| 204 | CC | Ì | ╠ | | |
| 205 | CD | Í | = | | |
| 206 | CE | Î | ╬ | | |
| 207 | CF | Ï | ╧ | | |
| 208 | D0 | Ð | ╨ | | |
| 209 | D1 | Ñ | ╤ | | |
| 210 | D2 | Ò | ╥ | | |
| 211 | D3 | Ó | ╙ | | |
| 212 | D4 | Ô | ╘ | | |
| 213 | D5 | Õ | ╒ | | |
| 214 | D6 | Ö | ╓ | | |
| 215 | D7 | × | ╫ | | |
| 216 | D8 | Ø | ╪ | | |
| 217 | D9 | Ù | ┘ | | |
| 218 | DA | Ú | ┌ | | |
| 219 | DB | Û | █ | | |
| 220 | DC | Ü | ▄ | | |
| 221 | DD | Ý | ▌ | | |
| 222 | DE | Þ | ▐ | | |

| Extended ASCII Characters (Continued) | | | | | |
|---|---|---|---|---|---|
| DEC | HEX | CP 1252 | ASCII | Alternate Extended | PS2 Scan Code |
| 223 | DF | ß | ■ | | |
| 224 | E0 | à | α | | |
| 225 | E1 | á | ß | | |
| 226 | E2 | â | Γ | | |
| 227 | E3 | ã | π | | |
| 228 | E4 | ä | Σ | | |
| 229 | E5 | å | σ | | |
| 230 | E6 | æ | µ | | |
| 231 | E7 | ç | τ | | |
| 232 | E8 | è | Φ | | |
| 233 | E9 | é | Θ | | |
| 234 | EA | ê | Ω | | |
| 235 | EB | ë | δ | | |
| 236 | EC | ì | ∞ | | |
| 237 | ED | í | φ | | |
| 238 | EE | î | ε | | |
| 239 | EF | ï | ∩ | | |
| 240 | F0 | ð | ≡ | | |
| 241 | F1 | ñ | ± | | |
| 242 | F2 | ò | ≥ | | |
| 243 | F3 | ó | ≤ | | |
| 244 | F4 | ô | ⌠ | | |
| 245 | F5 | õ | ⌡ | | |
| 246 | F6 | ö | ÷ | | |
| 247 | F7 | ÷ | ≈ | | |
| 248 | F8 | ø | ° | | |
| 249 | F9 | ù | · | | |
| 250 | FA | ú | · | | |
| 251 | FB | û | √ | | |
| 252 | FC | ü | ⁿ | | |
| 253 | FD | ý | ² | | |
| 254 | FE | þ | ■ | | |
| 255 | FF | ÿ | | | |
| | | | | | |

## 5.3.  ISO 2022/ISO 646 Character Replacements

Code pages define the mapping of character codes to characters. If the data received does not display with the proper characters, it may be because the bar code being scanned was created using a code page that is different from the one the application is expecting. If this is the case, select the code page with which the bar codes were created. The data characters should then appear properly.

| Code Page Selection Method/Country | Standard | Keyboard Country | AsReader Code Page Option |
|---|---|---|---|
| United States (standard ASCII) | ISO/IEC 646-IRV | n/a | 1 |
| Automatic National Character Replacement | ISO/IEC 2022 | n/a | 2 (default) |
| Binary Code page | n/a | n/a | 3 |
| *Default "Automatic National Character replacement" will select the below AsReader Code Page options for Code128, Code 39 and Code 93.* | | | |
| United States | ISO/IEC 646-06 | 0 | 1 |

| Code Page Selection Method/Country | Standard | Keyboard Country | AsReader Code Page Option |
|---|---|---|---|
| Canada | ISO /IEC 646-121 | 54 | 95 |
| Canada | ISO /IEC 646-122 | 18 | 96 |
| Japan | ISO/IEC 646-14 | 28 | 98 |
| China | ISO/IEC 646-57 | 92 | 99 |
| Great Britain (UK) | ISO /IEC 646-04 | 7 | 87 |
| France | ISO /IEC 646-69 | 3 | 83 |
| Germany | ISO/IEC646-21 | 4 | 84 |
| Switzerland | ISO /IEC 646-CH | 6 | 86 |
| Sweden / Finland (extended Annex C) | ISO/IEC 646-11 | 2 | 82 |
| Ireland | ISO /IEC 646-207 | 73 | 97 |
| Denmark | ISO/IEC 646-08 | 8 | 88 |
| Norway | ISO/IEC 646-60 | 9 | 94 |
| Italy | ISO/IEC 646-15 | 5 | 85 |
| Portugal | ISO/IEC 646-16 | 13 | 92 |
| Spain | ISO/IEC 646-17 | 10 | 90 |
| Spain | ISO/IEC 646-85 | 51 | 91 |

