Honeywell

Integrated Scanner

Bar Code Programming Guide

For:
MX3Plus with Windows® CE 5
MX7 with Windows® CE 5
MX7 Tecton with Windows® CE 6 or with Windows® Mobile® 6.5
MX8 with Windows® CE 5 or with Windows® Mobile® 6.1
MX9 with Windows® CE 5 or with Windows® Mobile® 6.5

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1 Introduction

Bar code laser scanners and laser imagers are used to read and then decode the data in bar codes.

Bar code readers have many forms -- some are enclosed in a hand held device, others are connected to a hand held device by a cable, some are connected to the hand held device wirelessly and a few bar code readers are enclosed in a ring device that is worn on the finger and cabled to a body-worn device.

Configuration bar codes in this guide are designed for a specific type of bar code decoder engine. Determining the type of bar code decoder engine for your Mobile Device is an important requirement before using it to scan a configuration bar code. If you are unsure, contact your System Administrator for assistance.

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

Ring Scanners and Ring Imagers

Ring Scanners and Ring Imagers are bar code readers that can be worn on either hand. They may be tethered to:

- the Bluetooth® module,
- the HX2 mobile device, or
- the HX3 voice mobile device.

The ring scanner is secured to a finger. The Bluetooth module can be worn on the back of the hand or the wrist. The Bluetooth Module, HX2 and HX3 use only one ring scanner or ring imager at a time.

The HX2 and HX3 are usually worn on the arm or at the waist.

The Bluetooth Ring Scanner module is compatible with any Honeywell mobile device that has a Microsoft® Windows® CE 5 or later operating system and Bluetooth client capability.

Integrated Scanners and Integrated Imagers

Integrated scanners and integrated imagers are built-in to the mobile device and are usually located at the top of the device. The scan engine cannot be accessed by the end-user. The MX8 will beep twice when a configuration bar code is successfully scanned.

Devices with an integrated bar code reader can also:

- scan bar codes using a tethered bar code reader (connected to a cradle or a port on the mobile device).
- pair with and scan bar codes using the wireless Bluetooth Ring Scanner.

Tethered and Wireless Scanners

Tethered scanners (tethered to a serial port on the device or device's cradle) are configured by scanning the engine-specific bar codes in the scanner manufacturer's programming guide. The manufacturer's guides are usually shipped with the bar code reader.

Wireless Bluetooth scanners are configured by scanning the engine-specific bar codes in the Bluetooth scanner manufacturer's programming guide. The manufacturer's guides are usually shipped with the wireless Bluetooth bar code reader.

Cautions and Warnings

It is good practice to avoid looking into the beam emitted by any scan beam aperture.

Do not connect the beam aperture to any other device, for example, a beam magnifier.

Class 2 laser scanners use a low power, visible light diode. As with any very bright light source, such as the sun, the user should avoid staring directly into the light beam. Momentary exposure to a Class 2 laser is not known to be harmful.

Bar Code Readers

Your mobile device may be equipped with any of the following bar code readers:

- 1D Linear Imager, EV-15
- 2D Area Imager, 5300
- 2D Area Imager, 5380
- Short Range Laser Scanner, 955i
- Base Laser Scanner, 955E
- Multi-Range "LORAX" Laser, 1524ER
- Laser Scanner, N43XX
- Laser Scanner, N73XX

Note: Base Laser scanner, 955E does not support aim mode. Any attempt to adjust the aiming beam using the 955 bar codes in this guide will fail. The Base Laser scanner does not decode Codablock, Code93i, or Telepen symbologies.

Programming bar codes for the bar code readers listed above are included in this guide.

The Mobile Device can also use the following bar code readers:

- Tethered hand-held scanners are tethered to a serial port on the Mobile Device and are configured by scanning the engine-specific bar codes in the scanner manufacturer's programming guide. The manufacturer's guides are usually shipped with the bar code reader.
- Wireless hand-held Bluetooth scanners are configured by scanning the engine-specific bar codes in the scanner manufacturer's programming guide. The manufacturer's guides are usually shipped with the bar code reader.
- The body worn Bluetooth Ring Scanner module may be using a 4400 Ring Imager or a 955 Ring Scanner. The module and rings are configured by scanning the bar codes in the *Bluetooth Ring Scanner Programming Guide*.

If your Mobile Device is using a bar code reader that is not included in this guide, please contact Technical Assistance (page 8-1) for the desired bar code reader availability or upgrade.

Bar Code Reader and Device Chart

Device	***BTRS***	***HX2***	***HX3***	***Marathon***	***MX3Plus***	***MX7***	***MX7 Tecton***	***MX8***	***MX9***
Reader									
1524 Multi-Range LORAX Laser						X	X		X
4400 Ring Imager	X	X	X						
5300 2D Area Imager							X	X	X
5380 2D Area Imager						X			
955E Base Laser	X	X	X			X	X	X	
955I Short Range Laser					X	X	X	X	X
EV-15 1D Linear Imager						X		X	
Hybrid 2D Imager				X					
N43XX Laser							X	X	
N73XX Laser							X		

Return to Factory Default Settings

Important: After scanning the engine-specific bar code to return the scanner/imager to factory default settings, the next step is to open the bar code wedge control panel on the mobile device collecting the scanned data. Click the OK button to close the control panel. This action will synchronize all bar code reader formats for your device.

How To Scan a Bar Code

Note: The function to use an imager like a camera (or for OCR decoding) is not supported. Using a Continuous Scan option, if available, to scan programming bar codes is not supported.

The linear bar codes in this guide were created using Code 128 symbology. Your Mobile Device has been set up by Honeywell to automatically read / decode Code 128 bar codes.

Using the bar codes contained in this guide, you can change bar code reader system parameters or reset all parameters to their factory default values.

All bar code reader parameters are programmed into and stored by the bar code reader engine.

Note: If this guide is not in print form, locate the page in this electronic guide that contains the bar code you wish to use. Print the page on white paper using a 600dpi laser printer (or equivalent).

Note: Print the page containing the Reset and Cancel bar codes as well as the page containing the A – F and 0 – 9 number bar codes.

Select the parameter you want to scan. If this guide is in print form,lay it flat on a table or propped up at an angle.

Scan a Linear Bar Code

Holding the beam aperture approximately 3 – 12 inches away from the bar code, aim the scan aperture toward the selected bar code. Refer to the bar code reader engine type in *Decode Zones* later in this guide for recommended decode ranges.

Press the Scan button. Align the scan beam so that the bar code is centered within the beam. The beam must cross the entire bar code. Move the bar code reader towards or away from the bar code so that the bar code takes up approximately two-thirds the width of the beam.

Refer to the recommended *decode zones* for the installed bar code reader engine if you are having difficulty with this process.

Note: Do not position the scan aperture exactly perpendicular to the bar code being read. In this position, light can bounce back into the scan aperture, and possibly prevent a successful decode.

Scan a 2D Bar Code

To scan a bar code with the imager, point the beam aperture at a bar code and press the Scan button. You will see a bracketed cross-hair strike the bar code.

Holding the beam aperture approximately 3 – 12 inches away from the bar code, aim the imager aperture toward the selected bar code. Press the Scan button and you will see a bracketed cross-hair strike the bar code.

Align the brackets so that the center (or one of the four corners of the bar code's center box) of the bar code is covered by the cross-hair. Refer to bar code decoder engine *Decode Zones* later in this guide for recommended scan ranges for your device.

Good Read / Bad Read Indicators

The scan On indicator illuminates (usually red) when the beam is on. Following a bar code scan and “good read” the indicator usually turns green and the mobile device beeps, indicating a successful scan. The mobile device may also play a WAV file while decoding or the mobile device may vibrate.

The laser beam and scan On indicator automatically turn off after a successful or unsuccessful read and the bar code reader is ready to scan again.

Note: Whether there are beeps in conjunction with scan and decode functions is dependent on the application currently running in the mobile device. Beeps are emitted by the mobile device, not a tethered ring bar code reader.

Note: Decrease decode time by disabling unused bar code types. The scan engine can store several different bar code symbologies at the same time. This means the system is able to scan a Code 39 bar code, then an Interleaved 2 of 5 bar code, then a different bar code without requiring a parameter reset.

Reboot the mobile device to synchronize the new bar code reader engine parameters with the mobile device’s bar code wedge settings.

Factors That May Impact Decode Performance

Successful decode range of a bar code decoder is dependent upon many outside influences including size of the bar code, quality of the bar code printing, material the bar code is printed on, condition of the scan aperture lens (scratches) and angle of the beam aperture relative to the bar code label. Any of these factors may result in having to re-scan the label from a different distance or angle.

Bar Code Quality

Check the bar code for marks or physical damage e.g., ripped label, missing section, correct size for the bar code reader being used, etc.

In general, the bigger the bar code the further the distance from which it can be read. If the bar code is smaller than the specified size for the bar code reader being used, the distance, in almost all cases, will shrink.

Large bar codes can be read at the maximum distance. Hold the bar code reader closer to small bar codes (or with bars that are very close together).

Note: Do not position the bar code reader exactly perpendicular to the bar code being scanned. In this position, light can bounce back into the scan aperture, and possibly prevent a successful decode.

Bar Code Source

Using a graphics program to clip/copy a bar code from an online file (e.g., Adobe, Word) will copy the bar code at your monitor's dot per inch setting, a level too low for successful bar code decoding.

Copy a Bar Code -- Use your browser's right-click menu to download an individual bar code using the Save Picture As option. Save the picture to a location on your computer's hard drive. The individual bar code can be added, as a file, to any delivery vehicle e.g., email, Word document.

Bar Code Symbology

Bar codes such as UPC codes and Code 128 are more complex than Code 39 and Interleaved 2 of 5. When attempting to get the maximum read distance possible, particularly with reflective labels, use Code 39. The use of Code 128 or other more complex symbologies will almost always result in a reduction in maximum read distance. Honeywell will not support bar code reader maximum distances (from Decode Zones) when symbologies other than Code 39 are used.

Lens Damage

A scratched scan beam aperture can impact read rates and distances. Beam apertures should be inspected frequently, particularly if bar code reading quality or distances get worse over time.

Ambient Lighting

High ambient conditions, particularly outdoor environments, will produce enough light to somewhat “blind” the bar code reader. This will result in shorter read distances.

Temperature

While small deviations in room temperature will have no impact on bar code reader performance, severe conditions like those found in freezers will have a negative impact on both the distance bar code readers can read and the speed the decode is acquired.

Some bar code reader engines contain protection circuitry that shuts the bar code reader down in temperatures that exceed the recommended operating temperature.

Bar Code Help

- Whether there are beeps in conjunction with scan and decode functions is dependent on the application currently running in the Mobile Device.
- Decrease decode time by disabling unused bar code types. The bar code reader engine can store several different bar code symbologies at the same time. This means the Mobile Device is able to decode a Code 39 bar code, then an Interleaved 2 of 5 bar code, then a different bar code without requiring a parameter reset.
- The Mobile Device Scan Wedge (or Data Collection Wedge) panel parameters are applied to the data resulting from successful bar code scans sent to the Mobile Device for processing. The Control Panel does not affect or change the programming bar code parameter settings contained in this guide.
- After reading the Reset All (or equivalent) bar code with the Mobile Device’s integrated bar code reader engine or tethered ring scanner, the next step is to open the Scan (or Data Collection Wedge) panel, click the OK button and then close the panel. This action will synchronize all bar code reader formats.

Printing Bar Codes

Problem

Bar codes on the printed page are too compact to be read, especially with a long range scanner.

Solution - Printing Adobe Acrobat PDF File Pages

When printing pages from an Adobe Acrobat PDF file, there is a difference between laser printer types and how they handle some Adobe Acrobat print functions – specifically, the “shrink to fit” option on the Print Options screen.

Before clicking Print, make sure the “Shrink oversized pages to paper size” checkbox is unchecked. If the bar code is still too small to be read by the bar code reader engine, run the printed page through the laser printer again using the laser printer’s Zoom feature until the bar code is large enough to scan satisfactorily.

When printing pages from an on-line Web page, run the printed page through a laser copier using the laser copier's Zoom feature until the bar code is large enough to decode satisfactorily.

Solution - Printing from a Browser Page

Print a Page

Use the Print button on the Taskbar. Bar codes must be printed at 600 dots per inch (dpi) before they can be successfully scanned with a bar code reader.

Miscellaneous Programmable Bar Codes

Note: Ring decoding devices do not have the ability to emit a good read or bad read sound.

Beep After Good Decode

Audible scan progress indicators are generated by the bar code reader driver on Honeywell mobile devices, not the bar code reader engine. Use Windows Control Panel options to set up the mobile device audible indicators.

Beeper Frequency Adjustment

Audible scan progress indicators are generated by the bar code reader driver on Honeywell mobile devices, not the bar code decoder engine. Use Windows Control Panel options to set up the mobile device audible indicators.

Beep on <BEL>

This parameter is enabled on the Bluetooth Ring Scanner Module. There is no corresponding ring scanner programming bar code required.

This parameter is disabled/inactive on all other Honeywell mobile devices.

Beeper Tone / Beeper Volume

Audible scan progress indicators are generated by the bar code reader driver on Honeywell mobile devices, not the bar code reader engine. Use Windows Control Panel options to set up the mobile device audible indicators.

Event Reporting

Honeywell mobile devices aren't designed to process events triggered by a bar code reader engine. Events are processed by the operating system resident on the mobile device. Use Windows Control Panel options to set up the mobile device event reporting parameters.

LED Mode

This parameter is disabled/inactive as the scan LEDs are controlled by the bar code reader driver, not the bar code reader engine.

Return to Factory Default Settings

Important: After scanning the engine-specific bar code to return the scanner/imager to factory default settings, the next step is to open the bar code wedge panel on the mobile device collecting the scanned data. Click the OK button to close the panel. This action will synchronize all bar code reader formats for your device.

Note: When the MX8 (CE 5 only) has an integrated bar code reader, the MX8 will be pre-loaded with ***either*** *Scan Wedge* ***or*** *Data Collection Wedge, not both.*

Cleaning the Beam Aperture

Note: New devices -- Remove the shipping film from the beam aperture before first use.

Keep fingers and rough, sharp or abrasive objects away from the beam aperture.

If the aperture becomes soiled or smudged, clean only with a standard household cleaner such as Windex® without vinegar or use Isopropyl Alcohol. Dampen the cloth with the cleaner; do not apply liquids directly to the aperture.

Do not use paper towels or harsh-chemical-based cleaning fluids since they may result in damage to the aperture surface.

Use a clean, damp, lint-free cloth. Do not scrub optical surfaces.

If possible, clean only those areas which are soiled.

Lint/particulates can be removed with clean, filtered canned air.

2

EV-15 Imager

Introduction

Integrated Imager Engine	MX7	MX8

This section's explanations and instructions are directed toward devices with an integrated EV-15 Imager. Do not use the bar codes in this section for other types of imagers or scan engines.

Configuration bar codes in this section are designed for the EV-15 scan engine. Determining the type of scan engine in your decoding device is an important requirement before using it to scan a configuration bar code. If you are unsure, contact your System Administrator for assistance with your mobile device.

Scan engine manufacturers may offer more bar codes and options than are contained in this section. Please note that the bar codes in this section are only those supported by Honeywell on the mobile devices listed above.

Technical Assistance (page 8-1) is available if you need help when using the bar codes in this section.

An asterisk (*) next to an option indicates the default setting. The MX8 will beep twice when a configuration bar code is successfully scanned.

Reset to Factory Defaults

After scanning the engine-specific bar code to return the imager to factory default settings, the next step is to open the bar code wedge panel on the mobile device collecting the scanned data. Click the OK button to close the panel. This action will synchronize all bar code decoder formats for your device.

Print a Page

Use the Print button on the browser Taskbar. These bar codes must be printed at 600 dots per inch (dpi) before they can be successfully scanned by a bar code reader.

Reset to Factory Defaults using the LXEReset Bar Code

The LXEReset bar code should only be scanned by mobile devices running the Data Collection Wedge software.

This bar code must not be scanned by devices running the Bar Code Scan Wedge software.

The following function-specific bar code is only used when it is necessary to return the decoder engine back to factory default values.

When the scan is successful, the mobile device emits a double beep and the Scan On indicator is amber. The decoding engine is not available for further bar code scanning until the Scan On indicator turns off. Scanning this bar code does not affect the mobile device's operating system, wireless client or installed software (e.g., AppLock) settings.

Pre-Configured Default Values

Parameter	**Default Value**
Reset Factory Defaults	All Defaults
Disable all Symbologies	Enable
Disable all Extended Reading Ranges	Enable
Configuration Modes	
Configuration	Enabled
Transparent Configuration Mode	Disabled
Symbology Settings	
Disable all symbologies	Enabled
Disable all extended reading ranges	Enabled
Operating Parameters	
Hardware trigger	Enabled
Turn off after good read	Enabled
Bad read message	Disabled
Scanning / triggering - triggering mode	Level
Level triggering mode timeout	2 seconds
Aiming Beam	Disabled
Aiming beam duration	0.5 seconds (500 ms)
Data Decoding Security	
Predefined security level	Normal
Timeout between identical consecutive codes	300 ms
Timeout between different consecutive codes	None
Read Optimization	
Shutter speed	Automatic
Sensor optimization	Automatic
Lighting	LED brightness 100%
Power hold	Disabled
Data Transmission	
Symbology Identifier	Not transmitted
Preamble	None
Postamble CR LF	Enable
Codabar	Disabled
Codabar CSI	B7
Stop / Start	Not transmitted
CLSI Library System	Disabled
Check Digit (AIM)	Disabled
Bar Code Length Minimum	6
Concatenation	Disabled
Concatenation Mode No Start/Stop Restrictions	Enabled
Codablock A	Disabled

Parameter	Default Value
Codablock A CSI	K0
Codablock F	Disabled
Codablock F CSI	K1
Code 11	Disabled
Code 11 CSI	C1
Check digits	1
Check digits – checked and transmitted	Enabled
Code 11 bar code length	Any length
Code 39	Disabled
Code 39 CSI	B1
Format	Standard
Start / Stop	Not transmitted
Accepted characters (standard C39)	Asterisk only
Check digit	Disabled
Bar code length	Any
Reading range	Extended
Tolerance	High
Code 93 / 93i	Disabled
Code 93 / 93i CSI	B6
Code 93 bar code length	Any
Code 128	Enabled
EAN 128	Enabled
Code 128 CSI	B3
EAN 128 CSI	C9
EAN 128 identifier	Include]C1
CIP 128 French pharmaceutical code	Disabled
FNC1 separator character	Enabled
Bar Code length	Any
Reading range	Extended
Tolerance	High
ISBT 128	Disabled
ISBT 128 transmit	Single codes only
ISBT concatenate	Authorized ISBT 128 pairs only
GTIN Processing for EAN 128	Disabled
Interleaved 2 of 5	Disabled
I 2 of 5 CSI	B2
Check digit	Disabled
Bar Code length	6
Compose Minimum Length	4
Reading range	Extended
Matrix 2 of 5	Disabled
Matrix 2 of 5 CSI	B4
Minimum bar code length	6
MSI Code	Disabled

Parameter	Default Value
MSI code CSI	B8
Check Digit	Mod 10 – checked and transmitted
Bar Code length	6
Plessey code	Disabled
Plessey code CSI	C2
Check digit	Not transmitted
Bar Code length	6
GS1 DataBar (RSS) Code	Disabled
GS1 DataBar (RSS) Code CSI	C3
GS1 DataBar Limited (RSS Limited)	Disabled
GS1 DataBar Limited (RSS Limited) CSI	C4
GS1 DataBar Expanded (RSS expanded)	Disabled
GS1 DataBar Expanded (RSS expanded) CSI	C4
Standard 2 of 5 Code	Disabled
Standard 2 of 5 Code CSI	B5
Format	Identicon (6 stop/start bars)
Check digit mod 10	Disabled
Bar Code length	6
Telepen	Disabled
CSI	C6
Format	ASCII
Bar Code length	Any
UPC-A	Enabled
UPC-E	Enabled
EAN-8	Enabled
EAN-13	Enabled
UPC-E1	Disabled
CSI UPC-A	A0
CSI UPC-E	E0
CSI EAN-8	FF
CSI EAN-13	F
Add-on Digits	Not required but transmitted if read
Add-on 2	Disabled
Add-on 5	Disabled
Security level	10
Check digit – UPC-A	Transmitted
Check digit – UPC-E	Transmitted
Check digit – EAN-8	Transmitted
Check digit – EAN-13	Transmitted
UPC number system – UPC-A	Transmitted
UPC number system – UPC-E	Transmitted
Transmit UPC-A as EAN-13	Enabled
Transmit UPC-E as UPC-E	Enabled

Parameter	Default Value
Transmit EAN-8 as EAN-8	Enabled
ISBN	Disabled
GTIN processing	Disabled
Reading range	Extended

Frequently Used Bar Codes

Note: Honeywell does not support Micro PDF or PDF 417 using the integrated EV-15 scanner.

Reset to Factory Defaults Bar Code

Use the Reset Factory Defaults parameter to reset all scanner parameters to their default values. Scanning this bar code does not affect the mobile device's operating system, wireless or installed software (e.g., RFTerm) settings.

Reset to Factory Defaults

See Pre-Configured Default Values (page 2-2) for an alphabetical listing of all default values.

Important: After scanning the engine-specific bar code to return the scanner/imager to factory default settings, the next step is to open the bar code wedge panel on the mobile device collecting the scanned data. Click the OK button to close the panel. This action will synchronize all scanner formats for your device.

EV-15 Configuration Modes

Select an option by scanning one of the bar codes in this section.

Configuration

* Enable configuration

Transparent Configuration Mode

* Disable Transparent Configuration Mode

Symbology Settings

Disable all symbologies

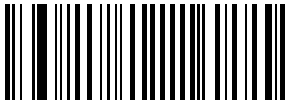
Disable all extended reading ranges

EV-15 Parameters - General

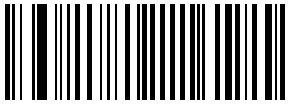
Scanning/Triggering

Default = Hardware trigger : Enabled
Default = Turn off after good read : Enabled
Default = Bad read message : Disabled
Default = Triggering Mode : Level

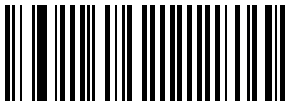
* Hardware trigger – active



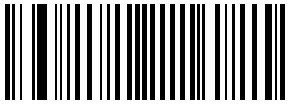
* Turn off after good read – active



* Bad read message – not active



* Level triggering mode



Level Triggering Mode Timeout

1 second timeout

* 2 second timeout

3 second timeout

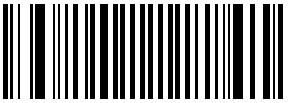
4 second timeout

5 second timeout

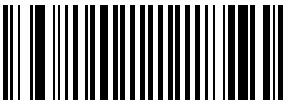
6 second timeout

7 second timeout

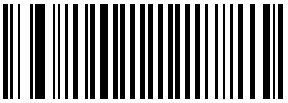
8 second timeout



9 second timeout



10 second timeout



Aiming Beam

* Aiming beam off

Turn on aiming beam after first pull aim and read

Aiming Beam Duration

* 0.5 seconds duration (500 ms)

250 ms duration (0.25 seconds)

750 ms duration (0.75 seconds)

1 second duration (1000 ms)

1.2 seconds duration

1.5 seconds duration

2 seconds duration

2.5 seconds duration

Data Decoding Security

* Predefined security level -- Normal

Predefined security level -- Medium

Predefined security level --
High

Consecutive same read data validation -
Auto read count before transmission

Consecutive same read data validation -
Single read before transmission

Consecutive same read data validation –
Number of same reads : 3

Data Decoding Timeout

Default = Timeout between identical consecutive codes : 300 ms
Default = Timeout between different consecutive codes : None

* Timeout between identical consecutive codes - 300 ms

Timeout between identical consecutive codes – 500 ms

Timeout between identical consecutive codes – 750 ms

Timeout between identical consecutive codes – 1000 ms

* Timeout between different consecutive codes - none

Timeout between different consecutive codes – 500 ms

Read Optimization

Shutter Speed

* Automatic mode

Sensor Optimization

Default = Automatic

* Automatic

1-dimensional codes

Stacked codes

Lighting

Default = LED brightness 100%

* LED brightness 100%

LED brightness 25%

LED brightness 50 %

LED brightness 75%

Power Hold

* Power hold - not active

EV-15 Data Transmission Parameters

Symbology Identifier

Default = Not transmitted

* Not transmitted

AIM identifier transmitted

Preamble

Default = None

* None

Line Feed (LF)

Postamble

Default = Carriage return and line feed <CR>+<LF>

* Carriage return and line feed <CR>+<LF>

Carriage return <CR>

None

Scanner Parameters – Bar Code Type Specific

Note: Honeywell does not support Micro PDF or PDF 417 using the integrated EV-15 scanner.