| Dec | | | 35 | 36 | 64 | 91 | 92 | 93 | 94 | 96 | 123 | 124 | 125 | 126 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hex | | | 23 | 24 | 40 | 5B | 5C | 5D | 5E | 60 | 7B | 7C | 7D | 7E |
| US | 0 | 1 | # | $ | @ | [ | ¥ | ] | ^ | ` | { | \| | } | ~ |
| CA | 54 | 95 | # | $ | à | â | ç | ê | î | ô | é | ù | è | û |
| CA | 18 | 96 | # | $ | à | â | ç | ê | É | ô | é | ù | è | û |
| JP | 28 | 98 | # | $ | @ | [ | ¥ | ] | ^ | ` | { | \| | } | – |
| CN | 92 | 99 | # | ¥ | @ | [ | ¥ | ] | ^ | ` | { | \| | } | – |
| GB | 7 | 87 | £ | $ | @ | [ | ¥ | ] | ^ | ` | { | \| | } | ~ |
| FR | 3 | 83 | £ | $ | à | ° | ç | § | ^ | µ | é | ù | è | ¨ |
| DE | 4 | 84 | # | $ | § | Ä | Ö | Ü | ^ | ` | ä | ö | ü | ß |
| CH | 6 | 86 | ù | $ | à | é | ç | ê | î | ô | ä | ö | ü | û |
| SE/FI | 2 | 82 | # | ¤ | É | Ä | Ö | Å | Ü | é | ä | ö | å | ü |
| DK | 8 | 88 | # | $ | @ | Æ | Ø | Å | ^ | ` | æ | ø | å | ~ |
| NO | 9 | 94 | # | $ | @ | Æ | Ø | Å | ^ | ` | æ | ø | å | ¨ |
| IE | 73 | 97 | £ | $ | Ó | É | Í | Ú | Á | ó | é | í | ú | á |
| IT | 5 | 85 | £ | $ | § | ° | ç | é | ^ | ù | à | ò | è | ì |
| PT | 13 | 92 | # | $ | § | Ã | Ç | Õ | ^ | ` | ã | ç | õ | ° |
| ES | 10 | 90 | # | $ | § | ¡ | Ñ | ¿ | ^ | ` | ° | ñ | ç | ~ |
| ES | 51 | 91 | # | $ | · | ¡ | Ñ | Ç | ¿ | ` | ´ | ñ | ç | ¨ |
| COUNTRY | Country Keyboard | AsReaderCodePage | **ISO / IEC 646 National Character Replacements** | | | | | | | | | | | |