Codabar

Default = Disabled
Default = CSI (Custom symbology identifier) : B7

Enable

* Disable

* Custom symbology identifier - "B7"

Start/Stop

Default = Not transmitted (*)

* Not transmitted (*)

a, b, c, d

A, B, C, D

a, b, c, d / t, n, *, e

DC1, DC2, DC3, DC4

CLSI Library System

Default = Disable

* Disable

Enable (insert spaces)

Check Digit (AIM Recommendation)

Default = Disabled

* Disabled

Checked and transmitted

Checked but not transmitted

Bar Code Length

Default = Minimum length = 6

* Minimum length = 6

Any length

Concatenation

Default = Disabled

* Disabled

Transmit

Default = Transmit all codes (single, concatenated)

* Transmit all codes (single, concatenated)

Transmit concatenated codes only

Start/Stop

Default = No start/stop restrictions

* No start/stop restrictions

Stop 1 = start 2

ABC (American Blood Commission)

Codablock

Codablock A

Default = Codablock A : Disabled
CSI (Custom symbology identifier) K0

* Disable Codablock A

Enable Codablock A

* Custom symbology identifier K0

Codablock F

Default = Codablock F : Disabled
Custom symbology identifier K1

* Disable Codablock F

Enable Codablock F

* Custom symbology identifier K1

Code 11

Default = Code 11 : Disabled

Default = Custom symbology identifier C1

Default = Check digits : 1

Default = Checked and transmitted

Default = Bar code length : Any length

* Disable

Enable

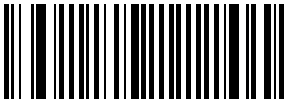
* Custom symbology identifier C1

* Check digits - 1

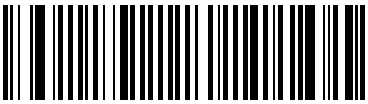
Check digits - 2

* Checked and transmitted

Check but not transmitted



* Bar Code length – Any length



Code 39

Default = Code 39 : Disabled
Default = Custom symbology identifier B1

Enable

* Disable

* Custom symbology identifier B1

Format

Default = Standard 43 characters format

* Standard 43 characters format

Full ASCII format (extended)

Start/Stop

Default = Not transmitted
Default = Accepted characters : asterisk only (standard Code 39)

* Not transmitted

Transmitted

* Accepted characters - * only (standard Code 39)

Accepted characters - $ only (Trioptic Code 39)

Accepted characters - $ and * (standard and Trioptic Code 39)

Check Digit

Default = Disable

* Disable

Modulo 43 - checked but not transmitted

Modulo 43 - checked and transmitted

French CIP - checked and transmitted

French CIP - checked but not transmitted

Italian CPI / Code 32 - checked and transmitted

Italian CPI / Code 32 - checked but not transmitted

Bar Code Length

Default = Any length

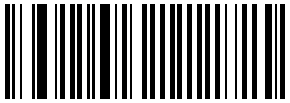
* Any length

Minimum length : 6

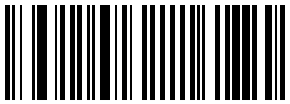
Reading Range / Tolerance

Default = Extended range
Default = High tolerance

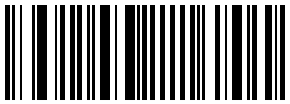
Normal range



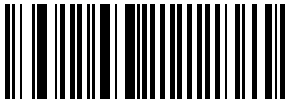
* Extended range



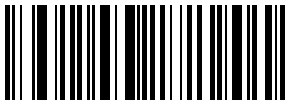
Medium tolerance



* High tolerance



Low tolerance



Code 93 / Code 93i

Default = Disabled
Default = Custom symbology identifier B6
Default = Any bar code length

* Disable

Enable

* Custom symbology identifier B6

* Any bar code length

Minimum length - 6

Code 128 / EAN 128

Default = Code 128 Enabled / EAN 128 Enabled

* Code 128 Enable

Code 128 Disable

* EAN 128 Enable

EAN 128 Disable

Custom Symbology Identifier

Default = Code 128 : B3
Default = EAN 128 : C9

* Custom symbology identifier - Code 128 - default "B3"

* Custom symbology identifier - EAN 128 - default "C9"

EAN 128 Identifier

Default = Include C1 identifier

* Include]C1 identifier

Remove]C1 identifier

CIP 128 French Pharmaceutical Code

Default = Disable

* Disable

Enable

FNC1 Separator Character

* FNC1 separator character (EAN 128 norms) - <GS> (1Dh)

Bar Code Length

Default = Any length

* Any length

Minimum length = 6

Reading Range

Default = Extended reading range

* Extended reading range

Normal reading range

Tolerance

Default = High tolerance

* High tolerance

Medium tolerance

Low tolerance

ISBT 128

Default = Disable

* Disable

Enable

ISBT 128 Transmit

Default = Single codes only

* Single codes only

Concatenated codes only

Single codes / concatenated codes

ISBT 128 Concatenate

Default = Authorized ISBT 128 code pairs only

* Authorized ISBT 128 code pairs only

All ISBT 128 code pairs

GTIN Processing for EAN 128

Default = Disable

* Disable

Enable

Interleaved 2 of 5

Default = Disabled
Default = Custom symbology identifier B2

* Disable

Enable

* Custom symbology identifier B2

Reading Range

Default = Extended reading range

* Extended reading range

Normal reading range

Check Digit

Default = Disable

* Disable

Mod 10 – checked and transmitted

Mod 10 – checked but not transmitted

French CIP HR – checked and transmitted

French CIP HR – checked but not transmitted

Bar Code Length

Note: I2of5 is always an even number of characters.

Default = Bar code minimum length = 6

* Bar code minimum length = 6

Compose Minimum Length

Note: Range : 4 - 50

Default = Minimum length = 4

* Minimum Length = 4

Minimum Length = 50

Matrix 2 of 5

Default = Disabled
Default = Custom symbology identifier B4
Default = Minimum bar code length : 6

* Disable

Enable

* Custom symbology identifier B4

Any bar code length

* Minimum bar code length = 6

MSI Code

Default = Disabled
Default = Custom symbology identifier B8

* Disable

Enable

* Custom symbology identifier B8

Check Digit

Default = Mod 10 checked and transmitted

* Mod 10 checked and transmitted

Mod 10 checked but not transmitted

Double Mod 10 checked and transmitted

Double Mod 10 checked but not transmitted

Bar Code Length

Default = Minimum bar code length = 6

* Minimum bar code length = 6

Any bar code length

Plessey Code

Default Value : Disable
Custom symbology identifier C2

* Disable

Enable

* Custom symbology identifier C2

Check Digit

Default = Check digit not transmitted

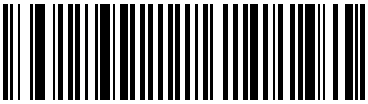
* Check digit not transmitted

Check digit transmitted

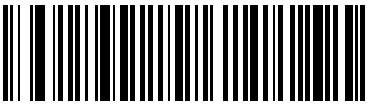
Bar Code Length

Default = Minimum bar code length = 6

Any length



* Minimum bar code length = 6



GS1 DataBar (RSS) Code

Default = Disable
Default = Custom symbology identifier C3

Enable

* Disable

* Custom symbology identifier C3

GS1 DataBar Limited (RSS Limited)

Default = Disable
Default = Custom symbology identifier C4

Enable

* Disable

* Custom symbology identifier C4

GS1 DataBar Expanded (RSS expanded)

Default = Disable
Default = Custom symbology identifier C5

Enable

* Disable

* Custom symbology identifier C5

Standard 2 of 5 Code

Default = Disable
Default = Custom symbology identifier B5

* Disable

Enable

* Custom symbology identifier B5

Format

Default = Identicon

* Identicon (6 start/stop bars)

Computer Identics (4 stop/start bars)

Check Digit Mod 10

Default = Disable

* Disable

Checked and transmitted

Checked but not transmitted

Bar Code Length

Default = Minimum bar code length = 6

* Minimum bar code length = 6

Any bar code length

Telepen

Default = Disabled
Default = Custom symbology identifier C6
Default = Format ASCII
Default = Any length bar code

* Disable

Enable

* Custom symbology identifier C6

* Format – ASCII

Format – numeric

* Any bar code length

UPC / EAN

UPC-A

Default = Enable UPC-A

* Enable UPC-A

Disable UPC-A

UPC-E

Default = Enable UPC-E

* Enable UPC-E

Disable UPC-E

EAN-8

Default = Enable EAN-8

* Enable EAN-8

Disable EAN-8

EAN-13

Default = Enable EAN-13

* Enable EAN-13

Disable EAN-13

UPC-E1

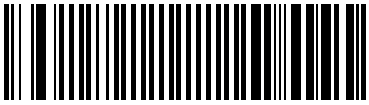
Default = Disable UPC-E1

Enable UPC-E1

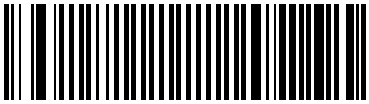
* Disable UPC-E1

Custom Symbology Identifier

* UPC-A - default "A0"

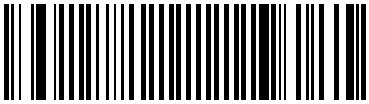


* UPC-E - default "E0"



* EAN-8 - default "FF"

* EAN-13 - default "F"



Add-on Digits

Default = Not required but transmitted if read

Default = Add-on 2 disabled

Default = Add-on 5 disabled

Default = Security level 10

* Not required but transmitted if read

Required and transmitted

* Add-on 2 Disabled

Add-on 2 Enabled

* Add-on 5 Disabled

Add-on 5 Enabled

* Security level = 10

Check Digit

Default = UPC-A transmitted

Default = UPC-E transmitted

Default = EAN-8 transmitted

Default = EAN-13 transmitted

* UPC-A – transmitted

UPC-A – not transmitted

* UPC-E – transmitted

UPC-E – not transmitted

* EAN-8 – transmitted

EAN-8 – not transmitted

* EAN-13 – transmitted

EAN-13 – not transmitted

UPC Number System

Default = UPC-A transmitted

Default = UPC-E transmitted

* UPC-A – transmitted

UPC-A – not transmitted

* UPC-E – transmitted

UPC-E – not transmitted

Transmit As

Re-encoding UPC-A, UPC-E, EAN-8.

Default = UPC-A transmitted as EAN-13

Default = UPC-E transmitted as UPC-E

Default = EAN-8 transmitted as EAN-8

Default = ISBN disable

Default = GTIN processing disable

* UPC-A transmitted as EAN-13

UPC-A transmitted as UPC-A

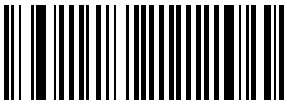
* UPC-E transmitted as UPC-E

UPC-E transmitted as UPC-A

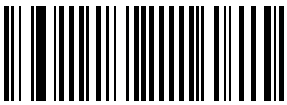
* EAN-8 transmitted as EAN 8

EAN-8 transmitted as EAN-13

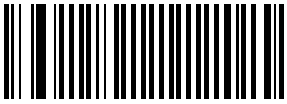
* ISBN disable



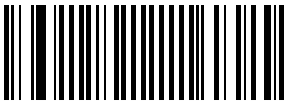
ISBN enable



* GTIN processing disable



GTIN processing enable



Reading Range

Default = Extended

* Extended

Normal

3

5300 2D Imager

Introduction

Integrated Imager Engine	MX7 Tecton	MX8	MX9

This section's explanations and instructions are directed toward devices with an integrated (Hand Held Products) HHP 5300 2D Imager. Do not use these decoding engine instructions for any other imager type or scan engine.

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

This section is directed toward a mobile device with an integrated (Hand Held Products) HHP 5300 2D imager and contains instructions that can be used to modify the HHP 5300 2D Imager scan engine configuration parameters, only.

MX8 CE 5

The configuration parameters are stored in the SCANCONFIG.INI file on the Mobile Device in the \System folder.

The value shown for each parameter in the Sample SCANCONFIG.INI file is the pre-configured default value.

After configuration changes are complete, save the modified SCANCONFIG.INI file and **initiate a reboot** in order for the new settings to take effect.

*Note: When the MX8 (CE 5 only) has an integrated bar code reader, the MX8 is pre-loaded with **either** Scan Wedge **or** Data Collection Wedge, not both.*

Mobile Device with a Windows Mobile operating system

Options set (in the past) with SCANCONFIG.INI file for a device with an installed HHP 5300 2D non-decoded imager, have been replaced by the **Advanced properties dialogs** in the **Data Collection Wedge (DCWedge)** panel on the mobile device.

Data Collection Wedge Panel

Bar code enable/disable settings and Min/Max settings may appear to be duplicated in the SCANCONFIG.INI file and the Mobile Device operating system Data Collection Wedge Panel.

Parameters set in the SCANCONFIG.INI file establish initial imager engine scan settings.

Then the settings in the Mobile Device Data Collection Wedge Panel manipulates the results of successful imager bar code scans.

When the Mobile Device restarts, the imager parameter settings set in the SCANCONFIG.INI are applied, then the parameter settings in the Data Collection Wedge Panel are applied.

Use the HHP Properties button on the Data Options tab and the Advanced button available on many of the individual Symbology Settings screen to configure the (Hand Held Products) HHP Imager. There are no configuration bar codes for this imager.

Reset to Factory Defaults using the LXEReset Bar Code

The LXEReset bar code should only be scanned by mobile devices running Data Collection Wedge software.

This bar code must not be scanned by devices running Bar Code Scan Wedge software.

The following function-specific bar code is only used when it is necessary to return the decoder engine back to factory default values.

When the scan is successful, the mobile device emits a double beep and the Scan On indicator is amber. The decoding engine is not available for further bar code scanning until the Scan On indicator turns off. Scanning this bar code does not affect the mobile device's operating system, wireless client or installed software (e.g., AppLock) settings.

Decoder

Note: These settings have no effect on laser scanner-equipped units or EV-15 imager equipped units.

DecodeMode

Default	1
Valid	1 = Normal mode
	2 = Aggressive Linear Decode (ALD)
	4 = Quick Omni

In Normal mode the imager will decode both linear and 2-D symbologies.

In Aggressive Linear Decode mode the imager will only read linear symbologies in this mode, but decoding these is faster and more accurate than Normal Mode.

In Quick Omni mode the imager searches for a bar code in a reduced field located around the center of the image. Decoding is faster in this mode, but the user must center the aiming line over the bar code to be read. Both linear and 2-D symbologies can be read in this mode.

LinearRange

Default	3
Valid	1 - 6

1 specifies that the linear range that is searched for a readable label is a tight vertical range near the aimer.

6 specifies that the entire height of the image is to be searched.

LeaveLightsOn

Default	0
Valid	0 = Off, 1 = On

Specifies if the imager's lights and aimer should be left on during the entire decode process.

If Off, the lights are turned on only during image capture, then turned off while the imager attempts to process and decode the bar code.

If On, the aimer and lights remain turned on during the entire process.

In Aggressive Linear Decode mode, set this parameter to 1 to improve the aimer visibility.

See DecodeMode on page 3-2

AimTimer

Duration of the imager aim beam in 0.1 second increments.

Default	0
Valid	0 = 50 (0 – 5 seconds)

If a value greater than 50 is entered, the aim duration is set to the maximum time of 5 seconds.

Centering

The centering feature is used to allow the user to accurately scan a selected bar code among a group of bar codes that are located closely together. When centering is turned on, the imager will only decode bar codes that intersect the centering window defined by the user. The centering window must intersect the center of the bar code.

The default centering settings define a 60 pixel square area in the center of the imager's field of view.

Default centering settings and allowable minimum and maximum settings are listed below.

Centering	Enable
Default	0
Valid	1 Enable
	0 Disable

Enable or disable Centering feature. When disabled, the following values are ignored.

Position	Default	Minimum	Maximum
CenteringTop	120	0	239
CenteringBottom	360	240	479
CenteringLeft	188	0	319
CenteringRight	564	320	639

Symbologies

For each symbology, the first parameter (parameter1) determines if the symbology is enabled (1 = enabled).

The remaining parameters through parameter **n** have various meanings for each symbology.

Minimum parameters with a range indicate the minimum value can begin at any number after the initial minimum number e.g., if a parameter has a minimum length range between 0 and 200, the minimum range can be set to any number between the minimum (0) and the maximum (200).

Note: Altering these settings has no effect on a mobile device equipped with a laser scanner.

Aztec

Syntax Aztec=p1,p2,p3

Example Aztec=1,1,3750

Pn	Default	Valid	Description
1	1	1 enable 0 disable	Decode Aztec bar code
2	1	1 - 3750	minimum length of bar code to decode
3	3750	1 - 3750	maximum length of bar code to decode

Codabar

Syntax Codabar=p1,p2,p3,p4,p5,p6

Example Codabar=1,0,0,0,4,60

Pn	Default	Valid	Description
1	1	1 enable 0 disable	Decode Codabar bar code
2	0	1 enable 0 disable	Transmit start/stop characters
3	0	1 enable 0 disable	Decode only bar codes with check characters
4	0	1 enable 0 disable	Transmit check characters
5	4	2 - 60	Minimum length to decode
6	60	2 - 60	Maximum length to decode

Codablock

Syntax Codablock=p1,p2,p3

Example Codablock=0,0,2048

Pn	Default	Valid	Description
1	0	1 enable 0 disable	Decode Codablock bar code
2	0	0 - 2048	Minimum length of bar code to decode
3	2048	0 - 2048	Maximum length of bar code to decode

Code 11

Syntax Code11=p1,p2,p3,p4

Example Code11=0,1,4,80

Pn	Default	Valid	Description
1	0	1 enable 0 disable	Decode Code 11 bar code
2	1	1 enable 0 disable	Decode only bar codes with two check digits
3	4	1 - 80	Minimum length to decode
4	80	1 - 80	Maximum length to decode

Code 16K

Syntax Code16K=p1,p2,p3

Example Code16K=0,1,160

Pn	Default	Valid	Description
1	0	1 enable 0 disable	Decode Code 16K bar code
2	1	1 - 160	Minimum length to decode
3	160	1 - 160	Maximum length to decode

Code 32

Syntax Code32=p1

Example Code32=1

Pn	Default	Valid	Description
1	1	1 enable 0 disable	Decode Code32 bar code

Code 39

Syntax Code39=p1,p2,p3,p4,p5,p6,p7,p8

Example Code39=1,0,0,0,0,0,0,48

Pn	Default	Valid	Description
1	1	1 enable 0 disable	Decode Code 39 bar code
2	0	1 enable 0 disable	Transmit start/stop characters
3	0	1 enable 0 disable	Decode only bar codes with check characters
4	0	1 enable 0 disable	Transmit check character
5	0	1 enable 0 disable	Full ASCII interpretation
6	0	0 disable	Append and buffer codes that start with a space
7	0	0 - 48	Minimum length to decode
8	48	0 - 48	Maximum length to decode

Code 49

Syntax Code49=p1,p2,p3

Example Code49=1,1,81

Pn	Default	Valid	Description
1	1	1 enable 0 disable	Decode Code 49 bar code
2	1	1 - 81	Minimum length to decode
3	81	1 - 81	Maximum length to decode

Code 93

Syntax Code93=p1,p2,p3

Example Code93=1,0,80

Pn	Default	Valid	Description
1	1	1 enable 0 disable	Decode Code 93 bar code
2	0	0 - 80	Minimum length to decode
3	80	1 - 80	Maximum length to decode

Code 128

Syntax Code128=p1,p2,p3

Example Code128=1,0,80

Pn	Default	Valid	Description
1	1	1 enable 0 disable	Decode Code 128 bar code
2	0	0 - 80	Minimum length to decode
3	80	0 - 80	Maximum length to decode

Coupon Code

Syntax Coupon=p1

Example Coupon=0

Pn	Default	Valid	Description
1	0	1 enable 0 disable	Decode Coupon Code bar code

EAN-UCC Composite

Syntax Composite=p1,p2,p3

Example Composite=0,1,300

Pn	Default	Valid	Description
1	0	1 enable 0 disable	Decode EAN-UCC Composite bar code
2	1	1 - 300	Minimum length to decode
3	300	1 - 300	Maximum length to decode

Data Matrix

Data Matrix – 2D bar code uses a unique square module perimeter pattern that helps the bar code reader determine the cell locations.

Syntax DataMatrix=p1,p2,p3

Example DataMatrix=1,1,1500

Pn	Default	Valid	Description
1	1	1 enable 0 disable	Decode Data Matrix bar code
2	1	1 - 1500	Minimum length to decode
3	1500	1 - 1500	Maximum length to decode

EAN 8

Syntax EAN8=p1,p2,p3,p4,p5,p6

Example EAN8=1,1,0,0,0,1

Pn	Default	Valid	Description
1	1	1 enable 0 disable	Decode EAN 8 bar code
2	1	1 enable 0 disable	Transmit check character
3	0	1 enable 0 disable	Transmit 2 digit addenda
4	0	1 enable 0 disable	Transmit 5 digit addenda
5	0	1 enable 0 disable	Only decode bar codes with 2 or 5 digit addenda
6	1	1 enable 0 disable	Insert space between code and addenda

EAN 128

Syntax EAN128=p1,p2,p3

Example EAN128=1,0,80

Pn	Default	Valid	Description
1	1	1 enable 0 disable	Decode EAN 128 bar code
2	0	0 - 80	Minimum length to decode
3	80	0 - 80	Maximum length to decode

EAN 13

Note: A UPCA decoding algorithm will also decode EAN 13 labels. For correct operation, either disable the UPCA (page 3-17) symbology when using EAN 13 labels or configure the UPCA settings to match the EAN 13 settings.