## 5.4.  Sample Symbols

**UPC-A**



0 123456 7890

**Interleaved 2 of 5**



1234567890

**EAN-13**



9 780330 290951

**Code 128**



Code 128

**Code 39**



BC321

**Codabar**



A13579B

**Code 93**



123456-9$

**Code 2 of 5**



123456

**Matrix 2 of 5**



6543210

**RSS-14**



(01)00123456789012

# Sample Symbols

**PDF417**



*Car Registration*

**Postnet**



*Zip Code*

**Code 49**



*1234567890*

**Data Matrix**



*Test Symbol*

**QR Code**



*Numbers*

**Aztec**



*Package Label*

**MaxiCode**



*Test Message*

**Micro PDF417**



*Test Message*

**OCR-A with Modulo 36 check character**

532427D

**OCR-A with Modulo 10 check character**

5324277
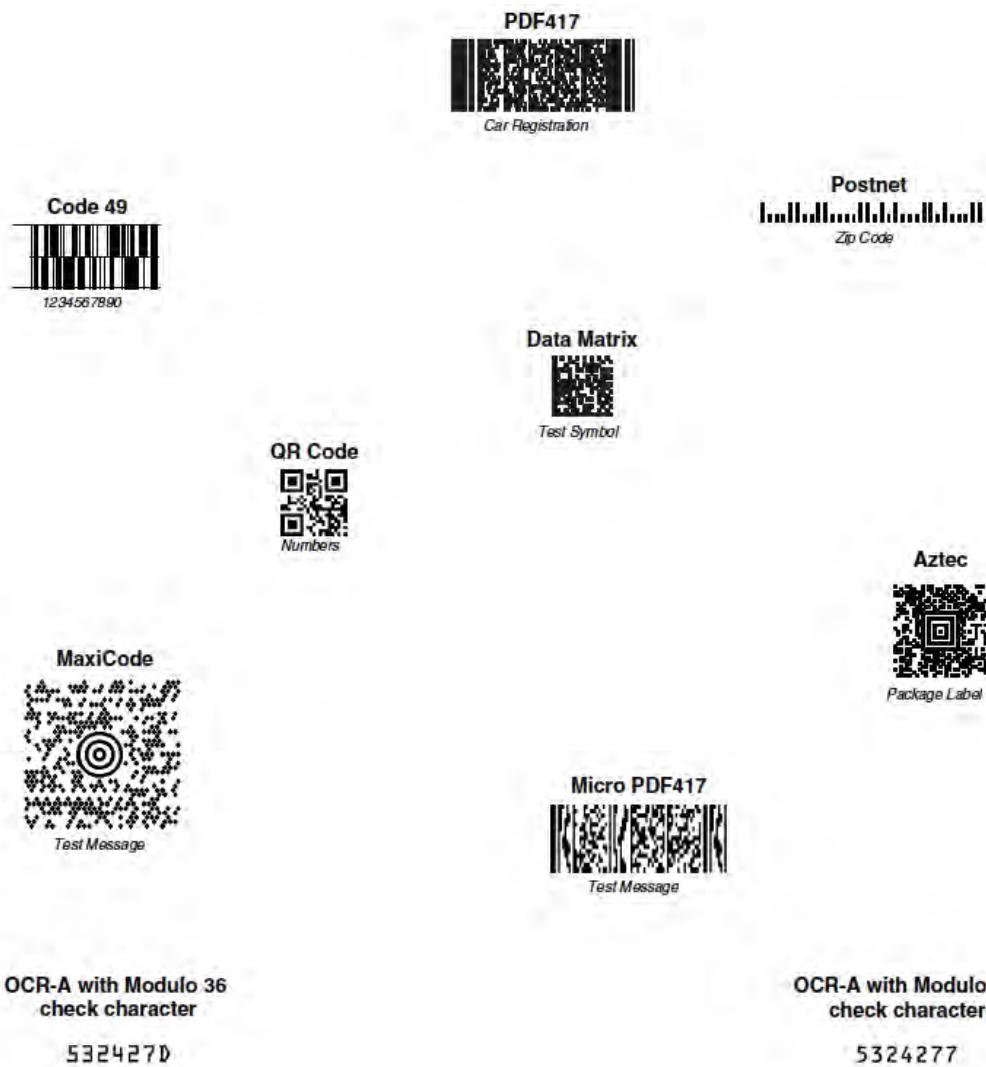
## 5.5. Programming Chart

K0K
0

K1K
1

K2K
2

K3K
3

K4K
4

K5K
5

K6K
6

K7K
7

K8K
8

K9K
9

## Programming Chart


KAK
**A**


KBK
**B**


KCK
**C**


KDK
**D**


KEK
**E**


KFK
**F**


MNUSAV.
**Save**


MNUABT.
**Discard**


RESET_
**Reset**

*Note: If you make an error while scanning the letters or digits (before scanning Save), scan Discard, scan the correct letters or digits, and Save again.*

# 6. Appendix

## 6.1. ASR-L251G

### *To Add a Prefix or Suffix*

Step 1.    Scan the Add Prefix or Add Suffix symbol (Page 26).
Step 2.    Determine the 2-digit Hex value from the Symbology Chart (included in the Symbology Charts, beginning on Page 76) for the symbology to which you want to apply the prefix or suffix. For example, for Code 128, Code ID is "j" and Hex ID is "6A". scan 9, 9 for all symbologies.
Step 3.    For prefix addition, scan 5, C, 8, 0 before Step 4. (This step is not needed when you are only adding suffixes.)
Step 4.    Determine the hex value from the ASCII Conversion Chart for the prefix or suffix you wish to enter.
Step 5.    Scan the 2-digit hex value from the Programming Chart.
Step 6.    Repeat Steps 4 and 5 for every prefix or suffix character.
Step 7.    For suffix addition, scan 0, D, 0, A, 0, 3 before Step 8. (This step is not needed when you are only adding prefixes.)
Step 8.    Scan Save to exit and save, or scan Discard to exit without saving.