Syntax EAN13=p1,p2,p3,p4,p5,p6

Example EAN13=1,1,0,0,0,1

Pn	Default	Valid	Description
1	1	1 enable 0 disable	Decode EAN 13 bar code
2	1	1 enable 0 disable	Transmit check character
3	0	1 enable 0 disable	Transmit 2 digit addenda
4	0	1 enable 0 disable	Transmit 5 digit addenda
5	0	1 enable 0 disable	Only decode bar codes with 2 or 5 digit addenda
6	1	1 enable 0 disable	Insert space between code and addenda

GenCode 128

Syntax GenCode128=p1,p2,p3

Example GenCode128=1,0,80

Pn	Default	Valid	Description
1	1	1 enable 0 disable	Decode GenCode 128 bar code
2	0	0 - 80	Minimum length to decode
3	80	0 - 80	Maximum length to decode

IATA 2 of 5

Syntax IATA25=p1,p2,p3

Example IATA25=0,4,80

Pn	Default	Valid	Description
1	0	1 enable 0 disable	Decode IATA 2 of 5 bar code
2	4	4 - 80	Minimum length to decode
3	80	4 - 80	Maximum length to decode

ID Tag

Syntax IDTag=p1

Example IDTag=0

Pn	Default	Valid	Description
1	0	1 enable 0 disable	Decode ID Tag bar code

Interleaved 2 of 5

Syntax Int25=p1,p2,p3,p4,p5

Example Int25=1,0,0,4,80

Pn	Default	Valid	Description
1	1	1 enable 0 disable	Decode Interleaved 2 of 5 bar code
2	0	1 enable 0 disable	Only decode bar codes w/ check digit
3	0	1 enable 0 disable	Transmit check digit
4	4	4 - 80	Minimum length to decode
5	80	4 - 80	Maximum length to decode

ISBT-1

Syntax ISBT=p1

Example ISBT=0

Pn	Default	Valid	Description
1	0	1 enable 0 disable	Decode ISBT bar code

Matrix 2 of 5

Syntax Matrix25=p1,p2,p3

Example Matrix25=0,4,80

Pn	Default	Valid	Description
1	0	1 enable 0 disable	Decode Strt25 bar code
2	4	4 - 80	Minimum length to decode
3	80	4 - 80	Maximum length to decode

Maxicode

Maxi Code – 2D matrix symbology containing hexagon modules in a 1” square area.

Syntax Maxicode=p1,p2,p3, p4

Example Maxicode=1,0,1,150

Pn	Default	Valid	Description
1	1	1 enable 0 disable	Decode Maxicode bar code
2	0	Not Applicable	CarrierMsgOnly - Unused
3	1	1 - 150	Minimum length to decode
4	150	1 - 150	Maximum length to decode

Mesa

Syntax Mesa=p1,p2,p3,p4,p5,p6,p

Example Mesa=0,0,0,0,0,0,0

Pn	Default	Valid	Description
1	0	1 enable 0 disable	Decode Mesa bar code
2	0	1 enable 0 disable	Decode UPCA Mesa
3	0	1 enable 0 disable	Decode EAN13 Mesa
4	0	1 enable 0 disable	Decode Code 39 Mesa bar code
5	0	1 enable 0 disable	Decode Code 128 Mesa
6	0	1 enable 0 disable	Decode Interleaved 2 of 5 Mesa
7	0	1 enable 0 disable	Decode Code 93 Mesa

MicroPDF417

Syntax MicroPDF=p1,p2,p3

Example MicroPDF=1,1,366

Pn	Default	Valid	Description
1	1	1 enable 0 disable	Decode MicroPDF bar code
2	1	1 - 366	Minimum length to decode
3	366	1 - 366	Maximum length to decode

MSI Plessey

Syntax MSI=p1,p2,p3,p4

Example MSI=0,4,48,0

Pn	Default	Valid	Description
1	0	1 enable 0 disable	Decode MSI bar code
2	4	4 – 48	Minimum length to decode
3	48	4 – 48	Maximum length to decode
4	0	1 enable 0 disable	Transmit check character

Plessey

Syntax Plessey=p1,p2,p3

Example Plessey=0,4,48

Pn	Default	Valid	Description
1	0	1 enable 0 disable	Decode MSI bar code
2	4	4 – 48	Minimum length to decode
3	48	4 – 48	Maximum length to decode

OCR

Syntax OCR=p1,p2,p3,p4,p5,p6,p7

Example OCR=0,2,ddddddd,,,,0

Pn	Default	Valid	Description
1	0	1 enable 0 disable	Decode OCR bar code
2	2	0 OCR_DISABLED 1 OCR_A 2 OCR_B 3 OCR_MONEY	Font Selection
3	ddddddd	See Note 1	Template selection(null terminated string)
4	null	See Note 1	Null-terminated string defines the set of characters in group G
5	null	See Note 1	Null-terminated string defines the set of characters in group H

Note 1: The length of the template must match the length of the OCR string to be read. P3 parameter template selections are:

a - alphanumeric character (digit or letter)

c - check character

d - digits from 0 to 9

e - any character

g - any character specified in group G

h - any character specified in group H

l - alphabetic letter

r - delimits a row

t - delimits multiple templates

All characters are transmitted as is, except for the selected template.

Pn	Default	Valid	Description
6	null	Modulo 10 “0123456789” Modulo 36 “0123456789ABC DEFGHIJKLMNOPQRSTUVWXYZ”	Null-terminated string defines legal characters for checksum calculation.

Calculate checksum characters as follows:

Modulo 10

1. Add the characters in the string (not including the checksum character).
2. Subtract 10 from the sum obtained above. Continue subtracting 10 until the remainder is less than 10.

The remainder obtained above is the checksum. Enter this digit in the checksum position.

Modulo 36

1. Add the characters in the string (not including the checksum character).
2. Subtract 36 from the sum obtained above. Continue subtracting 36 until the remainder is less than 36.
3. Subtract the remainder obtained above from 36. The value obtained is the checksum. Enter this character in the checksum position.

Digit / Alpha values are defined as follows for modulo 36:

0 – 9 = 0 – 9; A = 10, B = 11, … Z = 25

Direction (Orientation) – this parameter is ignored

Pn	Default	Valid	Description
7	0	0 left to right 1 top to bottom 2 right to left 3 bottom to top	Orientation. Decoder reads OCR fonts in any orientation, but setting this parameter correctly can increase decoding speed.

Example:

To read a combination of 6 alpha and numeric characters use the following template:

```
aaaaaa
```

Example:

To read the same string with a modulo 10 check digit in the 7th character position, use the following template:

```
aaaaaac
```

Then enter 0123456789 for parameter 6.

Example:

To read either a string of 6 alphabetic letters OR a string of 8 numeric digits, use this template:

```
llllllttdddddddd
```

Note the use of the “t” to separate the first template from the second.

Example:

To read multiple rows of OCR data as shown below:

```
123450
ABCDEF
```

Either of the following templates could be used:

dddddddrllllll or aaaaaaraaaaaa

Note the use of the “r” to define the position of the second row.

PDF417

Syntax PDF417=p1,p2,p3

Example PDF417=1,1,2750

Pn	Default	Valid	Description
1	1	1 enable 0 disable	Decode PDF417 bar code
2	1	1 - 2750	Minimum length to decode
3	2750	1 - 2750	Maximum length to decode

QR Code

Syntax QR=p1,p2,p3

Example QR=1,1,3500

Pn	Default	Valid	Description
1	1	1 enable 0 disable	Decode QR bar code
2	1	1 - 3500	Minimum length to decode
3	3500	1 - 3500	Maximum length to decode

RSS Code

Syntax RSS=p1,p2,p3

Example RSS=0,4,74

Pn	Default	Valid	Description
1	0	1 enable 0 disable	Decode RSS bar code
2	4	4 - 74	Minimum length to decode
3	74	4 - 74	Maximum length to decode

Note: RSS Code name change effective January 2010 to GS1 DataBar.

Straight 2 of 5

Syntax Strt25=p1,p2,p3

Example Strt25=1,4,48

Pn	Default	Valid	Description
1	1	1 enable 0 disable	Decode Strt25 bar code
2	4	4 - 48	Minimum length to decode
3	48	4 - 48	Maximum length to decode

Telepen

Syntax Telepen=p1,p2,p3

Example Telepen=0,1,60,0

Pn	Default	Valid	Description
1	0	1 enable 0 disable	Decode Telepen bar code
2	1	1 – 60	Minimum length to decode
3	60	1 – 60	Maximum length to decode
4	0	0=AIM, 1=Original	Select AIM or Original Telepen

TLC

Syntax TLC=p1

Example TLC=0

Pn	Default	Valid	Description
1	0	1 enable 0 disable	Decode TLC bar code

Trioptic

Syntax Trioptic=p1

Example Trioptic=0

Pn	Default	Valid	Description
1	0	1 enable 0 disable	Decode Trioptic bar code

UPCA

Syntax UPCA=p1,p2,p3,p4,p5,p6,p7

Example UPCA=1,1,1,0,0,0,1

Pn	Default	Valid	Description
1	1	1 enable 0 disable	Decode UPCA bar code
2	1	1 enable 0 disable	Transmit check digit
3	1	1 enable 0 disable	Transmit number system
4	0	1 enable 0 disable	Transmit 2-digit addenda
5	0	1 enable 0 disable	Transmit 5-digit addenda
6	0	1 enable 0 disable	Only decode bar codes with 2- or 5- digit addenda
7	1	1 enable 0 disable	Insert space between code and addenda

Note: An EAN 13 decoding algorithm will also decode UPCA labels. For correct operation, either disable the EAN 13 symbology when using UPCA labels or configure the EAN 13 settings to match the UPCA settings.

UPCE0

Syntax UPCE0=p1,p2,p3,p4,p5,p6,p7,p8

Example UPCE0=1,1,1,0,0,0,0,1

Pn	Default	Valid	Description
1	1	1 enable 0 disable	Decode UPCE0 bar code
2	1	1 enable 0 disable	Transmit check digit
3	1	1 enable 0 disable	Transmit number system
4	0	1 enable 0 disable	Expand version E to 12-digit UPCA format
5	0	1 enable 0 disable	Transmit 2-digit addenda
6	0	1 enable 0 disable	Transmit 5-digit addenda
7	0	1 enable 0 disable	Only decode bar codes with 2- or 5- digit addenda
8	1	1 enable 0 disable	Insert space between code and addenda

Note: UPCEO and UPCE1 must be configured identically for correct operation.

UPCE1

Syntax UPCE1=p1,p2,p3,p4,p5,p6,p7,p8

Example UPCE1=1,1,1,0,0,0,0,1

Pn	Default	Valid	Description
1	1	1 enable 0 disable	Decode UPCE1 bar code
2	1	1 enable 0 disable	Transmit check digit
3	1	1 enable 0 disable	Transmit number system
4	0	1 enable 0 disable	Expand version E to 12-digit UPCA format
5	0	1 enable 0 disable	Transmit 2-digit addenda
6	0	1 enable 0 disable	Transmit 5-digit addenda
7	0	1 enable 0 disable	Only decode bar codes with 2- or 5- digit addenda
8	1	1 enable 0 disable	Insert space between code and addenda

Note: UPCEO and UPCE1 must be configured identically for correct operation.

Postal Codes

Auspost

Note: Auspost = Australian 4 State Code

Syntax Auspost=p1

Example Auspost=0

Pn	Default	Valid	Description
1	0	1 enable 0 disable	Decode Auspost bar code

BPO

BPO = British Post Office 4 State Code

Syntax BPO=p1

Example BPO=0

Pn	Default	Valid	Description
1	0	1 enable 0 disable	Decode BPO bar code

Canpost

Canpost = Canadian 4 State Code

Syntax Canpost=p1

Example Canpost=0

Pn	Default	Valid	Description
1	0	1 enable 0 disable	Decode Canpost bar code

China Post

Syntax ChinaPost=p1,p2,p3

Example ChinaPost=0,4,80

Pn	Default	Valid	Description
1	0	1 enable 0 disable	Decode China Post bar code
2	4	4 - 80	Minimum length to decode
3	80	4 - 80	Maximum length to decode

DutchPost

Dutchpost = Dutch Postal Code

Syntax DutchPost=p1

Example DutchPost=0

Pn	Default	Valid	Description
1	0	1 enable 0 disable	Decode Dutchpost bar code

JapanPost

JapanPost = Japanese Postal Service Code

Syntax JapanPost=p1

Example JapanPost=0

Pn	Default	Valid	Description
1	0	1 enable 0 disable	Decode JapanPost bar code

Korean Post

Syntax KoreanPost=p1,p2,p3

Example KoreanPost=0,4,48

Pn	Default	Valid	Description
1	0	1 enable 0 disable	Decode Korean Post bar code
2	4	4 - 48	Minimum length to decode
3	48	4 - 48	Maximum length to decode

Planet

The PostaL Alpha Numeric Encoding Technique (PLANET)

Syntax Planet=p1,p2

Example Planet=0,0

Pn	Default	Valid	Description
1	0	1 enable 0 disable	Decode Planet bar code
2	0	1 enable 0 disable	Transmit check digit

Posi Code

Syntax Posi=p1,p2,p3

Example Posi=0,4,48,2

Pn	Default	Valid	Description
1	0	1 enable 0 disable	Decode Posi Code bar code
2	4	4 – 48	Minimum length to decode
3	48	4 – 48	Maximum length to decode
4	2	0=none 1=A 2=B	Limited setting

Postnet

Postnet = US Postal Service Postnet Code

Syntax	Postnet=p1,p2
Example	Postnet=0,0

Pn	Default	Valid	Description
1	0	1 enable 0 disable	Decode Postnet bar code
2	0	1 enable 0 disable	Transmit check digit

Usps4cb

USPS height-modulated bar code designed for use in high speed, automated, mail sorting machines that allow both Planet and Postnet bar code information to be combined into a single bar code to track mailings, request address-quality service.

Syntax	Usps4cb=p1
Example	Usps4cb=0

Pn	Default	Valid	Description
1	0	1 enable 0 disable	Decode Usps4cb Code bar code

Sample SCANCONFIG.INI File

The SCANCONFIG.INI file used for 5300 2D imager configuration is located in the System folder on the mobile device and has the format shown below.

Do not insert spaces in the settings entries. For example:

DecodeMode=1	Correct
DecodeMode = 1	Incorrect

Note: Default values are shown in the SCANCONFIG.INI file below.

```
[Decoder]
DecodeMode=1
LinearRange=3
LeaveLightsOn=0
AimTimer=0

[Centering]
CenteringEnable=0
CenteringTop=120
CenteringBottom=360
CenteringLeft=188
CenteringRight=564

[Symbologies]
Aztec=1,1,3750
Mesa=0,0,0,0,0,0,0
Codabar=1,0,0,0,4,60
Code11=0,1,4,80
Code128=1,0,80
Code39=1,0,0,0,0,0,0,48
Code49=1,1,81
Code93=1,0,80
Composite=0,1,300
DataMatrix=1,1,1500
EAN8=1,1,0,0,0,1
EAN13=1,1,0,0,0,1
Interlv2of5=1,0,0,4,80
Maxicode=1,0,1,150
MicroPDF=1,1,366
OCR=0,2,ddddddddd,,,,0
PDF417=1,1,2750
Postnet=0,0
QR=1,1,3500
RSS=1,4,74
UPCA=1,1,1,0,0,0,1
UPCE0=1,1,1,0,0,0,0,1
```

UPCE1=1,1,1,0,0,0,0,1
ISBT=0
BPO=0
Canpost=0
Auspost=0
IATA25=0,4,80
Codablock=0,0,2048
JapanPost=0
Planet=0,0
DutchPost=0
MSI=0,4,48,0
TLC=0
Trioptic39=0
Code32=1
Strt25=0,4,48
Matrix25=0,4,80
Plessey=0,4,48
ChinaPost=0,4,80
Telepen=0,1,60,0
Code16K=0,1,160
Posi=1,4,48,2
Coupon=0
Usps4cb=0
IDTag=0
EAN128=1,0,80
GenCode128=1,0,80

4

5380SF 2D Imager

Introduction

Integrated Imager Engine	MX7

This section's explanations and instructions are directed toward devices with an integrated (Hand Held Products) HHP 5380SF 2D Imager. Do not use these bar codes for any other imager type or scan engine.

Scan engine manufacturers may offer more bar codes and options than are contained in this section. Please note that the bar codes in this section are only those supported by Honeywell.

See the *device-specific Reference Guide* for instruction when using the imager. There are many imager functions that are controlled by Windows Panel settings e.g., beeper/volume/events, RS232 settings, read timers, etc.

An asterisk (*) next to an option indicates the default setting. Technical Assistance (page 8-1) is available if you need help when using the bar codes in this section.

The bar codes contained in this section are to be used when programming the (Hand Held Products) HHP 5380SF decoded imager engine.

5380SF 2D imager engine programming bar codes obtained from sources other than Honeywell cannot be supported.

Symbologies Enabled (by Default) at Startup

Aztec Code	Interleaved 2 of 5
Codabar	MaxiCode
Code 128	MicroPDF417
Code 39	PDF417
Code 49	Posicode
Code 93	QR Code
Data Matrix	GS1 DataBar Omnidirectional (RSS-14)
EAN/JAN-13	UPC-A
EAN/JAN-8	UPC-E0

The 5380SF 2D Imager reads inverse bar codes when available.

See the following section Imager Parameters – Symbology Specific (page 4-18) for a full list of supported symbologies and related options.

Reset to Factory Defaults using the LXEReset Bar Code

The LXEReset bar code should only be scanned by mobile devices running Data Collection Wedge software.

This bar code must not be scanned by devices running Bar Code Scan Wedge software.

The following function-specific bar code is only used when it is necessary to return the decoder engine back to factory default values.

When the scan is successful, the mobile device emits a double beep and the Scan On indicator is amber. The decoding engine is not available for further bar code scanning until the Scan On indicator turns off. Scanning this bar code does not affect the mobile device's operating system, wireless client or installed software (e.g., AppLock) settings.

Pre-Configured 5380SF 2D Imager Default Values

The following values are set by Honeywell before the Mobile Device is shipped. The imager can be returned to factory defaults by scanning the Reset to Factory Defaults (page 4-7) bar code.

Factory defaults are listed in the following table.

Imager Parameter	Device Default Value
Factory Default Settings	As built
Good Read Delay	No Delay
Reread Delay	Medium
LED Power Level	High
Aimer Delay	Off (no delay)
Centering Window	Centering Off
Print Weight	4
Working Orientation	Upright
Intercharacter Delay	No delay
Interfunction Delay	No delay
Intermessage Delay	No delay
Codabar	On
Start/Stop Characters	Don't Transmit
Check Character	No Check Character
Concatenation	On
Message Length	Min: 4 / Max: 60
Code 39	On
Start/Stop Characters	Don't Transmit
Check Character	No Check Character
Message Length	Min: 0 / Max: 48
Append	Off
Code 32 Pharmaceutical	Off
Code 39 Full ASCII	Off
Code Page	Not Supported
Interleaved 2 of 5	On

Imager Parameter	Device Default Value
Check Digit	No Check Digit
Message Length	Min: 4 / Max: 80
Code 93	On
Message Length	Min: 0 / Max: 80
Code Page	Not Supported
Straight 2 of 5 Industrial	Off
Message Length	Min: 4 / Max: 48
Straight 2 of 5 IATA	Off
Message Length	Min: 4 / Max: 48
Matrix 2 of 5	Off
Message Length	Min: 4 / Max: 80
Code 11	Off
Check Digits Required	Two Check Digits
Message Length	Min: 4 / Max: 80
Code 128	On
ISBT 128 Concatenation	Off
Message Length	Min: 0 / Max: 80
Code Page	Not Supported
Telepen	Off
Output	AIM Telepen Output
Message Length	Min: 1 / Max: 60
UPC-A	On
Check Digit	On
Number System	On
Addenda	2 Digit Addenda and 5 Digit Addenda Off
Addenda Required	Not Required
Addenda Separator	On
UPC-A/EAN-13 with Extended Coupon Code	On
UPC-E0	On
Expand	Off
Addenda	2 Digit Addenda and 5 Digit Addenda Off
Addenda Required	Not Required
Addenda Separator	On
Check Digit	On
Number System	On
UPC-E1	Off
EAN/JAN-13	On
Addenda	2 Digit Addenda and 5 Digit Addenda Off
Addenda Required	Not Required
Addenda Separator	On
Check Digit	On
ISBN Translate	On
EAN/JAN-8	On
Addenda	2 Digit Addenda and 5 Digit Addenda Off

Imager Parameter	Device Default Value
Addenda Required	Not Required
Addenda Separator	On
Check Digit	On
MSI	Off
Check Character	Validate Type 10, but Don't Transmit
Message Length	Min: 4 / Max: 48
Plessey	Off
Message Length	Min: 4 / Max: 48
GS1 DataBar Omnidirectional (RSS-14)	On
GS1 DataBar Limited (RSS Limited)	On
GS1 DataBar Expanded (RSS expanded)	On
Expanded Message Length	Min: 4 / Max: 74
PosiCode A and B	On
A and B and Limited B	On (Limited A Off)
Message Length	Min: 4 / Max: 48
Trioptic Code	Off
Codablock F	Off
Message Length	Min: 1 / Max: 2048
Code 16K	Off
Message Length	Min: 1 / Max: 160
Code 49	On
Message Length	Min: 1 / Max: 81
PDF417	On
Message Length	Min: 1 / Max: 81
MicroPDF417	On
Message Length	Min: 1 / Max: 366
EAN-UCC Composite	Off
UPC/EAN Version	Off
EAN-UCC Message Length	Min: 1 / Max: 2435
EAN-UCC Emulation	Off
TCIF Linked Code 39	Off
Postnet (Postal Code	Off
Check Digit	Don't Transmit Check Digit
Planet Code (Postal Code)	Off
Check Digit	Don't Transmit Check Digit
British Post (Postal Code)	Off
Canadian Post (Postal Code)	Off
Kix (NL) Post (Postal Code)	Off
Australian Post (Postal Code)	Off
Japanese Post (Postal Code)	Off
China Post (Postal Code)	Off
Message Length	Min: 4 / Max: 80
Korea Post (Postal Code)	Off

Imager Parameter	Device Default Value
Message Length	Min: 4 / Max: 80
QR Code	On
Message Length	Min: 1 / Max: 3500
Data Matrix	On
Message Length	Min: 1 / Max: 1500
MaxiCode	On
Message Length	Min: 1 / Max: 150
Aztec Code	On
Message Length	Min: 1 / Max: 3750
Aztec Runes	Disable

Frequently Used Bar Codes

Save or Discard Settings

Note: The Discard bar code will not function as expected when Save is scanned before scanning Discard.

After changing a parameter, scan the Save bar code. If you make an error while scanning a parameter option, scan the Discard bar code, scan the correct parameter option and then scan the Save bar code.

Scan the Save bar code each time a parameter is changed.

Save

Discard (before scanning Save)

Enable All Symbologies

Scan the All Symbologies On bar code when you want the ability to decode all the supported symbologies for the imager installed in the mobile device.

Scan the All Symbologies Off bar code when you want to select individual symbologies. Scan the “On” bar code for each symbology desired.

All Symbologies On

All Symbologies Off

Scan the Save bar code after each parameter change.

Supported Imager Symbologies

Aztec Code	Interleaved 2 of 5
Codabar	MaxiCode
Code 128	MicroPDF417
Code 39	PDF417
Code 49	PosiCode
Code 93	QR Code
DataMatrix	GS1 DataBar Omnidirectional (RSS-14)
EAN/JAN-13	UPC-A
EAN/JAN-8	UPC-E0

Note: Improve decode speed by disabling unused bar code types.

Refer to a bar code type's main section for the available programming bar codes for that symbology.

Note: All Postal Code symbologies default to "Off." For best performance when reading a postal symbology, all other postal symbologies should be disabled.

Imager Parameters – General

Except for the General imager attributes in this section that can be set by the end-user, imager programming attributes are set using the Windows Scan Wedge panel resident on the Mobile Device.

Prefix / Suffix

Refer to the section titled "Scanner Control Panel" in the Mobile Device Reference Guide for information and instruction on setting up the following imager parameters:

- Good/Bad Read indicators
- Serial Parameters
- Code ID: AIM, Symbol, Custom
- Symbology Settings including Prefix/Suffix
- Control Character Mapping
- Custom Identifiers

(Hand Held Products) HHP 5380SF 2D Imager prefix and suffix parameters cannot be set, changed, or reset using the bar codes in this section.

Reset to Factory Defaults

Scan the Default Settings bar code below when you want to reset the imager to the original factory defaults. This action resets the integrated imager settings. It does not affect the mobile device hardware or software settings.

Any imager parameter changes that had been made prior to resetting to factory defaults will need to be set again.

Note: All Postal Code symbologies default value is "Off." For best performance when reading a postal symbology, all other postal symbologies should be disabled.

See Reset to Factory Defaults using the LXEReset Bar Code on page 4-2.

Good Read Delay

Set the minimum amount of time before the imager can read another bar code by scanning one of the bar codes below and then scanning the Save bar code in Save or Discard Settings (page 4-6). *Default = No Delay*

* No Delay

Short Delay (500 ms)

Medium Delay (1,000 ms)

Long Delay (1,500 ms)

User Specified Good Read Delay

If the bar codes available in section titled “Good Read Delay” are insufficient, you can set the amount of time before the imager can read another bar code using the **User-Specified Good Read Delay** bar code below. *Default = Range: Minimum 0 milliseconds / Maximum 30,000 milliseconds.*

Scan the **User-Specified Good Read Delay** bar code, then scan up to 5 digits in a row using the number symbols on the Symbols 0 – 9 (page 4-83) page at the end of this section, then scan **Save**. If you make an error while scanning the digits (before scanning Save), scan the Discard bar code scan the User-Specified Good Read Delay bar code, scan the correct digits, and the Save bar code again.

Reread Delay

Scan one of the **Reread Delay** bar codes below to set the time period before the imager can read the same bar code a second time.

Setting a reread delay may protect against accidental rereads of the same bar code. Use shorter delays in applications where repetitive bar code scanning is required. *Default = Medium (750 ms).*

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the desired value.

Short (500 ms)

* Medium (750 ms)

Long (1000 ms)

Extra Long (2000 ms

User Specified Reread Delay

If the bar codes available in section titled **Reread Delay** are insufficient, you can set the amount of time before the imager can read the same bar code using the **User-Specified Reread Delay** bar code. *Default = Range: Minimum 0 ms / Maximum 30,000 milliseconds.*

Scan the **User-Specified Reread Delay** bar code below , then scan up to 5 digits in a row using the number symbols on the Symbols 0 – 9 (page 4-83) page at the end of this section, then scan the Save bar code in Save or Discard Settings (page 4-6). If you make an error while scanning the digits (before scanning Save), scan the Discard bar code, then scan the User-Specified Reread Delay bar code, scan the correct digits, and then scan the Save bar code again.

LED Power Level

Scan one of the bar codes to set LED and aimer brightness. *Default = LED Power Level High (100%)*

- Off is used when no illumination is needed.
- Low is used if low illumination is sufficient.
- High (the default) is the brightest setting.
- Minimum is the minimum power setting with good read quality.

LED Power Level Low (50%)

* LED Power Level High (100%)

LED Power Level Off

LED Power Level Minimum (30%)

If you have an aimer delay programmed (See Aimer Delay on page 4-11), the aimer will be at 100% power during the delay, regardless of the LED Power Level.

Note: When the imager LED Power Level is set to Off, both the aimer and illumination lights turn off, which may make it difficult to scan bar codes in low light. Adjust the LED Power Level by first moving the mobile device to a brightly lit area and then scan either the Low or the High bar code. Scan the Save bar code in Save or Discard Settings *(page 4-6).*

Aimer Delay

If the default aimer delay time is insufficient, scan one of the bar codes below to enable enough time to aim the imager at a bar code before the LEDs turn on.

200 milliseconds

* Off (No delay)

400 milliseconds

During the delay time, the aiming light appears but the LEDs won't turn on until the delay timer expires.

Scan the Save bar code in Save or Discard Settings (page 4-6).

User-Specified Aimer Delay

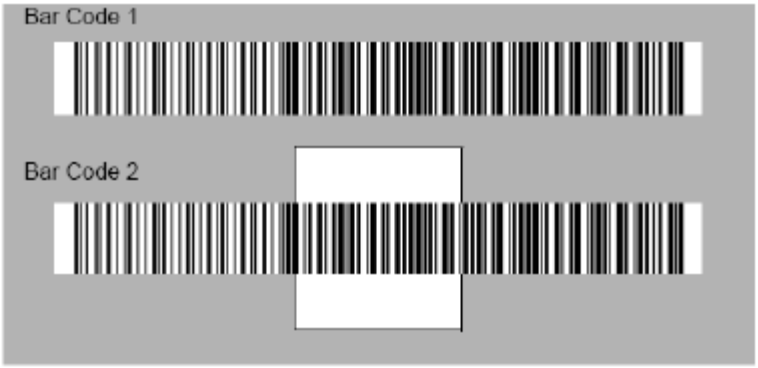
If the bar codes available in section titled "Aimer Delay" are insufficient, you can set the amount of time to use to aim the imager at a bar code before the LEDs turn on. *Default = Off (No Delay) / Range: Minimum 0 ms / Maximum 4,000 milliseconds*

Scan the **User-Specified Aimer Delay** bar code below, then scan up to 4 digits in a row using the number symbols on Symbols 0 – 9 (page 4-83) at the end of this section, then scan **Save** on the same page. If you make an error while scanning the digits (before scanning Save), scan the **Discard** bar code, scan the **User-Specified Aimer Delay** bar code, scan the correct digits, and then scan the **Save** bar code again.

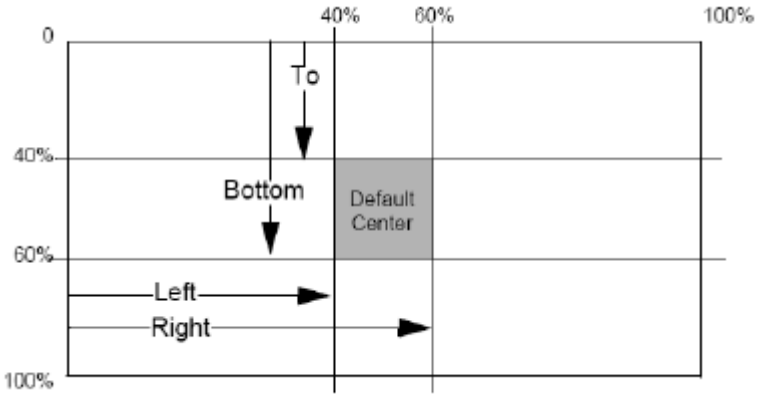
Centering Scan Window

Use Centering to narrow the imager's field of view to make sure the imager reads only those bar codes intended by the user.

In the example below, the gray area is the full imager field of view and the white area is the centering window. Bar code 1 will not be read, while Bar code 2 will be.



The default centering window is a 128x96 pixel area (640x480 default image size) in the center of the imager's field of view. The following diagram illustrates the default top, bottom, left, and right pixel positions, measured from the top and the left side of the imager's field of view.



If a bar code is not within the predefined window, it will not be decoded or output by the imager.

If centering is enabled, the imager only reads codes that intersect the centering window specified by the user scanning the Top, Bottom, Left, or Right bar codes that follow.

Centering On

* Centering Off

Scan **Centering Off** to turn the scan window centering option off. Scan the Save bar code in Save or Discard Settings (page 4-6).

Scan **Centering On**, then scan one of the following bar codes to change the top, bottom, left, or right of the centering window.

Note: The default percent value for Top and Left is 40%, the default percent value for Bottom and Right is 60%.

Top of Centering Window

Bottom of Centering Window

Left of Centering Window

Right of Centering Window

Scan the percent to be used to shift the centering window by scanning 2 digits in a row using the number symbols on Symbols 0 – 9 (page 4-83) page at the end of this section, and scan **Save** on the same page. If you make an error while scanning the digits (before scanning Save), scan the Discard bar code, scan the **Centering On** bar code, scan the top, bottom, left or right bar codes, scan the correct digits, and then scan the Save bar code again.

Print Weight

Print Weight is used to adjust the way the imager reads Matrix 2 of 5 (page 4-32) symbols. If an imager will be seeing consistently heavily printed Matrix symbols, then a print weight of 6 may improve the reading performance. For consistently light printing, a print weight of 2 may help.

To set a different print weight value than the default of 4, begin by scanning the **Set Print Weight** bar code

Set Print Weight

* Default Print Weight 4

Next, scan numeric bar codes that correspond to the desired print weight value using the Save bar code in Save or Discard Settings (page 4-6) at the end of this section. Single digit numbers must have a leading zero e.g., scan “0” and “3” to assign the value of 3 to this option.

If you wish to change the print weight number selection, before scanning the **Save** bar code, scan the Discard bar code on the Symbols 0-9 page. Scan the Save bar code on the same page when you have finished setting the desired print weight numeric value.

Working Orientation

Some bar codes are direction sensitive. For example, Kix (Netherlands) Post (page 4-73) can misread when scanned sideways or upside down.

Scan one of the **orientation** bar codes below, then scan the Save bar code in Save or Discard Settings (page 4-6).

* Upright

Upside Down

Rotate Clockwise 90°

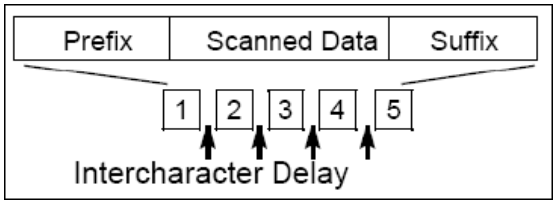
Rotate Counterclockwise 90°

Intercharacter, Interfunction and Intermessage Delay

Some mobile devices drop information (characters) if data comes through too quickly. Intercharacter, interfunction, and intermessage delays slow the transmission of data, increasing data integrity. Each delay is composed of a 5 millisecond step. The imager can be programmed up to 99 steps (of 5 ms each) for a range between 0 and 495 ms.

Intercharacter Delay

Note: Intercharacter delays are not supported in USB serial emulation.



An intercharacter delay of up to 495 milliseconds may be placed between the transmission of each character of scanned data. The imager can be programmed up to 99 steps (of 5 ms each) for a range between 0 and 495 ms.

Scan the **Set an Intercharacter Delay** bar code below, then set the steps by scanning up to 2 digits in a row using the number symbols on Symbols 0 – 9 (page 4-83) at the end of this section, and scan Save.

If you make an error while scanning the digits (before scanning Save), scan the Discard bar code, scan the Set an Intercharacter Delay bar code, scan the correct digits, and then scan the Save bar code again. *Default = 0 ms / Range: Min: 0 ms / Max: 495 ms..*

To remove the delay, scan the Set an Intercharacter Delay bar code, then scan a zero using the number symbols on Symbols 0 – 9 (page 4-83) at the end of this section, and scan Save.

User-Specified Intercharacter Delay

An intercharacter delay of up to 495 milliseconds (ms) may be placed after the transmission of a particular character of scanned data. The imager can be programmed up to 99 steps (of 5 ms each) for a range between 0 and 495 ms. *Default = 0 ms / Range: Min: 0 ms / Max: 495 ms.*

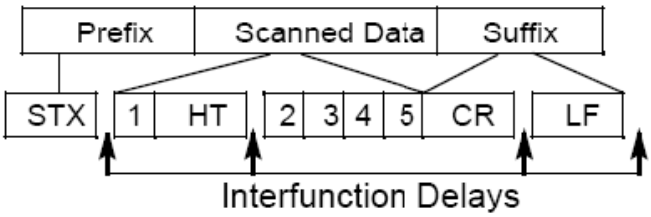
Scan the **Delay Length** bar code below, then set the steps by scanning up to 2 digits in a row using the symbols on Symbols 0 – 9 (page 4-83) at the end of this section, and scan Save.

If you make an error while scanning the digits (before scanning Save), scan the Discard bar code, scan the Delay Length bar code, scan the correct digits, and then scan the Save bar code again.

Next, scan the **Character to Trigger Delay** bar code below, then the 2-digit hex value for the ASCII character that will trigger the delay. Two digit hex values are listed in the ASCII Conversion Chart (Code Page 1252) (page 4-84)at the end of this section.

To remove an Intercharacter delay, scan the Delay Length bar code, then scan a zero using the number symbols on Symbols 0 – 9 (page 4-83) at the end of this section, and scan Save.

Interfunction Delay



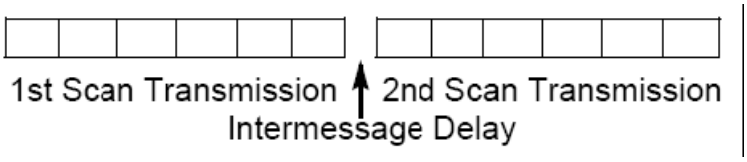
An interfunction delay of up to 495 milliseconds (ms) may be placed between the transmission of each segment of the message string. The imager can be programmed up to 99 steps (of 5 ms each) for a range between 0 and 495 ms. *Default = 0 ms / Range: Min: 0 ms / Max: 495 ms.*

Scan the Interfunction Delay bar code below, then set the steps by scanning up to 2 digits in a row using the symbols on the Symbols 0 – 9 (page 4-83) at the end of this section, and scan Save.

If you make an error while scanning the digits (before scanning Save), scan the Discard bar code, scan the Interfunction Delay bar code, scan the correct digits, and then scan the Save bar code again.

To remove an Interfunction delay, scan the Interfunction Delay bar code, then scan a zero using the number symbols on the Symbols 0 – 9 (page 4-83) at the end of this section, and scan Save.

Intermessage Delay



An intermessage delay of up to 495 milliseconds (ms)may be placed between the transmission of each scan transmission. The imager can be programmed up to 99 steps (of 5 ms each) for a range between 0 and 495 ms. *Default = 0 ms / Range: Min: 0 ms / Max: 495 ms.*

Scan the Intermessage Delay bar code below, then set the steps by scanning up to 2 digits in a row using the symbols on theSymbols 0 – 9 (page 4-83) at the end of this section, and scan Save.

If you make an error while scanning the digits (before scanning Save), scan the Discard bar code, scan the Interfunction Delay bar code, scan the correct digits, and then scan the Save bar code again.

To remove an Intermessage delay, scan the Intermessage Delay bar code, then scan a zero using the number symbols on theSymbols 0 – 9 (page 4-83) at the end of this section, and scan Save.

Imager Parameters – Symbology Specific

All Symbologies On / Off

Scan the **All Symbologies On** bar code when you want the ability to decode all the symbologies available for the decoding engine installed in the mobile device.

Scan the **All Symbologies Off** bar code when you want to select individual symbologies. Scan the specific symbology “On” bar code for each symbology desired and again for each parameter setting desired.

Note: Scan the Save bar code in Save or Discard Settings (page 4-6) after each parameter change.

All Symbologies On

All Symbologies Off

Note: All Postal Code symbologies default to “Off.” For best performance when reading a postal symbology, all other postal symbologies should be disabled.

Codabar

Scan the bar code below to set all Codabar parameters to their default value.

Scan the Save bar code in Save or Discard Settings (page 4-6) after any change.

Codabar Off

* Codabar On

Codabar Start/Stop Characters

Start/Stop characters identify the leading and trailing ends of the bar code. Scan the Save bar code in Save or Discard Settings (page 4-6) after any change.

Transmit

* Don’t Transmi

Codabar Check Character

Scan the **No Check Character** bar code below to have the imager read and transmit bar code data with or without a Modulo 16 check character.

Scan the **Validate and Transmit** bar code below to have the imager only read Codabar bar codes printed with a check character, and will transmit this character at the end of the scanned data.

Scan the **Validate, but Don't Transmit** bar code below to have the imager only read Codabar bar codes printed with a check character, and not transmit the check character with the scanned data.

Codabar Concatenation

When enabled, the imager strips start and stop characters (if they are the same) from two messages.

For example, two bar codes are scanned, one has a “D” character as a Start character. The other one has a “D” as a Stop character. The two bar codes are concatenated into one bar code with the “D” characters omitted.

Scan the **Require** bar code below to prevent the imager from decoding a single “D” Codabar symbol without it’s expected “D” companion. This setting has no effect on Codabar symbols without Stop/Start D characters.

* On 

Off 

Scan the Save bar code in Save or Discard Settings (page 4-6) after any change.

Codabar Message Length

This option decodes a code type within a specified minimum and maximum range. Valid minimum and maximum lengths are between 2 and 60 characters.

To set **Codabar Minimum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired minimum message value using Symbols 0 – 9 (page 4-83) at the end of this section. *Default = 4.*

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard bar code on Save or Discard Settings (page 4-6). Scan the Save bar code when you have finished setting the correct minimum message numeric value.

To set **Codabar Maximum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired maximum message value using Symbols 0 – 9 (page 4-83) at the end of this section. *Maximum = 60.*

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard bar code on Save or Discard Settings (page 4-6). Scan the Save bar code when you have finished setting the correct maximum message numeric value.

Code 39

Scan the bar code below to set all Code 39 parameters to their default value.

Code 39 Off

* Code 39 On

Scan the Save bar code in Save or Discard Settings (page 4-6) after any change.

Code 39 Start/Stop Characters

Start/Stop characters identify the leading and trailing ends of the bar code. Scan the Save bar code in Save or Discard Settings (page 4-6) after any change. *Default = Don't Transmit*.

Transmit Start/Stop Characters

* Don't transmit Start/Stop Characters

Code 39 Check Character

Scan the **No Check Character** bar code below to set the imager to read and transmit bar code data with or without a check character. *Default = No Check Character*

Scan the **Validate and Transmit** bar code below to set the imager to only read Code 39 bar codes printed with a check character, and transmit this character at the end of the scanned data.

Scan the **Validate but Don't Transmit** bar code below to set the imager to only read Code 39 bar codes printed with a check character, and not transmit the check character with the scanned data.

Code 39 Message Length

This option decodes a code type within a specified minimum and maximum range. Valid minimum and maximum lengths are between 0 and 48 characters. *Default = 0.*

To set **Code 39 Minimum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired minimum message value using Symbols 0 – 9 (page 4-83) at the end of this section.

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard bar code in Save or Discard Settings (page 4-6). Scan the Save bar code when you have finished setting the correct minimum message numeric value.

To set **Code 39 Maximum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired maximum message value using Symbols 0 – 9 (page 4-83). *Default = 48.*

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard bar code in Save or Discard Settings (page 4-6). Scan the Save bar code when you have finished setting the correct maximum message numeric value.

Code 39 Append

This option stores several Code 39 bar codes before transmitting. When this function is enabled (On), the imager stores Code 39 bar codes that start with a space (excluding the start and stop symbols), but does not immediately transmit the data. The data is stored in the order in which the bar codes were read, deleting the first space from each. The imager transmits the appended data when it reads a Code 39 bar code that starts with a character other than a space. *Default = Off.*

* Off

On

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the desired value.

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. *Default = Off.*

Note: Trioptic Code (page 4-61) must be turned off while scanning Code 32 Pharmaceutical codes.

* Off

On

Scan the Save bar code in Save or Discard Settings (page 4-6) after any change..

Code 39 Full ASCII

When enabled, the ASCII character set assigns a code to letter, punctuation marks, numerals, and most control keystrokes on the keyboard. *Default = On*.

The first 32 codes are non-printable and are assigned to keyboard control characters such as [Backspace] and [Return or Enter]. The other 96 are called printable codes because all but [Space] and [Delete] produce visible characters.

Code 39 Full ASCII interprets the bar code special character ($ + % /) preceding a Code 39 character and assigns an ASCII character value to the pair. For example, $V is decoded as the ASCII character SYN, and /C is decoded as the ASCII character #.

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

See the table titledASCII Character Pairs (page 4-87) at the end of this section.

Set this parameter by scanning either of the bar codes shown below.

Off

* On

Scan the Save bar code in Save or Discard Settings (page 4-6) after any change..

Code 39 Code Page

Note: Not supported in this release.

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 host program is expecting. *Default= 2 (ISO 2022 – Automatic National Replacement Characters).*

Interleaved 2 of 5

Scan the bar code below to set all Interleaved 2 of 5 parameters to their default value.

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting each desired value.

Interleaved 2 of 5 Off

* Interleaved 2 of 5 On

Check Digit

Scan the **No Check Digit** bar code below to set the imager to read and transmit bar code data with or without a check digit.

Scan the **Validate and Transmit** bar code below to set the imager to only read Interleaved 2 of 5 bar codes printed with a check digit, and transmit this digit at the end of the scanned data.

Scan the **Validate but Don't Transmit** bar code below to set the imager to only read Interleaved 2 of 5 bar codes printed with a check digit, and not transmit the check digit with the scanned data.

Scan the Save bar code in Save or Discard Settings (page 4-6).

Interleaved 2 of 5 Message Length

This option decodes a code type within a specified minimum and maximum range. Valid minimum and maximum lengths are between 2 and 80 characters.

To set **Interleaved 2 of 5 Minimum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired minimum message value using Symbols 0 – 9 (page 4-83). *Default = 4*.

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard bar code in Save or Discard Settings (page 4-6). Scan the Save bar code when you have finished setting the correct minimum message numeric value.

To set **Interleaved 2 of 5 Maximum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired maximum message value using Symbols 0 – 9 (page 4-83). *Default = 80.*

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard bar code in Save or Discard Settings (page 4-6). Scan the Save bar code when you have finished setting the correct maximum message numeric value.

Code 93

Scan the bar code below to set all Code 93 parameters to their default value.

Scan the Save bar code when you have finished setting each desired value.

Code 93 Off

* Code 93 On

Code 93 Message Length

This option decodes a code type within a specified minimum and maximum range. Valid minimum and maximum lengths are between 0 and 80 characters. *Default =0.*

To set **Code 93 Minimum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired minimum message value using the Symbols 0 – 9 (page 4-83). *Default =0.*

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard bar code in Save or Discard Settings (page 4-6) Scan the Save bar code when you have finished setting the correct minimum message numeric value.

To set **Code 93 Maximum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired maximum message value using Symbols 0 – 9 (page 4-83). *Default = 80.*

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard bar code in Save or Discard Settings (page 4-6). Scan the Save bar code when you have finished setting the correct maximum message numeric value.

Code 93 Code Page

Note: Not supported in this release.