Example: Add a Tab Suffix to All Symbologies
Step 1.    Scan Add Suffix.
Step 2.    Scan 9, 9 from the Programming Chart to apply this suffix to all symbologies.
Step 3.    Scan 0, 9 from the Programming Chart.
Step 4.    Scan 0, D, 0, A, 0, 3 from the Programming Chart before scanning Save.
Step 5.    Scan Save, or scan Discard to exit without saving.

### *To Clear One or All Prefixes or Suffixes*

Step 1. Scan the Add Prefix or Add Suffix symbol (Page 26).
Step 2. Determine the 2-digit Hex value from the Symbology Chart (included in the Symbology Charts, beginning on Page 76) for the symbology from which you want to clear the prefix or suffix.
Step 3. Scan the 2-digit hex value from the Programming Chart or scan 9, 9 for all symbologies.
Step 4. To clear prefixes, scan 5, C, 8, 0 from Programming Chart before scanning Save.
        To clear suffixes, scan 0, D, 0, A, 0, 3 from Programming Chart before scanning Save.
Step 5. Scan Save, or scan Discard to exit without saving.

Example: Clear All Prefixes to All Symbologies.
Step 1. Scan Add Prefix.
Step 2. Scan 9, 9 from the Programming Chart to all symbologies.
Step 3. Scan 5, C, 8, 0 from the programming Chart.
Step 4. Scan Save, or scan Discard to exit without saving.

## 6.2. ASR-022D

### *To Add a Prefix or Suffix*

Step 1.   Scan the Add Prefix or Add Suffix symbol (Page 26).
Step 2.   Determine the 2-digit Hex value from the Symbology Chart (included in the Symbology Charts, beginning on Page 76) for the symbology to which you want to apply the prefix or suffix. For example, for Code 128, Code ID is "j" and Hex ID is "6A". scan 9, 9 for all symbologies.
Step 3.   For prefix addition, scan 0, 2 before Step 4. (This step is not needed when you are only adding suffixes.)
Step 4.   Determine the hex value from the ASCII Conversion Chart for the prefix or suffix you wish to enter.
Step 5.   Scan the 2-digit hex value from the Programming Chart.
Step 6.   Repeat Steps 4 and 5 for every prefix or suffix character.
Step 7.   For suffix addition, scan 0, 4, 0, 3, 0, 4, 0, 3 before Step 8. (This step is not needed when you are only adding prefixes.)
Step 8.   Scan Save to exit and save, or scan Discard to exit without saving.

Example: Add a Tab Suffix to All Symbologies
Step 1.   Scan Add Suffix.
Step 2.   Scan 9, 9 from the Programming Chart to apply this suffix to all symbologies.
Step 3.   Scan 0, 9 from the Programming Chart.
Step 4.   Scan 0, 4, 0, 3, 0, 4, 0, 3 from the Programming Chart before scanning Save.
Step 5.   Scan Save, or scan Discard to exit without saving.

### *To Clear One or All Prefixes or Suffixes*

Step 1. Scan the Add Prefix or Add Suffix symbol (Page 26).
Step 2. Determine the 2-digit Hex value from the Symbology Chart (included in the Symbology Charts, beginning on Page 76) for the symbology from which you want to clear the prefix or suffix.
Step 3. Scan the 2-digit hex value from the Programming Chart or scan 9, 9 for all symbologies.
Step 4. To clear prefixes, scan 0, 4, 0, 3, 0, 4, 0, 3 from Programming Chart before scanning Save.
        To clear suffixes, scan 0, 2 from Programming Chart before scanning Save.
Step 5. Scan Save, or scan Discard to exit without saving.

Example: Clear All Prefixes to All Symbologies.
Step 1. Scan Add Prefix.
Step 2. Scan 9, 9 from the Programming Chart to all symbologies.
Step 3. Scan 0, 2 from the programming Chart.
Step 4. Scan Save, or scan Discard to exit without saving.

## AsReader, Inc.

385 Van Ness Avenue #110, Torrance, CA, 90501, U.S.
TEL: +1-310-294-5776
https://asreader.com/