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 host program is expecting. *Default = 2 (ISO 2022 – Automatic National Replacement Characters)*

Straight 2 of 5 Industrial

Scan the bar code below to set all Straight 2 of 5 Industrial parameters to their default value.

* Straight 2 of 5 Industrial Off 

Straight 2 of 5 Industrial On 

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting each desired value.

Straight 2 of 5 Industrial Message Length

This option decodes a code type within a specified minimum and maximum range. Valid minimum and maximum lengths are between 1 and 48 characters.

To set **Straight 2 of 5 Industrial Minimum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired minimum message value using Symbols 0 – 9 (page 4-83). *Default = 4.*

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard bar code on the Keypad Alphanumeric Symbols page. Scan the Save bar code when you have finished setting the correct minimum message numeric value.

To set **Straight 2 of 5 Industrial Maximum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired maximum message value using Symbols 0 – 9 (page 4-83). *Default = 48.*

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard bar code on the Keypad Alphanumeric Symbols page. Scan the Save bar code when you have finished setting the correct maximum message numeric value.

Straight 2 of 5 IATA

Scan the bar code below to set all Straight 2 of 5 IATA parameters to their default value.

* Straight 2 of 5 IATA Off 

Straight 2 of 5 IATA On 

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting each desired value.

Straight 2 of 5 IATA Message Length

This option decodes a code type within a specified minimum and maximum range. Valid minimum and maximum lengths are between 1 and 48 characters.

To set **Straight 2 of 5 IATA Minimum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired minimum message value using Symbols 0 – 9 (page 4-83). *Default = 4.*

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard bar code on the Keypad Alphanumeric Symbols page. Scan the Save bar code when you have finished setting the correct minimum message numeric value.

To set **Straight 2 of 5 IATA Maximum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired maximum message value using Symbols 0 – 9 (page 4-83). *Default = 48.*

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard bar code on the Keypad Alphanumeric Symbols page. Scan the Save bar code when you have finished setting the correct maximum message numeric value.

Matrix 2 of 5

Scan the bar code below to set all Matrix 2 of 5 parameters to their default value.

* Matrix 2 of 5 Off

Matrix 2 of 5 On

Scan the Save bar code in Save or Discard Settings (page 4-6) after any change.

Matrix 2 of 5 Message Length

This option decodes a code type within a specified minimum and maximum range. Valid minimum lengths and maximum lengths are between 1 and 80 characters.

To set **Matrix 2 of 5 Minimum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired minimum message value using Symbols 0 – 9 (page 4-83). *Default = 4.*

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard bar code on the Keypad Alphanumeric Symbols page. Scan the Save bar code when you have finished setting the correct minimum message numeric value.

To set **Matrix 2 of 5 Maximum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired maximum message value using Symbols 0 – 9 (page 4-83). *Default = 80.*

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard bar code on the Keypad Alphanumeric Symbols page. Scan the Save bar code when you have finished setting the correct maximum message numeric value.

Code 11

Scan the bar code below to set all Code 11 parameters to their default value.

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting each desired value.

* Code 11 Off

Code 11 On

Code 11 Check Digits Required

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting each desired value.

One Check Digit

* Two Check Digits

Code 11 Message Length

This option decodes a code type within a specified minimum and maximum range. Valid minimum lengths and maximum lengths are between 1 and 80 characters. *Default = 4.*

To set **Code 11 Minimum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired minimum message value using Symbols 0 – 9 (page 4-83).

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard bar code in Save or Discard Settings (page 4-6). Scan the Save bar code when you have finished setting the correct minimum message numeric value.

To set **Code 11 Maximum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired maximum message value using Symbols 0 – 9 (page 4-83). *Default = 80*.

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard bar code in Save or Discard Settings (page 4-6). Scan the Save bar code when you have finished setting the correct maximum message numeric value.

Code 128

Scan the bar code below to set all Code 128 parameters to their default value.

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting each desired value.

Code 128 Off

* Code 128 On

ISBT 128 Concatenation

Scan one of the bar codes below to turn **ISBT 128 Concatenation** on or off.

* ISBT 128 Concatenation Off

ISBT 128 Concatenation On

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the desired value.

ISBT = International Society of Blood Transfusion

Code 128 Message Length

This option decodes a code type within a specified minimum and maximum range. Valid minimum lengths and maximum lengths are between 0 and 80 characters. *Default = 0.*

To set **Code 128 Minimum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired minimum message value using Symbols 0 – 9 (page 4-83).

If you wish to change your message length number selection, before scanning the Save bar code, scan the Discard bar code on the Keypad Alphanumeric Symbols page. Scan the Save bar code when you have finished setting the correct minimum message numeric value.

To set **Code 128 Maximum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired maximum message value using Symbols 0 – 9 (page 4-83). *Default = 80*.

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard bar code in Save or Discard Settings (page 4-6). Scan the Save bar code when you have finished setting the correct maximum message numeric value.

Code 128 Code Page

Note: Not supported in this release.

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 host program is expecting. *Default = 2 (ISO 2022 Automatic National Replacement Characters).*

Telepen

Scan the bar code below to set all Telepen parameters to their default value.

* Telepen Off 

Telepen On 

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting each desired value.

Telepen Output

AIM Telepen Output – The imager reads symbols with start/stop pattern 1 and decodes them as standard full ASCII.

Original Telepen Output – The imager reads symbols with start/stop pattern 1 and decodes them as compressed numeric with optional full ASCII.

* AIM Telepen Output 

Original Telepen Output 

Telepen Message Length

This option .decodes a code type within a specified minimum and maximum range. Valid minimum lengths and maximum lengths are between 1 and 60 characters.

To set **Telepen Minimum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired minimum message value using Symbols 0 – 9 (page 4-83). *Default = 1*.

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard bar code on the Keypad Alphanumeric Symbols page. Scan the Save bar code when you have finished setting the correct minimum message numeric value.

To set **Telepen Maximum Message Length,** first scan this bar code:

Next, scan numeric bar codes that correspond to the desired maximum message value using Symbols 0 – 9 (page 4-83). *Default = 60*.

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard bar code in Save or Discard Settings (page 4-6). Scan the Save bar code when you have finished setting the correct maximum message numeric value

UPC-A

Scan the bar code below to set all UPC-A parameters to their default value.

UPC-A Off

* UPC-A On

Scan the Save bar code in Save or Discard Settings (page 4-6)when you have finished setting each desired value.

UPC-A Check Digit

Scan the **UPC-A Check Digit Off** bar code to disable transmission of the check digit at the end of the scanned data. *Default = UPC-A Check Digit On*.

UPC-A Check Digit Off

* UPC-A Check Digit On

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the desired value.

UPC-A Number System

Scan the **UPC-A Number System Off** bar code to disable transmission of the numeric system digit at the beginning of the scanned data. *Default = UPC-A Number System On.*

UPC-A Number System Off

* UPC-A Number System On

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the desired value.

UPC-A Addenda

Scan the **2-Digit Addenda On** bar code below to enable the addition of 2 digits to the end of all scanned UPC-A data. *Default = 2 Digit Addenda Off.*

* 2 Digit Addenda Off

2 Digit Addenda On

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the desired value.

Scan the **5 Digit Addenda On** bar code below to enable the addition of 5 digits to the end of all scanned UPC-A data. *Default = 5 Digit Addenda Off.*

* 5 Digit Addenda Off

5 Digit Addenda On

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the desired value.

See Also: UPC-A Addenda Required and UPC-A Addenda Separator below.

UPC-A Addenda Required

Scan the **UPC-A Addenda Required** bar code below to enable the imager to read only UPC-A bar codes that have addenda. *Default = UPC-A Addenda Not Required.*

Scan the Save bar code in Save or Discard Settings (page 4-6).

Next enable a 2 or 5 digit addenda using a programming bar code in the previous section titled UPC-A Addenda.

* UPC-A Addenda Not Required

UPC-A Addenda Required

See Also: UPC-A Addenda and UPC-A Addenda Separator.

UPC-A Addenda Separator

Scan the **UPC-A Addenda Separator Off** bar code to disable the imager adding a space between the scanned data from the bar code and the data from the addenda. *Default = UPC-A Addenda Separator On*.

UPC-A Addenda Separator Off

* UPC-A Addenda Separator On

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the desired value.

See Also: UPC-A Addenda and UPC-A Addenda Required.

UPC-A / EAN-13 with Extended Coupon Code

Scan the Off bar code below to disable UPC-A and EAN-13 with Extended Coupon Code. *Default = UPC-A / EAN-13 with Extended Coupon Code On*.

Extended Coupon Code Off

* Extended Coupon Code On

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the desired value.

UPC-E0

Scan the bar code below to set all UPC-E0 parameters to their default value.

UPC-E0 Off 

* UPC-E0 On 

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting each desired value.

UPC-E0 Expand

Scan the **UPC-E0 Expand On** bar code to enable expanding the UPC-E code to the 12 digit UPC-A format. *Default = UPC-E0 Expand Off.*

* UPC-E0 Expand Off 

UPC-E0 Expand On 

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting each desired value.

UPC-E0 Addenda

Scan the **UPC-E0 2 Digit Addenda On** bar code to enable the addition of 2 digits to the end of all scanned UPC-E data. *Default = 2 Digit Addenda Off.*

Scan the Save bar code in Save or Discard Settings (page 4-6).

* UPC-E0 2 Digit Addenda Off

UPC-E0 2 Digit Addenda On

Scan the **UPC-E0 5 Digit Addenda On** bar code to enable the addition of 5 digits to the end of all scanned UPC-E data. *Default = 5 Digit Addenda Off.*

* UPC-E0 5 Digit Addenda Off

UPC-E0 5 Digit Addenda On

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting each desired value.

See Also: UPC-E0 Addenda Required and UPC-E0 Addenda Separator.

UPC-E0 Addenda Required

Scan the **UPC-E0 Addenda Required** bar code below to enable the imager to read only UPC-E bar codes that have addenda. Scan the Save bar code in Save or Discard Settings (page 4-6). *Default = UPC-E0 Addenda Not Required*

* UPC-E0 Addenda Not Required

UPC-E0 Addenda Required

Next enable a 2 or 5 digit addenda using a programming bar code in the section titledUPC-E0 Addenda (page 4-44).

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the desired value.

See Also: UPC-E0 Addenda and UPC-E0 Addenda Separator.

UPC-E0 Addenda Separator

Scan the **UPC-E0 Addenda Separator Off** bar code below to disable the imager adding a space between the scanned data from the bar code and the data from the addenda. *Default = UPC-E0 Addenda Separator On*.

UPC-E0 Addenda Separator Off

* UPC-E0 Addenda Separator On

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the desired value.

See Also: UPC-E0 Addenda and UPC-E0 Addenda Required.

UPC-E0 Check Digit

Scan the **UPC-E0 Check Digit Off** bar code below to disable transmission of the check digit at the end of the scanned data. *Default = UPC-E0 Check Digit On*

UPC-E0 Check Digit Off

* UPC-E0 Check Digit On

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the desired value.

UPC-E0 Number System

Scan the **UPC-E0 Number System Off** bar code to disable transmission of the numeric system digit at the beginning of the scanned data.

UPC-E0 Number System Off

* UPC-E0 Number System On

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the desired value.

UPC-E1

To read UPC bar codes that lead with the 0 number system code, enable UPC-E0. See previous section titledUPC-E0 (page 4-43).

To read UPC codes that lead with the 1 number system code, scan the **UPC-E1 On** bar code. *Default = UPC-E1 Off.*

* UPC-E1 Off

UPC-E1 On

Scan the Save bar code in Save or Discard Settings (page 4-6)when you have finished setting the desired value.

EAN / JAN-13

Scan the bar code below to set all EAN/JAN-13 parameters to their default value.

Note: Enable or disable EAN13 with Extended Coupon Code using the bar codes in section titled UPC-A / EAN-13 with Extended Coupon Code (page 4-42).

EAN/JAN-13 Off

* EAN/JAN-13 On

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting each desired value.

EAN / JAN-13 Addenda

Scan the **2 Digit Addenda On** bar code to enable the addition of 2 digits to the end of all scanned EAN/JAN-13 data. *Default = 2 Digit Addenda Off.*

Scan the Save bar code in Save or Discard Settings (page 4-6).

* 2 Digit Addenda Off

2 Digit Addenda On

Scan the **5 Digit Addenda On** bar code to enable the addition of 5 digits to the end of all scanned EAN/JAN-13 data. *Default = 5 Digit Addenda Off.*

* 5 Digit Addenda Off

5 Digit Addenda On

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the desired value.

See Also: EAN/JAN-13 Addenda Required and EAN/JAN-13 Addenda Separator.

EAN / JAN-13 Addenda Required

Scan the EAN / JAN-13 Addenda Required bar code to enable the imager to read only EAN/JAN-13 bar codes that have addenda. *Default = EAN / JAN-13 Addenda Not Required*.

Scan the Save bar code.

Next enable a 2 or 5 digit addenda using a programming bar code in the section titled EAN / JAN-13 Addenda (page 4-48).

* EAN / JAN-13 Addenda Not Required

EAN / JAN-13 Addenda Required

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the desired value.

See Also: EAN/JAN-13 Addenda and EAN/JAN-13 Addenda Separator.

EAN / JAN-13 Addenda Separator

Scan the **EAN / JAN-13 Addenda Separator Off** bar code to disable the imager adding a space between the scanned data from the bar code and the data from the addenda. *Default = EAN / JAN-13 Addenda Separator On.*

EAN / JAN-13 Addenda Separator Off

* EAN / JAN-13 Addenda Separator On

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the desired value.

See Also: EAN/JAN-13 Addenda and EAN/JAN-13 Addenda Required.

EAN / JAN-13 Check Digit

Scan the **EAN / JAN-13 Check Digit Off** bar code to disable transmission of the check digit at the end of the scanned data. *Default = EAN / JAN-13 Check Digit On.*

EAN / JAN-13 Check Digit Off

* EAN / JAN-13 Check Digit On

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the desired value.

ISBN Translate

Scan the **ISBN Translate On** bar code to translate EAN-13 Bookland symbols into their equivalent ISBN (International Standard Book Number) number format.

* ISBN Translate Off

ISBN Translate On

Scan the Save bar code when you have finished setting the desired value.

EAN / JAN-8

Note: Enable or disable EAN-13 with Extended Coupon Code using the bar codes in section titled UPC-A / EAN-13 with Extended Coupon Code (page 4-42).

Scan the bar code below to set all EAN/JAN-8 parameters to their default value.

EAN/JAN-8 Off

* EAN/JAN-8 On

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting each desired value.

EAN / JAN-8 Addenda

Scan the **2 Digit Addenda On** bar code to enable the addition of 2 digits to the end of all scanned EAN/JAN-8 data.

Scan the Save bar code in Save or Discard Settings (page 4-6).

* 2 Digit Addenda Off

2 Digit Addenda On

Scan the **5 Digit Addenda On** bar code to enable the addition of 5 digits to the end of all scanned EAN/JAN-8 data.

Scan the Save bar code in Save or Discard Settings (page 4-6).

* 5 Digit Addenda Off

5 Digit Addenda On

See Also: EAN/JAN-8 Addenda Required and EAN/JAN-8 Addenda Separator.

EAN / JAN-8 Addenda Required

Scan the **EAN / JAN-8 Addenda Required** bar code below to enable the imager to read only EAN/JAN-8 bar codes that have addenda. Scan the **Save** bar code.

Next enable a 2 or 5 digit addenda using a programming bar code in EAN / JAN-8 Addenda (page 4-52).

* EAN / JAN-8 Addenda Not Required

EAN / JAN-8 Addenda Required

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the desired value.

See Also: EAN/JAN-8 Addenda and EAN/JAN-8 Addenda Separator.

EAN / JAN-8 Addenda Separator

Scan the **EAN / JAN-8 Addenda Separator Off** bar code below to disable the imager adding a space between the scanned data from the bar code and the data from the addenda.

Scan the Save bar code in Save or Discard Settings (page 4-6).

*EAN / JAN-8 Addenda Separator Off

* EAN / JAN-8 Addenda Separator On

EAN / JAN-8 Check Digit

Scan the **EAN / JAN-8 Check Digit Off** bar code below to disable transmission of the check digit at the end of the scanned data.

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the desired value.

EAN / JAN-8 Check Digit Off

* EAN / JAN-8 Check Digit On

MSI

Scan the bar code below to set all MSI parameters to their default value.

* MSI Off

MSI On

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the desired value.

MSI Check Character

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the desired value. *Default = Validate Type 10, but Don't Transmit*.

Scan the **Validate Type 10 and Transmit** bar code below to set the imager to only read MSI bar codes printed with the specified type check character, and transmit the check character at the end of the scanned data.

Scan the **Validate Type 10 but Don’t Transmit** bar code below to set the imager to only read MSI bar codes printed with the specified type check character, but not transmit the check character with the scanned data.

MSI Message Length

This option decodes a code type within a specified minimum and maximum range. Valid minimum lengths and maximum lengths are between 4 and 48 characters.

To set **MSI Minimum Message Length,** first scan this bar code:

Next, scan numeric bar codes that correspond to the desired minimum message value using Symbols 0 – 9 (page 4-83). *Default = 4.*

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard bar code in Save or Discard Settings (page 4-6). Scan the Save bar code when you have finished setting the correct minimum message numeric value.

To set **MSI Maximum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired maximum message value using Symbols 0 – 9 (page 4-83). *Default = 48.*

If you wish to change your message length number selection, before scanning the Save bar code, scan the Discard bar code in Save or Discard Settings (page 4-6). Scan the **Save** bar code when you have finished setting the correct maximum message numeric value.

Plessey Code

Scan the bar code below to set all Plessey Code parameters to their default value.

* Plessey Code Off 

Plessey Code On 

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the desired value.

Plessey Message Length

This option decodes a code type within a specified minimum and maximum range. Valid minimum lengths and maximum lengths are between 4 and 48 characters.

To set **Plessey Code Minimum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired minimum message value using Symbols 0 – 9 (page 4-83). *Default = 4.*

If you wish to change your message length number selection, before scanning the Save bar code, scan the Discard bar code. Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the correct minimum message numeric value.

To set **Plessey Code Maximum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired maximum message value using Symbols 0 – 9 (page 4-83). *Default = 48.*

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard bar code on the Keypad Alphanumeric Symbols page. Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the correct maximum message numeric value.

GS1 DataBar (RSS)

Default =

- *GS1 DataBar Omnidirectional (RSS-14) = On*
- *GS1 DataBar Limited (RSS Limited) = On*
- *GS1 DataBar Expanded (RSS Expanded) = On*

GS1 DataBar Omnidirectional (RSS-14)

Scan the bar code below to set all GS1 DataBar Omnidirectional (RSS-14) parameters to their default value.

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the desired value.

GS1 DataBar Omnidirectional (RSS-14) Off 

* GS1 DataBar Omnidirectional (RSS-14) On 

GS1 DataBar Limited (RSS Limited)

Scan the bar code below to set all GS1 DataBar Limited (RSS Limited) parameters to their default value.

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the desired value.

GS1 DataBar Limited (RSS Limited) Off 

* GS1 DataBar Limited (RSS Limited) On 

GS1 DataBar Expanded (RSS Expanded)

Scan the bar code below to set all GS1 DataBar Expanded (RSS Expanded) parameters to their default value.

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the desired value.

GS1 DataBar Expanded (RSS Expanded) Off

* GS1 DataBar Expanded (RSS Expanded) On

GS1 DataBar Expanded (RSS Expanded) Message Length

This option decodes a code type within a specified minimum and maximum range. Valid minimum lengths and maximum lengths are between 4 and 74 characters.

To set **GS1 DataBar Expanded (RSS Expanded) Message Minimum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired minimum message value using Symbols 0 – 9 (page 4-83). If you wish to change your message length number selection, before scanning the Save bar code, scan the Discard bar code. Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the correct minimum message numeric value. *Default = 4.*

To set **GS1 DataBar Expanded (RSS Expanded) Message Maximum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired maximum message value using Symbols 0 – 9 (page 4-83). If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard bar code. Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the correct maximum message numeric value. *Default = 74.*

PosiCode

Note: PosiCode A and B must be On to read any of the PosiCode symbologies.

Scan the bar code below to set all PosiCode parameters to their default value.

PosiCode A and B Off

* PosiCode A and B On

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting each desired value.

PosiCode A and B

Note: PosiCode A and B must be On to read any of the PosiCode symbologies.

A and B On (No Limited)

A and B and Limited A On (Limited B Off)

* A and B and Limited B On (Limited A Off)

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the desired value.

PosiCode Message Length

Note: PosiCode A and B must be On to read any of the PosiCode symbologies.

This option decodes a code type within a specified minimum and maximum range. Valid minimum lengths and maximum lengths are between 2 and 80 characters.

To set **PosiCode Message Minimum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired minimum message value using Symbols 0 – 9 (page 4-83). *Default = 4*.

If you wish to change your message length number selection, before scanning the Save bar code, scan the Discard bar code in Save or Discard Settings (page 4-6). Scan the Save bar code when you have finished setting the correct minimum message numeric value.

To set **PosiCode Message Maximum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired maximum message value using Symbols 0 – 9 (page 4-83). *Default = 48*.

If you wish to change your message length number selection, before scanning the Save bar code, scan the Discard bar code in Save or Discard Settings (page 4-6). Scan the Save bar code when you have finished setting the correct maximum message numeric value.

Trioptic Code

Trioptic Code is used when labelling magnetic storage media.

Note: Trioptic Code must be turned off when scanning Code 32 Pharmaceutical (PARAF) (page 4-24) codes.

* Trioptic Code Off

Trioptic Code On

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the desired value.

Codablock F

Scan the bar code below to set all Codablock F parameters to their default value.

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting each desired value.

* Codablock F Off

Codablock F On

Codablock F Message Length

This option decodes a code type within a specified minimum and maximum range. Valid minimum lengths and maximum lengths are between 1 and 2048 characters. *Default = 1*.

To set **Codablock F Message Minimum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired minimum message value using Symbols 0 – 9 (page 4-83).

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard bar code on the Symbols 0 - 9 page. Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the correct minimum message numeric value.

To set **Codablock F Message Maximum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired maximum message value using Symbols 0 – 9 (page 4-83). *Default = 2048.*

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard bar code in Save or Discard Settings (page 4-6). Scan the Save bar code when you have finished setting the correct maximum message numeric value.

Code 16K

Scan the bar code below to set all Code 16K parameters to their default value.

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting each desired value.

* Code 16K Off

Code 16K On

Code 16K Message Length

This option decodes a code type within a specified minimum and maximum range. Valid minimum lengths and maximum lengths are between 0 and 160 characters. *Default = 1.*

To set **Code 16K Message Minimum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired minimum message value using Symbols 0 – 9 (page 4-83).

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard bar code in Save or Discard Settings (page 4-6). Scan the Save bar code when you have finished setting the correct minimum message numeric value.

To set **Code 16K Maximum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired maximum message value using Symbols 0 – 9 (page 4-83). *Default = 160*.

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard bar code in Save or Discard Settings (page 4-6). Scan the Save bar code when you have finished setting the correct maximum message numeric value.

Code 49

Scan the bar code below to set all Code 49 parameters to their default value.

Code 49 Off

* Code 49 On

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting each desired value.

Code 49 Message Length

This option decodes a code type within a specified minimum and maximum range. Valid minimum lengths and maximum lengths are between 1 and 81 characters. *Default = 1.*

To set **Code 49 Message Minimum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired minimum message value using Symbols 0 – 9 (page 4-83).

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard bar code in Save or Discard Settings (page 4-6). Scan the Save bar code when you have finished setting the correct minimum message numeric value.

To set **Code 49 Maximum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired maximum message value using Symbols 0 – 9 (page 4-83). *Default = 81.*

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard bar code in Save or Discard Settings (page 4-6). Scan the Save bar code when you have finished setting the correct maximum message numeric value.

PDF417

Scan the bar code below to set all PDF417 parameters to their default value.

PDF417 Off

* PDF417 On

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting each desired value.

PDF417 Message Length

This option decodes a code type within a specified minimum and maximum range. Valid minimum lengths and maximum lengths are between 1 and 2750 characters.

To set **PDF417 Message Minimum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired minimum message value using Symbols 0 – 9 (page 4-83). *Default = 1*.

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard the bar code in Save or Discard Settings (page 4-6). Scan the Save bar code when you have finished setting the correct minimum message numeric value.

To set **PDF417 Maximum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired maximum message value using the Save bar code in Save or Discard Settings (page 4-6). *Default = 2750*.

If you wish to change your message length number selection, before scanning the Save bar code, scan the Discard bar code in Save or Discard Settings (page 4-6). Scan the Save bar code when you have finished setting the correct maximum message numeric value.

MicroPDF417

Scan the bar code below to set all MicroPDF417 parameters to their default value.

MicroPDF417 Off

* MicroPDF417 On

Scan the **Save** bar code when you have finished setting each desired value.

MicroPDF417 Message Length

This option decodes a code type within a specified minimum and maximum range. Valid minimum lengths and maximum lengths are between 1 and 366 characters.

To set **MicroPDF417 Message Minimum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired minimum message value using Symbols 0 – 9 (page 4-83). *Default = 1*.

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard bar code in Save or Discard Settings (page 4-6). Scan the Save bar code when you have finished setting the correct minimum message numeric value.

To set **MicroPDF417 Message Maximum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired maximum message value using Symbols 0 – 9 (page 4-83). *Default = 2750*.

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard bar code in Save or Discard Settings (page 4-6). Scan the Save bar code when you have finished setting the correct maximum message numeric value.

EAN-UCC Composite Codes

EAN-UCC Composite symbologies allow for the co-existence of symbologies already in use.

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting each desired value.

* EAN-UCC Composite Codes Off

EAN-UCC Composite Codes On

UPC/EAN Version

Scan the **UPC/EAN Version On** bar code to decode EAN-UCC Composite symbols that have a UPC or EAN linear component.

This does not affect EAN-UCC Composite symbols with a UCC/EAN-128 or GS1 DataBar (RSS) linear component.

* UPC/EAN Version Off

UPC/EAN Version On

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the desired value.

EAN-UCC Composite Code Message Length

This option decodes a code type within a specified minimum and maximum range. Valid minimum lengths and maximum lengths are between 1 and 2435 characters.

To set **EAN-UCC Composite Code Message Minimum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired minimum message value using Symbols 0 – 9 (page 4-83). *Default = 1.*

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard bar code in Save or Discard Settings (page 4-6). Scan the Save bar code when you have finished setting the correct minimum message numeric value.

To set **EAN-UCC Composite Code Message Maximum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired maximum message value using Symbols 0 – 9 (page 4-83). *Default = 2435*.

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard bar code in Save or Discard Settings (page 4-6). Scan the Save bar code when you have finished setting the correct maximum message numeric value.

EAN-UCC Emulation

The imager can automatically format the output from any EAN•UCC data carrier to emulate what would be encoded in an equivalent UCC/EAN-128 or RSS and Composite symbol. *Default = Off*

EAN•UCC data carriers include UPC-A and UPC-E, EAN-13 and EAN-8, ITF-14, UCC/EAN-128, and EAN•UCC GS1 DataBar (RSS) and Composites.

Data from 2D symbols such as Aztec Code, Data Matrix, or QR Code, which encode a leading FNC1, also invoke EAN•UCC emulation.

If **UCC/EAN-128 Emulation** is selected, the AIM Symbology Identifier is reported as “]C1”.

If **GS1 DataBar (RSS) Emulation** is selected, the AIM Symbology Identifier is reported as “]e0.”

Any application that accepts EAN•UCC data can be simplified since it only needs to recognize one data carrier type.

* EAN-UCC Emulation Off

GS1 DataBar (RSS) Emulation

UCC/EAN 128 Emulation

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the desired value.

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.

* TLC39 Off

TLC39 On

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the desired value.

Postal Code Symbologies

Note: For best performance when reading a postal symbology, all other postal symbologies should be turned Off.

If you wish to change your selection, before scanning the **Save** bar code, scan the Discard bar code in Save or Discard Settings (page 4-6). Scan the Save bar code when you have finished.

Postnet

* Postnet Off

Postnet On

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting each desired value.

Postnet Check Digit

Scan the **Transmit Check Digit** bar code to enable transmission of the check digit at the end of the scanned data.

* Don't Transmit Check Digit

Transmit Check Digit

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the desired value.

Planet Code

* Planet Code Off

Planet Code On

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting each desired value.

Planet Code Check Digit

Scan the **Transmit Check Digit** bar code to enable transmission of the check digit at the end of the scanned data.

* Don’t Transmit Check Digit

Transmit Check Digit

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the desired value.

British Post

* British Post Off

British Post On

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the desired value.

Canadian Post

* Canadian Post Off

Canadian Post On

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the desired value.

Kix (Netherlands) Post

Note: Kix code can misread when scanned sideways or upside down.

* Kix Post Off

Kix Post On

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the desired value.

Australian Post

* Australian Post Off

Australian Post On

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the desired value.

Japanese Post

* Japanese Post Off

Japanese Post On

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the desired value.

China Post

Scan the bar code below to set all China Post parameters to their default value.

* China Post Off

China Post On

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting each desired value.

China Post Message Length

This option decodes a code type within a specified minimum and maximum range. Valid minimum lengths and maximum lengths are between 2 and 80 characters.

To set **China Post Minimum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired minimum message value using Symbols 0 – 9 (page 4-83). *Default = 4.*

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard bar code in Save or Discard Settings (page 4-6). Scan the Save bar code when you have finished setting the correct minimum message numeric value.

To set **China Post Maximum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired maximum message value using Symbols 0 – 9 (page 4-83). *Default = 80*.

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard bar code on the Symbols 0 - 9 page. Scan the Save bar code when you have finished setting the correct maximum message numeric value.

Korea Post

Scan the bar code below to set all Korea Post parameters to their default value.

* Korea Post Off 

Korea Post On 

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting each desired value.

Korea Post Message Length

This option decodes a code type within a specified minimum and maximum range. Valid minimum lengths and maximum lengths are between 2 and 80 characters.

To set **Korea Post Minimum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired minimum message value using Symbols 0 – 9 (page 4-83). *Default = 4*.

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard bar code in Save or Discard Settings (page 4-6). Scan the Save bar code when you have finished setting the correct minimum message numeric value.

To set **Korea Post Maximum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired maximum message value using Symbols 0 – 9 (page 4-83). *Default = 80*.

If you wish to change your message length number selection, before scanning the Save bar code, scan the Discard bar code in Save or Discard Settings (page 4-6) Scan the Save bar code when you have finished setting the correct maximum message numeric value.

QR Code

This selection applies to both **QR Code** and **MicroQR Code**.

Scan the bar code below to set all QR Code parameters to their default value.

QR Code Off

* QR Code On

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting each desired value.

QR Code Message Length

This option decodes a code type within a specified minimum and maximum range. Valid minimum lengths and maximum lengths are between 1 and 3500 characters.

To set **QR Code Minimum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired minimum message value using Symbols 0 – 9 (page 4-83). *Default = 1.*

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard bar code in Save or Discard Settings (page 4-6). Scan the Save bar code when you have finished setting the correct minimum message numeric value.

To set **QR Code Maximum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired maximum message value using Symbols 0 – 9 (page 4-83). *Default = 3500*.

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard bar code in Save or Discard Settings (page 4-6). Scan the Save bar code when you have finished setting the correct maximum message numeric value.

Data Matrix

Scan the bar code below to set all Data Matrix parameters to their default value.

Data Matrix Off

* Data Matrix On

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting each desired value.

Data Matrix Message Length

This option decodes a code type within a specified minimum and maximum range. Valid minimum lengths and maximum lengths are between 1 and 1500 characters.

To set **Data Matrix Minimum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired minimum message value using Symbols 0 – 9 (page 4-83). *Default = 1.*

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard bar code in Save or Discard Settings (page 4-6). Scan the Save bar code when you have finished setting the correct minimum message numeric value.

To set **Data Matrix Maximum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired maximum message value using Symbols 0 – 9 (page 4-83). *Default =1500.*

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard bar code in Save or Discard Settings (page 4-6). Scan the Save bar code when you have finished setting the correct maximum message numeric value.

MaxiCode

Scan the bar code below to set all MaxiCode parameters to their default value.

MaxiCode Off

* MaxiCode On

Scan the Save bar code in Save or Discard Settings (page 4-6) after any change.

MaxiCode Message Length

This option decodes a code type within a specified minimum and maximum range. Valid minimum lengths and maximum lengths are between 1 and 150 characters.

To set **MaxiCode Minimum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired minimum message value using Symbols 0 – 9 (page 4-83). *Default = 1*.

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard bar code in Save or Discard Settings (page 4-6). Scan the Save bar code when you have finished setting the correct minimum message numeric value.

To set **MaxiCode Maximum Message Length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired maximum message value using Symbols 0 – 9 (page 4-83). *Default = 50*.

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the Discard bar code in Save or Discard Settings (page 4-6). Scan the Save bar code when you have finished setting the correct maximum message numeric value.

Aztec Code

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting each desired value.

Aztec Code Off

* Aztec Code On

Default all Aztec Code settings

Aztec Code Message Length

This option decodes a code type within a specified minimum and maximum range. Valid minimum lengths and maximum lengths are between 1 and 3750 characters.

To set **Aztec Code minimum message length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired minimum message value using Symbols 0 – 9 (page 4-83). *Default = 1*.

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the **Discard** bar code in Save or Discard Settings (page 4-6). Scan the **Save** bar code when you have finished setting the correct minimum message numeric value.

To set **Aztec Code maximum message length**, first scan this bar code:

Next, scan numeric bar codes that correspond to the desired maximum message value using Symbols 0 – 9 (page 4-83). *Default = 3750.*

If you wish to change your message length number selection, before scanning the **Save** bar code, scan the **Discard** bar code in Save or Discard Settings (page 4-6). Scan the **Save** bar code when you have finished setting the correct maximum message numeric value.

Aztec Runes

Select **Enable Runes** if you are scanning Aztec runes, which are the smallest type of Aztec Code symbol with the ability to encode a very short license plate message.

* Disable Runes

Enable Runes

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the desired value.

Keypad Alphanumeric Symbols (A-F, 0-9)

The bar codes shown below represent:

- an alpha character, with values from A through F
- a numeric keypad, with decimal values 0 through 9.

Each label can be scanned individually to enter a numeric or alpha value. Use these keypad value symbols to enter alphanumeric input in the course of performing an imager configuration.

Symbols A – F

Note: Scanning the Discard bar code will discard imager coding data entered since the last scan of the Save bar code.

Scan the **Save** bar code after each parameter change.

A

B

C

D

E

F

Discard (before scanning Save)

Save

Symbols 0 – 9

Note: Scanning the Discard bar code will discard imager coding data entered since the last scan of the Save bar code.

Scan the **Save** bar code after each parameter change.

0

1

2

3

4

5

6

7

8

9

Discard (before scanning Save)

Save

ASCII Conversion Chart (Code Page 1252)

ASCII Char	Hexadecimal Value	Decimal Char		ASCII Char	Hexadecimal Value	Decimal Char
NUL	00	1		ESC	1B	27
SOH	01	2		FS	1C	28
STX	02	3		GS	1D	29
ETX	03	4		RS	1E	30
EOT	04	5		US	1F	31
ENQ	05	6		(space)	20	32
ACK	06	7		!	21	33
BEL	07	8		“	22	34
BS	08	9		#	23	35
HT	09	10		$	24	36
LF	0A	11		%	25	37
VT	0B	12		&	26	38
FF	0C	13		‘	27	39
CR	0D	14		(	28	40
SO	0E	15		)	29	41
SI	0F	16		*	2A	42
DLE	10	17		+	2B	43
DC1(XON)	11	18		‘	2C	44
DC2	12	19		–	2D	45
DC3 (XOFF)	13	20		.	2E	46
DC4	14	21		/	2F	47
NAK	15	22		0	30	48
SYN	16	23		1	31	49
ETB	17	24		2	32	50
CAN	18	25		3	33	51
EM	19	26		4	34	52
SUB	1A	27		5	35	53
6	36	54		V	56	86
7	37	55		W	57	87
8	38	56		X	58	88
9	39	57		Y	59	89
:	3A	58		Z	5A	90
;	3B	59		[	5B	91
<	3C	60		\	5C	92
=	3D	61		]	5D	93
>	3E	62		^	5E	94
?	3F	63		_	5F	95
@	40	64		`	60	96
A	41	65		a	61	97
B	42	66		b	62	98
C	43	67		c	63	99
D	44	68		d	64	100

ASCII Char	Hexadecimal Value	Decimal Char		ASCII Char	Hexadecimal Value	Decimal Char
E	45	69		e	65	101
F	46	70		f	66	102
G	47	71		g	67	103
H	48	72		h	68	104
I	49	73		i	69	105
J	4A	74		j	6A	106
K	4B	75		k	6B	107
L	4C	76		l	6C	108
M	4D	77		m	6D	109
N	4E	78		n	6E	110
O	4F	79		o	6F	111
P	50	80		p	70	112
Q	51	81		q	71	113
R	52	82		r	72	114
S	53	83		s	73	115
T	54	84		t	74	116
U	55	85		u	75	117
v	76	118		_	96	150
w	77	119		_	97	151
x	78	120		~	98	152
y	79	121		™	99	153
z	7A	122		š	9A	154
{	7B	123		>	9B	155
|	7C	124		œ	9C	156
}	7D	125			9D	157
~	7E	126		ž	9E	158
<DEL>	7F	127		Ÿ	9F	159
€	80	128			A0	160
	81	129		¡	A1	161
‚	82	130		¢	A2	162
ƒ	83	131		£	A3	163
„	84	132		¤	A4	164
…	85	133		¥	A5	165
†	86	134		¦	A6	166
‡	87	135		§	A7	167
ˆ	88	136		¨	A8	168
‰	89	137		©	A9	169
Š	8A	138		ª	AA	170
‹	8B	139		«	AB	171
Œ	8C	140		¬	AC	172
	8D	141		(soft hyphen)	AD	173
Ž	8E	142		®	AE	174
	8F	143		¯	AF	175
	90	144		°	B0	176

ASCII Char	Hexadecimal Value	Decimal Char		ASCII Char	Hexadecimal Value	Decimal Char
‘	91	145		±	B1	177
’	92	146		²	B2	178
“	93	147		³	B3	179
”	94	148		´	B4	180
•	95	149		µ	B5	181
¶	B6	182		Ö	D6	214
·	B7	183		×	D7	215
¸	B8	184		Ø	D8	216
¹	B9	185		Ù	D9	217
º	BA	186		Ú	DA	218
»	BB	187		Û	DB	219
¼	BC	188		Ü	DC	220
½	BD	189		Ý	DD	221
¾	BE	190		Þ	DE	222
¿	BF	191		ß	DF	223
À	C0	192		à	E0	224
Á	C1	193		á	E1	225
Â	C2	194		â	E2	226
Ã	C3	195		ã	E3	227
Ä	C4	196		ä	E4	228
Å	C5	197		å	E5	229
Æ	C6	198		æ	E6	230
Ç	C7	199		ç	E7	231
È	C8	200		è	E8	232
É	C8	201		é	E9	233
Ê	CA	202		ê	EA	234
Ë	CB	203		ë	EB	235
Ì	CC	204		ì	EC	236
Í	CD	205		í	ED	237
Î	CE	206		î	EE	238
Ï	CF	207		ï	EF	239
Ð	D0	208		ð	F0	240
Ñ	D1	209		ñ	F1	241
Ò	D2	210		ò	F2	242
Ó	D3	211		ó	F3	243
Ô	D4	212		ô	F4	244
Õ	D5	213		õ	F5	245
ö	F6	246		û	FB	251
÷	F7	247		ü	FC	252
ø	F8	248		ý	FD	253
ù	F9	249		þ	FE	254
ú	FA	250		ÿ	FF	255

ASCII Character Pairs

Scan the Save bar code in Save or Discard Settings (page 4-6) when you have finished setting the desired value.

See Also: Code 39 Full ASCII (page 4-25)

NUL %U	DLE $P	SP SPACE	0 0
SOH $A	DC1 $Q	! /A	1 1
STX $B	DC2 $R	“ /B	2 2
ETX $C	DC3 $S	# /C	3 3
EOT $D	DC4 $T	$ /D	4 4
ENQ $E	NAK $U	% /E	5 5
ACK $F	SYN $V	& /F	6 6
BEL $G	ETB $W	‘ /G	7 7
BS $H	CAN $X	(/H	8 8
HT $I	EM $Y	) /I	9 9
LF $J	SUB $Z	* /J	: /Z
VT $K	ESC %A	+ /K	; %F
FF $L	FS %B	, /L	< %G
CR $M	GS %C	- -	= %H
SO $N	RS %D	. .	> %I
SI $O	US %E	/ /O	? %J
@ %V	P P	‘ %W	p +P
A A	Q Q	a +A	q +Q
B B	R R	b +B	r +R
C C	S S	c +C	s +S
D D	T T	d +D	t +T
E E	U U	e +E	u +U
F F	V V	f +F	v +V
G G	W W	g +G	w +W
H H	X X	h +H	x +X
I I	Y Y	i +I	y +Y
J J	Z Z	j +J	z +Z
K K	[%K	k +K	{ %P
L L	\ %L	l +L	| %Q
M M	] %M	m +M	} %R
N N	^ %N	n +N	~ %S
O O	_ %O	o +O	DEL %T

5380SF 2D Bar Codes Supported by Honeywell

Scanner Parameters - General

Selection	**Setting** * **Indicates default**	**Serial Command** *# indicates numeric entry*
Factory Default Settings	Default	DEFALT
User-Specified Good Read Delay	Range 0 - 30,000 ms	DLYGRD#####
Good Read Delay	*No Delay	DLYGRD0
	Short Delay (500 ms)	DLYGRD500
	Medium Delay (1000 ms)	DLYGRD1000
	Long Delay (1500 ms)	DLYGRD1500
User-Specified Reread Delay	Range 0 - 30,000 ms	DLYRRD#####
Reread Delay	Short (500 ms)	DLYRRD500
	*Medium (750 ms)	DLYRRD750
	Long (1000 ms)	DLYRRD1000
	Extra Long (2000 ms)	DLYRRD2000
LED Power Level	Off	PWRLDC0
	Minimum (30%)	PWRLDC30
	Low (50%)	PWRLDC50
	*High (100%)	PWRLDC100
Aimer Delay	200 milliseconds	SCNDLY200
	400 milliseconds	SCNDLY400
	*Off (no delay)	SCNDLY0
User-Specified Aimer Delay	Range 0 - 4,000 ms	SCNDLY####
Centering Window	Centering On	DECWIN1
	*Centering Off	DECWIN0
	Left of Centering Window (*40%)	DECLFT
	Right of Centering Window (*60%)	DECRGT
	Top of Centering Window (*40%)	DECTOP
	Bottom of Centering Window (*60%)	DECBOT
Print Weight	Set Print Weight (1-7)	PRTWGT
	*Default (4)	PRTWGT4
Working Orientation	*Upright	ROTATN0
	Rotate Clockwise 90°	ROTATN1
	Upside Down	ROTATN2
	Rotate Counterclockwise 90°	ROTATN3
Intercharacter Delay	Range 0 - 495 ms	DLYCHR##
User Specified Intercharacter Delay	Delay Length (0 - 495 ms)	DLYCRX##
	Character to Trigger Delay	DLY_XX###
Interfunction Delay	Range 0 - 495 ms	DLYFNC##
Intermessage Delay	Range 0 - 495 ms	DLYMSG##
Centering Window	Centering On	DECWIN1

Scanner Parameters - Symbologies

Selection	**Setting** * **Indicates default**	**Serial Command** *# indicates numeric entry*
All Symbologies	All Symbologies Off	ALLENA0
	All Symbologies On	ALLENA1
Codabar	Default All Codabar Settings	CBRDFT
	Off	CBRENA0
	*On	CBRENA1
Codabar Start/Stop Char.	*Don't Transmit	CBRSSX0
	Transmit	CBRSSX1
Codabar Check Char.	*No Check Char.	CBRCK20
	Validate, But Don't Transmit	CBRCK21
	Validate, and Transmit	CBRCK22
Codabar Concatenation	Off	CBRCCT0
	*On	CBRCCT1
	Require	CBRCCT2
Codabar Message Length	Minimum (2 - 60) *4	CBRMIN##
	Maximum (2 - 60) *60	CBRMAX##
Code 39	Default All Code 39 Settings	C39DFT
	Off	C39ENA0
	*On	C39ENA1
Code 39 Start/Stop Char.	*Don't Transmit	C39SSX0
	Transmit	C39SSX1
Code 39 Check Char.	*No Check Char.	C39CK20
	Validate, But Don't Transmit	C39CK21
	Validate, and Transmit	C39CK22
Code 39 Message Length	Minimum (0 - 48) *0	C39MIN##
	Maximum (0 - 48) *48	C39MAX##
Code 39 Append	*Off	C39APP0
	On	C39APP1
Code 32 Pharmaceutical (PARAF)	*Off	C39B320
	On	C39B321
Code 39 Full ASCII	*Off	C39ASC0
	On	C39ASC1
	Code 39 Code Page *(Not supported)*	C39DCP
Interleaved 2 of 5	Default All Interleaved 2 of 5 Settings	I25DFT
	Off	I25ENA0
	*On	I25ENA1
Interleaved 2 of 5 Check Digit	*No Check Char.	I25CK20
	Validate, But Don't Transmit	I25CK21
	Validate, and Transmit	I25CK22
Interleaved 2 of 5 Message Length	Minimum (2 - 80) *4	I25MIN##
	Maximum (2 - 80) *80	I25MAX##

Selection	**Setting** * **Indicates default**	**Serial Command** *# indicates numeric entry*
Code 93	Default All Code 93 Settings	C93DFT
	Off	C93ENA0
	*On	C93ENA1
Code 93 Message Length	Minimum (0 - 80) *0	C93MIN##
	Maximum (0 - 80) *80	C93MAX#
	Code 93 Code Page *(Not supported)*	C93DCP
Straight 2 of 5 Industrial	Default All Straight 2 of 5 Industrial Settings	R25DFT
	*Off	R25ENA0
	On	R25ENA1
Straight 2 of 5 Industrial Message Length	Minimum (1 - 48) *4	R25MIN##
	Maximum (1 - 48) *48	R25MAX##
Straight 2 of 5 IATA	Default All Straight 2 of 5 IATA Settings	A25DFT
	*Off	A25ENA0
	On	A25ENA1
Straight 2 of 5 IATA Message Length	Minimum (1 - 48) *4	A25MIN##
	Maximum (1 - 48) *48	A25MAX##
Matrix 2 of 5	Default All Matrix 2 of 5 Settings	X25DFT
	*Off	X25ENA0
	On	X25ENA1
Matrix 2 of 5 Message Length	Minimum (1 - 80) *4	X25MIN##
	Maximum (1 - 80) *80	X25MAX##
Code 11	Default All Code 11 Settings	C11DFT
	*Off	C11ENA0
	On	C11ENA1
Code 11 Check Digits Required	1 Check Digit	C11CK20
	*2 Check Digits	C11CK21
Code 11 Message Length	Minimum (1 - 80) *4	C11MIN##
	Maximum (1 - 80) *80	C11MAX##
Code 128	Default All Code 128 Settings	128DFT
	Off	128ENA0
	*On	128ENA1
ISBT Concatenation	*Off	ISBENA0
	On	ISBENA1
Code 128 Message Length	Minimum (0 - 80) *0	128MIN##
	Maximum (0 - 80) *80	128MAX##
Code 128 Code Page	Code 128 Code Page (*2) *(Not supported)*	128DCP##
Telepen	Default All Telepen Settings	TELDFT
	*Off	TELENA0
	On	TELENA1
Telepen Output	*AIM Telepen Output	TELOLD0
	Original Telepen Output	TELOLD1

Selection	Setting * Indicates default	Serial Command *# indicates numeric entry*
Telepen Message Length	Minimum (1 - 60) *1	TELMIN##
	Maximum (1 - 60) *60	TELMAX##
UPC-A	Default All UPC-A Settings	UPADFT
	Off	UPAENA0
	*On	UPAENA1
UPC-A Check Digit	Off	UPACKX0
	*On	UPACKX1
UPC-A Number System	Off	UPANSX0
	*On	UPANSX1
UPC-A 2 Digit Addenda	*Off	UPAAD20
	On	UPAAD21
UPC-A 5 Digit Addenda	*Off	UPAAD50
	On	UPAAD51
UPC-A Addenda Required	*Not Required	UPAARQ0
	Required	UPAARQ1
UPC-A Addenda Separator	Off	UPAADS0
	*On	UPAADS1
UPC-A/EAN-13 with Extended Coupon Code	*On	CPNENA1
	Off	CPNENA0
UPC-E0	Default All UPC-E Settings	UPEDFT
	Off	UPEEN00
	*On	UPEEN01
UPC-E0 Expand	*Off	UPEEXP0
	On	UPEEXP1
UPC-E0 Addenda Required	Required	UPEARQ1
	*Not Required	UPEARQ0
UPC-E0 Addenda Separator	*On	UPEADS1
	Off	UPEADS0
UPC-E0 Check Digit	Off	UPECKX0
	*On	UPECKX1
UPC-E0 Number System	Off	UPENSX0
	*On	UPENSX1
UPC-E0 Addenda	2 Digit Addenda On	UPEAD21
	*2 Digit Addenda Off	UPEAD20
	5 Digit Addenda On	UPEAD51
	*5 Digit Addenda Off	UPEAD50
UPC-E1	*Off	UPEEN10
	On	UPEEN11
EAN/JAN-13	Default All EAN/ JAN Settings	E13DFT
	Off	E13ENA0
	*On	E13ENA1
EAN/JAN-13 Check Digit	Off	E13CKX0
	*On	E13CKX1

Selection	Setting * Indicates default	Serial Command *# indicates numeric entry*
EAN/JAN-13 2 Digit Addenda	2 Digit Addenda On	E13AD21
	*2 Digit Addenda Off	E13AD20
	5 Digit Addenda On	E13AD51
	*5 Digit Addenda Off	E13AD50
EAN/JAN-13 Addenda Required	*Not Required	E13ARQ0
	Required	E13ARQ1
EAN/JAN-13 Addenda Separator	Off	E13ADS0
	*On	E13ADS1
ISBN Translate	*Off	E13ISB0
	On	E13ISB1
EAN/JAN-8	Default All EAN/ JAN 8 Settings	EA8DFT
	Off	EA8ENA0
	*On	EA8ENA1
EAN/JAN-8 Check Digit	Off	EA8CKX0
	*On	EA8CKX1
EAN/JAN-8 Addenda	*2 Digit Addenda Off	EA8AD20
	2 Digit Addenda On	EA8AD21
	*5 Digit Addenda Off	EA8AD50
	5 Digit Addenda On	EA8AD51
EAN/JAN-8 Addenda Required	*Not Required	EA8ARQ0
	Required	EA8ARQ1
EAN/JAN-8 Addenda Separator	Off	EA8ADS0
	*On	EA8ADS1

5

NX3XX Laser Scanner

Introduction

Integrated Laser Engine	MX7 Tecton	MX8

This section's explanations and instructions are directed toward devices with an integrated N43XX and N73XX Laser Scanner engine. Please do not scan the bar codes in this section with any other bar code reader engine.

Configuration bar codes in this section are designed for the MX7 Tecton and the MX8. The MX7 Tecton may have a N43XX or N73XX scan engine. The MX8 may have a N43XX scan engine.

Determining the type of scan engine in your decoding device is an important requirement before using it to scan a configuration bar code. If you are unsure, contact your System Administrator for assistance with your mobile device.

Scan engine manufacturers may offer more bar codes and options than are contained in this section. Please note that the bar codes in this section are only those supported by Honeywell on the mobile devices listed above. The MX8 will beep twice when a configuration bar code is successfully scanned.

Technical Assistance (page 8-1) is available if you need help when using the bar codes in this section.

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

To change a parameter value: Scan the appropriate bar code in this section. After the Save bar code is scanned (where indicated), the new value replaces the standard default value in memory.

Identify the Scan Engine

1. Open the Data Collection application panel on the mobile device.
2. Select the About tab. The type of integrated scan engine in your device is shown in the Scanner segment.
3. If the scanner is listed as 4313-TTL *(N43XX)* or 7313-TTL *(N73XX)* use the bar codes in this chapter to configure the scan engine.

Supported Bar Code Symbologies

China Post (Hong Kong 2 of 5)	Matrix 2 of 5
Codabar	MSI
Code 11	NEC 2 of 5
Code 128	Plessey
Code 39	Straight 2 of 5 IATA
Code 93	Straight 2 of 5 Industrial
EAN/JAN-13	Telepen
EAN/JAN-8	Trioptic Code
GS1 DataBar (RSS)	UPC-A
GS1-128	UPC-A/EAN-13
Interleaved 2 of 5	UPC-E0

Pre-Configured Default Values

N43XX/N73XX Parameter	**Default**
Aimer Delay	Off
Centering	Off
Communication Check Character	None
Decode Security	Low
Laser Scan Angle	Full Laser Beam Sweep (48°)
No Read	Off
Power Save Mode	Hibernate (Low Power)
Power Save Mode Timeout	1 second
Read Time-Out	3 sec. (3000 ms)
Reread Delay	Medium (750 ms)
User Specified Reread Delay	0 to 30,000 ms
Symbologies	
Codabar	Off
Codabar Start/Stop Character	Don't Transmit
Codabar Check Character	No Check Character
Codabar Concatenation	Off
Codabar Redundancy	0
Codabar Message Length	Min 3 - Max 80
Code 39	On
Code 39 Start/Stop Character	Don't Transmit
Code 39 Check Character	No Check Character
Code 39 Redundancy	0
Code 39 Message Length	Min 3 - Max 80
Code 32 Pharmaceutical	Off
Code 39 Full ASCII	Off
Interleaved 2 of 5	On
Follett Formatting	Off
NULL Characters	Off
Interleaved 2 of 5 Check Digit	No Check Character
Interleaved 2 of 5 Redundancy	0
Interleaved 2 of 5 Message Length	Min 6 - Max 80
NEC 2 of 5	Off
NEC 2 of 5 Check Digit	No Check Character
NEC 2 of 5 Redundancy	0
NEC 2 of 5 Message Length	Min 3 - Max 80
Code 93	On
Code 93 Redundancy	0
Code 93 Message Length	Min 3 - Max 80
Straight 2 of 5 Industrial	Off
Straight 2 of 5 Industrial Redundancy	0
Straight 2 of 5 Industrial Message Length	Min 3 - Max 80
Straight 2 of 5 IATA	Off

N43XX/N73XX Parameter	Default
Straight 2 of 5 IATA Redundancy	0
Straight 2 of 5 IATA Message Length	Min 13 - Max 15
Matrix 2 of 5	Off
Matrix 2 of 5 Redundancy	0
Matrix 2 of 5 Message Length	Min 3 - Max 80
Matrix 2 of 5 Check Character	No Check Character
Code 11	Off
Code 11 Check Digits Required	2
Code 11 Redundancy	0
Code 11 Message Length	Min 3 - Max 80
Code 128	On
128 Group Separator Output	Off
Code 128 Redundancy	0
Code 128 Message Length	Min 3 - Max 80
GS1-128	On
GS1-128 Application Identifier Parsing	Off
GS1-128 Redundancy	0
GS1-128 Message Length	Min 3 - Max 80
Telepen	Off
Telepen Output	AIM Telepen Output
Telepen Redundancy	0
Telepen Message Length	Min 3 - Max 80
UPC-A	On
UPC-A Number system	On
UPC-A Check Digit	On
UPC-A 2 Digit Addenda	Off
UPC-A 5 Digit Addenda	Off
UPC-A Addenda Required	Not Required
UPC-A Addenda Timeout	100
UPC-A Addenda Separator	Off
UPC-A Redundancy	0
UPC-A/EAN-13 with Extended Coupon Code	Off
UPC-A Number System 4 Addenda Required	Don't Require Coupon Code
UPC-A Number System 5 Addenda Required	Don't Require Coupon Code/Addenda
UPC-A Addenda Timeout	100
UPC-E0	On
UPC-E0 Expand	Off
UPC-E0 Number System	On
UPC-E0 Check Digit	Off
UPC-E0 Leading Zero	Off
UPC-E0 Addenda	2 and 5 Digit Addenda Off
UPC-E0 Addenda Required	Not Required
Addenda Timeout	100
UPC-E0 Addenda Separator	Off

N43XX/N73XX Parameter	Default
UPC-E0 Redundancy	1
EAN/JAN-13	On
EAN/JAN-13 Check Digit	On
EAN/JAN-13 2 Digit Addenda	2 and 5 Digit Addenda Off
EAN/JAN-13 Addenda Required	Not Required
Addenda Timeout	100
EAN/JAN-13 Addenda Separator	Off
EAN/JAN-13 Redundancy	0
ISBN Translate	Off
Convert to 13-Digit	Off
Reformat	Off
ISSN Translate	Off
Reformat	Off
EAN/JAN-8	On
EAN/JAN-8 Check Digit	On
EAN/JAN-8 Addenda	2 and 5 Digit Addenda Off
EAN/JAN-8 Addenda Required	Not Required
Addenda Timeout	100
EAN/JAN-8 Addenda Separator	Off
EAN/JAN-8 Redundancy	0
MSI	Off
MSI Check Character	Validate Type 10, but don't transmit
MSI Redundancy	0
MSI Message Length	Min 3 - Max 80
Plessey Code	Off
Plessey Check Character	No Check Character
Plessey Redundancy	0
Plessey Message Length	Min 3 - Max 80
GS1 DataBar (RSS)	
GS1 DataBar Omnidirectional	On
GS1 DataBar Omnidirectional Redundancy	0
GS1 DataBar Limited	On
GS1 DataBar Limited Redundancy	0
GS1 DataBar Expanded	On
GS1 DataBar Expanded Redundancy	0
GS1 DataBar Expanded Message Length	Min 3 - Max 80
Trioptic Code	Off
GS1 Emulation	Off
China Post (Hong Kong 2 of 5)	Off
China Post (HK 2 of 5 Redundancy)	0
China Post (HK 2 of 5 Message Length)	Min 3 - Max 80
Read Time-out	30,000 ms

Setting Custom Defaults

Bar Code Decoder Engine = N43XX and N73XX

You have the ability to create a set of menu commands as your own custom defaults. To do so, scan the Set Custom Defaults bar code below before each menu command or sequence you want saved. If your command requires scanning numeric codes then a Save code, that entire sequence will be saved to your custom defaults. Scan the Set Custom Defaults code again before the next command you want saved to your custom defaults.

Set Custom Defaults

MNUCDF.

Save Custom Defaults

DEFALT.

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 Decode Security at Low to your custom defaults, and decide you want the security set to High, just scan the Set Custom Defaults bar code, then scan the Decode Security High bar code, and then Save Custom Defaults. The rest of the custom defaults will remain, but the security setting will be updated.

Resetting the Custom Defaults

If you want the custom default settings restored to your engine, scan the Activate Custom Defaults bar code below. This resets the engine to the custom default settings. If there are no custom defaults, it will reset the engine to the factory default settings. Any settings that have not been specified through the custom defaults will be defaulted to the factory default settings.

Activate Custom Defaults

DEFALT.

Resetting the Factory Defaults

Bar Code Decoder Engine = N43XX and N73XX

Note: This selection erases your custom settings and resets the scanner to the factory default values set before shipping.

If you are not sure which programming options are in your bar code reader, or you have changed some options and want to restore the reader to the original default settings, scan the **Reset** bar code below. If you have custom defaults, they are eliminated when the Reset bar code is scanned. The Reset Factory Defaults bar code is only available when the Data Collection Wedge is installed in the scanning device.

Pre-Configured Default Values (page 5-2) lists the factory default settings for each of the commands, indicated by an asterisk (*), on the following bar code reader programming pages.

Note: If stripping, data matching, minimum length or symbologies are configured incorrectly in your saved custom defaults, the incorrectly configured bar code is not decoded.

Reset Factory Defaults

RESET

When the scan is successful, the mobile device emits a double beep and the Scan On indicator is amber. The decoding engine is not available for further bar code scanning until the Scan On indicator turns off. Scanning this bar code does not affect the mobile device's operating system, wireless client or installed software (e.g., AppLock) settings.

Scanner Parameters – General

Aimer Delay

Bar Code Decoder Engine = N43XX and N73XX

This sets the aiming dot time period length before the aim beam expands to read a bar code. Scan one of the bar codes below to set Aimer Delay timeout. Open and close the Data Collection Wedge to save the Aimer Delay changed value. Scan the Reset bar code on the Resetting the Factory Defaults (page 5-6) to set Aimer Delay back to default. *Default = 0 milliseconds (Aimer Delay Off).*

250 ms / .25 sec

SCNDLY250.

500 ms / .5 sec

SCNDLY500.

750 ms / .75 sec

SCNDLY750.

1000 ms / 1 sec

SCNDLY1000.

1500 ms / 1.5 sec

SCNDLY1500.

2000 ms / 2 sec

SCNDLY2000.

2500 ms / 2.5 sec

SCNDLY2500.

3000 ms / 3 sec

SCNDLY3000.

3500 ms / 3.5 sec

SCNDLY3500.

4000 ms / 4 sec

SCNDLY4000.

4500 ms / 4.5 sec

SCNDLY4500.

5000 ms / 5 sec

SCNDLY5000.

10000 ms / 10 sec

SCNDLY10000.

30000 ms / 30 sec

SCNDLY30000.

Centering

Bar Code Decoder Engine = N43XX and N73XX

Use Centering to narrow the engine's field of view to make sure the engine reads only those bar codes intended by the user. For instance, if multiple codes are placed closely together, centering will insure that only the desired codes are read.

Scan **Centering On,** then scan one of the following bar codes to change the left or right of the centering window. To set the percent you want to shift the centering window scan the digits on 0 - 9 (page 5-128) then scan Save on Save, Discard, Reset (page 5-131). *Default = 40% Left and 60% Right.*

Centering On

DECWIN1.

* Centering Off

DECWIN0.

Left of Centering Window

DECLFT.

Right of Centering Window

DECRGT.

Communication Check Character

Bar Code Decoder Engine = N43XX and N73XX

To enhance security, you can specify the transmission type of a check character; either LRC where the calculation starts on the first transmitted character, LRC where the calculation starts on the second transmitted character, or CRC.

Note: This option adds a check character to the bar code data for all symbologies. If you need to enable or disable check characters for individual symbologies, seeScanner Parameters - Symbologies (page 5-20).

Scan the following bar code to set the communication check character type. *Default = None.*

* None

LRC Starts on 1st Character

LRC Starts on 2nd Character

CRC

Decode Security

Bar Code Decoder Engine = N43XX and N73XX

This selection allows you to adjust the decode security needed while scanning. For good quality codes, choose Low to achieve fast scan speed. For codes prone to misreads, choose High. *Default = Low.*

Note: Increasing the security level may decrease the scan speed.

* Low

PAPLS1.

Low/Medium

PAPLS2.

Medium/High

PAPLS3.

High

PAPLS4.

Laser Scan Angle

Bar Code Decoder Engine = N43XX and N73XX

The laser scan angle can be set to Reduced Laser Beam Sweep (35°) or Full Laser Beam Sweep (48°). Laser Scan Angle is not available for wide angle models. *Default = Full Laser Beam Sweep (48°).*

* Full Laser Beam Sweep (48°)

LASANG0.

Reduced Laser Beam Sweep (35°)

LASANG1.

No Read

Bar Code Decoder Engine = N43XX and N73XX

With No Read turned On, the scanner notifies you if a code cannot be read. If using a WordPad window, an “NR” appears when a code cannot be read. If No Read is turned Off, the “NR” will not appear. *Default = Off.*

The hex code for the No Read symbol is 9C.

On

SHWNRD1.

* Off

SHWNRD0.

Power Save Mode

Bar Code Decoder Engine = N43XX and N73XX

The scan engine has three Power Save Modes: Off, Sleep Mode, and Hibernate. In **Off** mode all components are powered on and the scan engine is in operating mode. In **Sleep Mode**, some components are powered off. In **Hibernate** all components are powered off.

Default = Hibernate.

Off

PWRMOD0.

Sleep Mode

PWRMOD1.

* Hibernate

PWRMOD2.

Power Save Mode Timeout

Bar Code Decoder Engine = N43XX and N73XX

This allows you to set the length (in seconds) for power save timeout. To set the length scan the **Power Save Timeout** bar code below, then set the timeout (from 0-65535 seconds) by scanning the digits on 0 - 9 (page 5-128) then scan Save on Save, Discard, Reset (page 5-131). The scan engine goes into a power save mode (Sleep or Hibernate) at timeout after a successful scan or at the end of the duration of inactivity.

Default = 1 second.

Power Save Timeout

PWRLPT.

Prefix/Suffix Overview

Bar Code Decoder Engine = N43XX and N73XX

When a bar code is scanned, additional information is sent to the host computer 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:

Prefix	Scanned Data	Suffix
1-11 alpha numeric and control characters	variable length	1-11 alpha numeric and control characters

Points to Keep In Mind

- It is not necessary to build a message string. The selections in this section are only used if you wish to alter the default settings. *Default prefix = None. Default suffix is dependent on interface.*
- 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 (Code Page 1252) (page 5-115) 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 32 characters, which includes header information.

To Add a Prefix or Suffix

1. Scan the **Add Prefix** or **Add Suffix** symbol.
2. Determine the 2 digit Hex value from the Symbology Chart (page 5-118) 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”.
3. Scan the 2 hex digits from the Programming Chart (page 5-128)or scan **9, 9** for all symbologies.
4. Determine the hex value from the ASCII Conversion Chart (Code Page 1252) (page 5-115) for the prefix or suffix you wish to enter.
5. Scan the 2 digit hex value from the Programming Chart (page 5-128)
6. Repeat Steps 4 and 5 for every prefix or suffix character.
7. To add the Code I.D., scan **5, C, 8, 0**. To add AIM I.D., scan **5, C, 8, 1**. To add a backslash (\), scan **5, C, 5, C.**
8. Scan **Save** to exit and save, or scan **Discard** to exit without saving.

Note: To add a backslash (\) as in Step 7, you must scan 5C twice – once to create the leading backslash and then to create the backslash itself.

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

Example: Add a Suffix to a specific symbology

To send a CR (carriage return) Suffix for U.P.C. only:

1. Scan Add Suffix.
2. Determine the 2 digit hex value from the Symbology Chart (page 5-118)for U.P.C.
3. Scan **6, 3** from the Programming Chart (page 5-128).
4. Determine the hex value from the ASCII Conversion Chart (Code Page 1252) (page 5-115) for the CR (carriage return).
5. Scan **0, D** from the Programming Chart (page 5-128).
6. Scan Save, or scan Discard to exit without saving.

To Clear One or All Prefixes or Suffixes

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

1. Scan the Clear One Prefix or Clear One Suffix symbol.
2. Determine the 2 digit Hex value from the Symbology Chart (page 5-118) for the symbology from which you want to clear the prefix or suffix.
3. Scan the 2 digit hex value from the Programming Chart (page 5-128)or scan **9, 9** for all symbologies.

Your change is automatically saved.

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.

Add CR Suffix All Symbologies

Prefix Selections

Bar Code Decoder Engine = N43XX and N73XX

Default = Clear All Prefixes

Add Prefix

Clear One Prefix

PRECL2.

* Clear All Prefixes

PRECA2.

Suffix Selections

Bar Code Decoder Engine = N43XX and N73XX

Default = Clear All Suffixes

Add Suffix

SUFBK2.

Clear One Suffix

SUFCL2.

* Clear All Suffixes

SUFCA2.

Read Time-Out

Bar Code Decoder Engine = N43XX and N73XX

Use this selection to set a time-out (in milliseconds) of the engine's external trigger when using serial commands to trigger the scanner. Once the engine has timed out, you can activate the engine either by the external trigger or using a serial trigger command. After scanning the **Read Time-Out** bar code, set the time-out duration (from 0-300,000 milliseconds) by scanning digits on 0 - 9 (page 5-128) then scan Save on Save, Discard, Reset (page 5-131). *Default = 3,000 ms.*

Read Time-Out

TRGSTO.

Reread Delay

Bar Code Decoder Engine = N43XX and N73XX

This sets the time period before the scanner 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. *Default = Medium.*

Short (500 ms)

DLYRRD500.

* Medium (750 ms)

DLYRRD750.

Long (1000 ms)

DLYRRD1000.

Extra Long (2000 ms)

DLYRRD2000.

Show Data Format

Bar Code Decoder Engine = N43XX and N73XX

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

DFMBK3?.

Show Software Revision

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

REVINF.

User-Specified Reread Delay

Bar Code Decoder Engine = N43XX and N73XX

If you want to set your own length for the reread delay, scan the following bar code, then set the delay (from 0-30,000 milliseconds) by scanning digits on 0 - 9 (page 5-128) then scan Save on Save, Discard, Reset (page 5-131).

User-Specified Reread Delay

DLYRRD.

Scanner Parameters - Symbologies

All Symbologies

Bar Code Decoder Engine = N43XX and N73XX

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.

All Symbologies On

ALLENA1.

All Symbologies Off

ALLENA0.

Message Length Description

Bar Code Decoder Engine = N43XX and N73XX

You are able to set the valid reading length of some of the bar code symbologies. If the data length of the scanned bar code doesn't match the valid reading length, the scanner will issue an error tone. You may wish to set the same value for minimum and maximum length to force the scanner to read fixed length 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 = 09
Max. length = 20

Example: Decode only those bar codes with a count of 15 characters.
Min. length = 15
Max. 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 then scan digits on the 0 - 9 (page 5-128) then scan Save on Save, Discard, Reset (page 5-131). The minimum and maximum lengths and the defaults are included with the respective symbologies.

Codabar

Bar Code Decoder Engine = N43XX and N73XX

Scan the bar code below to set all Codabar parameters to their default value.

CBRDFT.

Codabar On/Off

On

CBRENA1.

* Off

CBRENA0.

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.*

Transmit

CBRSSX1.

* Don't Transmit

CBRSSX0.

Codabar Check Character

Codabar check characters are created using different “modulos.” You can program the scanner to read only Codabar bar codes with Modulo 16, Modulo 7 CD, or CLSI check characters. *Default = No Check Character.*

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

When Check Character is set to **Validate and Transmit**, the scanner 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.

* No Check Character

CBRCK20.

Validate Modulo 16, but Don’t Transmit

CBRCK21.

Validate Modulo 16 and Transmit

CBRCK22.

Validate Modulo 7 CD, but Don’t Transmit

CBRCK23.

Validate Modulo 7 CD and Transmit

CBRCK24.

Validate CLSI, but Don’t Transmit

CBRCK25.

Validate CLSI and Transmit

CBRCK26.

Codabar Concatenation

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

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

On

* Off

Require

Concatenation Timeout

When searching for bar codes during concatenation, you may wish to set a delay used to find the next bar code. Set the length (in milliseconds) for this delay by scanning the following bar code, then setting the timeout (from 1-65535 milliseconds) by scanning digits on 0 - 9 (page 5-128) then scan Save on Save, Discard, Reset (page 5-131). *Default = 750.*

Concatenation Timeout

DLYCCT.

Codabar Redundancy

If you are encountering errors when reading Codabar bar codes, you may want to adjust the redundancy count. Redundancy adjusts the number of times a bar code is decoded before transmission, which may reduce the number of errors. Note that the higher the redundancy count, the longer it will take to decode the bar code. To adjust the redundancy, scan the following **Codabar Redundancy** bar code, then scan a redundancy count between 0 and 10 on 0 - 9 (page 5-128) then scan Save on Save, Discard, Reset (page 5-131). *Default = 0*.

Codabar Redundancy

CBRVOT.

Codabar Message Length

Scan the following bar codes to change the message length. Refer to Message Length Description (page 5-20) for additional information. Minimum and Maximum lengths = 1-80. *Minimum Default = 3, Maximum Default = 80.*

Minimum Message Length

CBRMIN.

Maximum Message Length

CBRMAX.

Code 39

Bar Code Decoder Engine = N43XX and N73XX

Scan the bar code below to set all Code 39 parameters to their default value.

C39DFT.

Code 39 On/Off

* On

C39ENA1.

Off

C39ENA0.

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.*

Transmit

C39SSX1.

* Don't Transmit

C39SSX0.

Code 39 Check Character

No Check Character indicates that the scanner 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**, the scanner 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.

* No Check Character

C39CK20.

Validate , but Don't Transmit

C39CK21.

Validate and Transmit

C39CK22.

Code 39 Redundancy

If you are encountering errors when reading Code 39 bar codes, you may want to adjust the redundancy count. Redundancy adjusts the number of times a bar code is decoded before transmission, which may reduce the number of errors. Note that the higher the redundancy count, the longer it will take to decode the bar code. To adjust the redundancy, scan the Code 39 Redundancy bar code below, then scan a redundancy count between 0 and 10 on 0 - 9 (page 5-128) then scan Save on Save, Discard, Reset (page 5-131). *Default = 0.*

Code 39 Redundancy

C39VOT.

Code 39 Message Length

Scan the bar co*des below to change the message length. Refer to* *Message Length Description* (page 5-20) *for additional information. Minimum and Maximum lengths = 1-80. Minimum Default = 2, Maximum Default = 80.*

Minimum Message Length

C39MIN.

Maximum Message Length

C39MAX.

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. Default = Off.*

On

C39B321.

* Off

C39B320.

Code 39 Full ASCII

If Code 39 Full ASCII 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.*

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

Full ASCII On

C39ASC1.

* Full ASCII Off Full ASCII On

C39ASC0.

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

Interleaved 2 of 5

Bar Code Decoder Engine = N43XX and N73XX

Scan the bar code below to set all Interleaved 2 of 5 parameters to their default value.

I25DFT.

Interleaved 2 of 5 On/Off

* On

I25ENA1.

Off

I25ENA0.

Follett Formatting

* Off

I25FOL0.

On

I25FOL1.

NULL Characters

Interleaved 2 of 5 requires an even number of characters. When an odd number of characters is present, it is due to NULL characters embedded in the bar code. Scan the On bar code below to decode this type of Interleaved 2 of 5 bar code. *Default = Off.*

* Off

I25NUL0.

On

I25NUL1.

Interleaved 2 of 5 Check Digit

No Check Digit indicates that the scanner 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**, the scanner 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.*

* No CheckDigit

I25CK20.

Validate , but Don't Transmit

I25CK21.

Validate and Transmit

I25CK2.

Interleaved 2 of 5 Redundancy

If you are encountering errors when reading Interleaved 2 of 5 bar codes, you may want to adjust the redundancy count. Redundancy adjusts the number of times a bar code is decoded before transmission, which may reduce the number of errors. Note that the higher the redundancy count, the longer it will take to decode the bar code. To adjust the redundancy, scan the **Interleaved 2 of 5 Redundancy** bar code below, then scan a redundancy count between 0 and 10 on 0 - 9 (page 5-128) then scan Save on Save, Discard, Reset (page 5-131). *Default = 0*.

Interleaved 2 of 5 Redundancy

I25VOT.

Interleaved 2 of 5 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 5-20) for additional information. Minimum and Maximum lengths = 1-80. *Minimum Default = 14, Maximum Default = 14.*

Minimum Message Length

I25MIN.

Maximum Message Length

I25MAX.

NEC 2 of 5

Bar Code Decoder Engine = N43XX and N73XX

Scan the bar code below to set all NEC 2 of 5 parameters to their default value.

C39DFT.

NEC 2 of 5 On/Off

On

N25ENA1.

* Off

N25ENA0.

NEC 2 of 5 Check Digit

No Check Digit indicates that the scanner 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**, the scanner 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.*

* No Check Digit

N25CK20.

Validate, but Don't Transmit

N25CK21.

Validate and Transmit

N25CK22.

NEC 2 of 5 Redundancy

If you are encountering errors when reading NEC 2 of 5 bar codes, you may want to adjust the redundancy count. Redundancy adjusts the number of times a bar code is decoded before transmission, which may reduce the number of errors. Note that the higher the redundancy count, the longer it will take to decode the bar code. To adjust the redundancy, scan the **NEC 2 of 5 Redundancy** bar code below, then scan a redundancy count between 0 and 10 on 0 - 9 (page 5-128) then scan Save on Save, Discard, Reset (page 5-131). *Default = 0.*

N25VOT.

NEC 2 of 5 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 5-20) for additional information. Minimum and Maximum lengths = 1-80. *Minimum Default = 3, Maximum Default = 80.*

Minimum Message Length

N25MIN.

Maximum Message Length

N25MAX.

Code 93

Bar Code Decoder Engine = N43XX and N73XX

Scan the bar code below to set all Code 93 parameters to their default value.

C93DFT.

Code 93 On/Off

* On

C93ENA1.

Off

C93ENA0.

Code 93 Redundancy

If you are encountering errors when reading Code 93 bar codes, you may want to adjust the redundancy count. Redundancy adjusts the number of times a bar code is decoded before transmission, which may reduce the number of errors. Note that the higher the redundancy count, the longer it will take to decode the bar code. To adjust the redundancy, scan the **Code 93 Redundancy** bar code below, then scan a redundancy count between 0 and 10 on 0 - 9 (page 5-128) then scan Save on Save, Discard, Reset (page 5-131). *Default = 0.*

Code 93 Redundancy

C93VOT.

Code 93 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 5-20) for additional information. Minimum and Maximum lengths = 1-80. *Minimum Default = 3, Maximum Default = 80.*

Minimum Message Length

C93MIN.

Maximum Message Length

C93MAX.

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

Bar Code Decoder Engine = N43XX and N73XX

Scan the bar code below to set all Straight 2 of 5 parameters to their default value.

R25DFT.

Straight 2 of 5 Industrial On/Off

Default = Off

On

R25ENA1.

* Off

R25ENA0.

Straight 2 of 5 Industrial Redundancy

If you are encountering errors when reading Straight 2 of 5 Industrial bar codes, you may want to adjust the redundancy count. Redundancy adjusts the number of times a bar code is decoded before transmission, which may reduce the number of errors. Note that the higher the redundancy count, the longer it will take to decode the bar code. To adjust the redundancy, scan the **Straight 2 of 5 Industrial Redundancy** bar code below, then scan a redundancy count between 0 and 10 on 0 - 9 (page 5-128) then scan Save on Save, Discard, Reset (page 5-131). *Default = 0.*

Straight 2 of 5 Industrial Redundancy

R25VOT.

Straight 2 of 5 Industrial Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 5-20) for additional information. Minimum and Maximum lengths = 1-80. *Minimum Default = 3, Maximum Default = 80.*

Minimum Message Length

R25MIN.

Maximum Message Length

R25MAX.

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

Bar Code Decoder Engine = N43XX and N73XX

Scan the bar code below to set all Straight 2 of 5 IATA parameters to their default value.

Note: This symbology is also known as Airline Code 5.

A25DFT.

Straight 2 of 5 IATA On/Off

Default = Off

On

A25ENA1.

* Off

A25ENA0.

Straight 2 of 5 IATA Redundancy

If you are encountering errors when reading Straight 2 of 5 IATA bar codes, you may want to adjust the redundancy count. Redundancy adjusts the number of times a bar code is decoded before transmission, which may reduce the number of errors. Note that the higher the redundancy count, the longer it will take to decode the bar code. To adjust the redundancy, scan the **Straight 2 of 5 IATA Redundancy** bar code below, then scan a redundancy count between 0 and 10 on 0 - 9 (page 5-128) then scan Save on Save, Discard, Reset (page 5-131). *Default = 0.*

Straight 2 of 5 IATA Redundancy

A25VOT.

Straight 2 of 5 IATA Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 5-20) for additional information. Minimum and Maximum lengths = 1-80. *Minimum Default = 13, Maximum Default = 15.*

Minimum Message Length

A25MIN.

Maximum Message Length

A25MAX.

Matrix 2 of 5

Bar Code Decoder Engine = N43XX and N73XX

Scan the bar code below to set all Matrix 2 of 5 parameters to their default value.

X25DFT.

Matrix 2 of 5 On/Off

On

X25ENA1.

* Off

X25ENA0.

Matrix 2 of 5 Check Character

No Check Character indicates that the scanner 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 Matrix 2 of 5 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**, the scanner only reads Matrix 2 of 5 bar codes printed with a check character, and will transmit this character at the end of the scanned data.

Default = No Check Character.

* No Check Character

Validate, but Don't Transmit

Validate and Transmit

Matrix 2 of 5 Redundancy

If you are encountering errors when reading Matrix 2 of 5 bar codes, you may want to adjust the redundancy count. Redundancy adjusts the number of times a bar code is decoded before transmission, which may reduce the number of errors. Note that the higher the redundancy count, the longer it will take to decode the bar code. To adjust the redundancy, scan the Matrix 2 of 5 Redundancy bar code below, then scan a redundancy count between 0 and 10 on 0 - 9 (page 5-128) then scan Save on Save, Discard, Reset (page 5-131). *Default = 0.*

Matrix 2 of 5 Redundancy

Matrix 2 of 5 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 5-20) for additional information. Minimum and Maximum lengths = 1-80. *Minimum Default = 3, Maximum Default = 80.*

Minimum Message Length

X25MIN.

Maximum Message Length

X25MAX.

Code 11

Bar Code Decoder Engine = N43XX and N73XX

Scan the bar code below to set all Code 11 parameters to their default value.

C11DFT.

Code 11 On/Off

On

C11ENA1.

* Off

C11ENA0.

Check Digits Required

These options set whether 1 or 2 check digits are required with Code 11 bar codes. **Auto Select Check Digits** determines the number of check digits based on the length of the bar code. If the bar code is 10 digits or more, 2 check digits are required. If it is 9 digits or less, 1 check digit is required. The check digit data is only transmitted if you program that feature. See Check Digit Validation (page 5-47). *Default = One Check Digit Required.*

* One Check Digit Required

C11CK20.

Two Check Digits Required

C11CK21.

Auto Select Check Digits Required

C11CK22.

Check Digit Validation

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

Validate and Transmit One Check Digit

C11CK23.

Validate and Transmit Two Check Digits

C11CK24.

Validate and Transmit Auto Select Check Digits

C11CK25.

Code 11 Redundancy

If you are encountering errors when reading Code 11 bar codes, you may want to adjust the redundancy count. Redundancy adjusts the number of times a bar code is decoded before transmission, which may reduce the number of errors. Note that the higher the redundancy count, the longer it will take to decode the bar code. To adjust the redundancy, scan the **Code 11 Redundancy** bar code below, then scan a redundancy count between 0 and 10 on 0 - 9 (page 5-128) then scan Save on Save, Discard, Reset (page 5-131). *Default = 0.*

Code 11 Redundancy

C11VOT.

Code 11 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 5-20) for additional information. Minimum and Maximum lengths = 1-80. *Minimum Default = 3, Maximum Default = 80.*

Minimum Message Length

C11MIN.

Maximum Message Length

C11MAX.

Code 128

Bar Code Decoder Engine = N43XX and N73XX

Scan the bar code below to set all Code 128 parameters to their default value.

128DFT.

Code 128 On/Off

* On

128ENA1.

Off

128ENA0.

Code 128 Group Separator Output

If you wish to convert FNC1 characters into group separator characters “GS” (0x1D hex) with your Code 128 bar code output, scan the **On** bar code. When **Off** is scanned, the group separator is not output. *Default =Off.*

On

128GSE1.

* Off

128GSE0.

Code 128 Redundancy

If you are encountering errors when reading Code 128 bar codes, you may want to adjust the redundancy count. Redundancy adjusts the number of times a bar code is decoded before transmission, which may reduce the number of errors. Note that the higher the redundancy count, the longer it will take to decode the bar code. To adjust the redundancy, scan the Code 128 Redundancy bar code below, then scan a redundancy count between 0 and 10 on 0 - 9 (page 5-128) then scan Save on Save, Discard, Reset (page 5-131). *Default = 0.*

Code 128 Redundancy

128VOT.

Code 128 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 5-20) for additional information. Minimum and Maximum lengths = 1-80. *Minimum Default = 3, Maximum Default = 80.*

Minimum Message Length

128MIN.

Maximum Message Length

128MAX.

GS1-128 (formerly UCC/EAN-128)

Bar Code Decoder Engine = N43XX and N73XX

Scan the bar code below to set all GS1-128 parameters to their default value.

GS1DFT.

GS1-128 On/Off

Default = On

* On

GS1ENA1.

Off

GS1ENA0.

GS1-128 Application Identifier Parsing

This allows a single GS1-128 bar code to be broken into multiple transmissions based on the presence of **application identifiers (AI)** embedded in the bar code. Scan **Transmit Without Identifiers** if you want the bar code broken into packets and stripped of the application identifiers. If you want the application identifiers included, scan **Transmit With Identifiers**. *Default = Off.*

* Off

GS1EMU0.

Transmit Without Identifiers

GS1EMU1.

Transmit With Identifiers

GS1EMU2.

GS1-128 Redundancy

If you are encountering errors when reading GS1-128 bar codes, you may want to adjust the redundancy count. Redundancy adjusts the number of times a bar code is decoded before transmission, which may reduce the number of errors. Note that the higher the redundancy count, the longer it will take to decode the bar code. To adjust the redundancy, scan the **GS1-128 Redundancy** bar code below, then scan a redundancy count between 0 and 10 on 0 - 9 (page 5-128) then scan Save on Save, Discard, Reset (page 5-131). *Default = 0.*

GS1-128 Redundancy

GS1VOT.

GS1-128 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 5-20) for additional information. Minimum and Maximum lengths = 1-80. *Minimum Default = 3, Maximum Default = 80.*

Minimum Message Length

GS1MIN.

Maximum Message Length

GS1MAX.

Telepen

Bar Code Decoder Engine = N43XX and N73XX

Scan the bar code below to set all Telepen parameters to their default value.

TELDFT.

Telepen On/Off

Default = Off

On

TELENA1.

* Off

TELENA0.

Telepen Output

Using AIM Telepen Output, the scanner reads symbols with start/stop pattern 1 and decodes them as standard full ASCII (start/stop pattern 1). When Original Telepen Output is selected, the scanner 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.*

* AIM Telepen Output

TELOLD0.

Original Telepen Output

TELOLD1.

Telepen Redundancy

If you are encountering errors when reading Telepen bar codes, you may want to adjust the redundancy count. Redundancy adjusts the number of times a bar code is decoded before transmission, which may reduce the number of errors. Note that the higher the redundancy count, the longer it will take to decode the bar code. To adjust the redundancy, scan the **Telepen Redundancy** bar code below, then scan a redundancy count between 0 and 10 on 0 - 9 (page 5-128) then scan Save on Save, Discard, Reset (page 5-131). *Default = 0.*

Telepen Redundancy

TELVOT.

Telepen Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 5-20) for additional information. Minimum and Maximum lengths = 1-80. *Minimum Default = 3, Maximum Default = 80.*

Minimum Message Length

TELMIN.

Maximum Message Length

TELMAX.

UPC-A

Bar Code Decoder Engine = N43XX and N73XX

Scan the bar code below to set all UPC-A parameters to their default value.

UPADFT.

UPC-A On/Off

Default = On.

* On

UPAENA1.

Off

UPAENA0.

UPC-A Number System and Check Digit

UPC-A sample showing the number system and check digit:

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 scanner can be programmed so it will not transmit it. *Default = On.*

* On

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.*

* On

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.*

2 Digit Addenda On

UPAAD21.

* 2 Digit Addenda Off

UPAAD20.

5 Digit Addenda On

UPAAD51.

* 5 Digit Addenda Off

UPAAD50.

UPC-A Addenda Required

When **Required** is scanned, the scanner will only read UPC-A bar codes that have addenda. You must then turn on a UPC-A Addenda (page 5-58). *Default = Not Required.*

Required

UPAARQ1.

* Not Required

UPAARQ0.

UPC-A Addenda Timeout

You can set a time during which the scanner 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. 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 on 0 - 9 (page 5-128) then scan Save on Save, Discard, Reset (page 5-131). *Default = 100.*

Note: The Addenda Timeout setting is applied to all addenda and coupon code searches

Addenda Timeout

DLYADD.

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 = Off.*

On

UPAADS1.

* Off

UPAADS0.

UPC-A Redundancy

If you are encountering errors when reading UPC-A bar codes, you may want to adjust the redundancy count. Redundancy adjusts the number of times a bar code is decoded before transmission, which may reduce the number of errors. Note that the higher the redundancy count, the longer it will take to decode the bar code. To adjust the redundancy, scan the **UPC-A Redundancy** bar code below, then scan a redundancy count between 0 and 10 on 0 - 9 (page 5-128) then scan Save on Save, Discard, Reset (page 5-131). *Default = 0.*

UPC-A Redundancy

UPAVOT.

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**), the scanner treats Coupon Codes and Extended Coupon Codes as single bar codes.

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

If you scan the **Require Concatenation** code, the scanner 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.

* Off

CPNENA0.

Allow Concatenation

CPNENA1.

Require Concatenation

CPNENA2.

UPC-A Number System 4 Addenda Required

This setting programs the scanner to require a coupon code only on UPC-A bar codes that begin with a “4.” The following settings can be programmed:

Require Coupon Code: All UPC-A bar codes that begin with a “4” must have a coupon code. The UPC-A bar code with the coupon code is then transmitted as a single, concatenated bar code. If a coupon code is not found within the UPC-A Addenda Timeout (page 5-59) period, the UPC-A bar code is discarded.

Don’t Require Coupon Code: If you have selected Require Coupon Code, and you want to disable this feature, scan Don’t Require Coupon Code. UPC-A bar codes are transmitted, depending on the setting you are using for UPC-A/ EAN-13 with Extended Coupon Code (page 5-61).

Default = Don’t Require Coupon Code.

* Don’t Require Coupon Code

ARQSY40.

Require Coupon Code

ARQSY41.

UPC-A Number System 5 Addenda Required

This setting programs the scanner to require any combination of a coupon code, a 2 digit addenda, or a 5 digit addenda on UPC-A bar codes that begin with a “5.” The following settings can be programmed:

Require Coupon Code/Addenda: All UPC-A bar codes that begin with a “5” must have a coupon code, a 2 digit addenda, a 5 digit addenda, or a combination of these addenda. The UPC-A bar code with the coupon code and/or addenda is then transmitted as a single, concatenated bar code. If a coupon code and/or required addenda is not found within the UPC-A Addenda Timeout (page 5-59) period, the UPC-A bar code is discarded.

Don’t Require Coupon Code/Addenda: If you have selected **Require Coupon Code/Addenda**, and you want to disable this feature, scan **Don’t Require Coupon Code/Addenda**. UPC-A bar codes are transmitted, depending on the setting you are using for UPC-A/EAN-13 with Extended Coupon Code (page 5-61).

Default = Don’t Require Coupon Code/Addenda.

* Don’t Require Coupon Code/Addenda

ARQSY50.

Require 2 Digit Addenda

ARQSY51.

Require 5 Digit Addenda

ARQSY52.

Require 2 or 5 Digit Addenda

ARQSY53.

Require Coupon Code

ARQSY54.

Require Coupon Code or 2 Digit Addenda

ARQSY55.

Require Coupon Code or 5 Digit Addenda

ARQSY56.

Require Coupon Code, 2 Digit Addenda, or 5 Digit Addenda

ARQSY57.

UPC-A/EAN-13 Addenda Timeout

You can set a time during which the scanner looks for a coupon code. If a coupon code 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/EAN-13 with Extended Coupon Code (page 5-61) or UPC-A Number System 4 Addenda Required (page 5-62). 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 on 0 - 9 (page 5-128) then scan Save on Save, Discard, Reset (page 5-131). *Default = 100.*

Note: The Addenda Timeout setting is applied to all addenda and coupon code searches.

Addenda Timeout

DLYADD.

UPC-E0

Bar Code Decoder Engine = N43XX and N73XX

Scan the bar code below to set all UPC-E0 parameters to their default value.

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 EAN/JAN-13 On/Off (page 5-71). *Default = On.*

* UPC-E0 On

UPEEN01.

UPC-E0 Off

UPEEN00.

UPC-E0 Expand

UPC-E0 Expand expands the UPC-E code to the 12 digit, UPC-A format. *Default = Off.*

On

UPEEXP1.

* Off

UPEEXP0.

UPC-E0 Number System and Check Digit

UPC-E0 sample showing the number system and check digit:

UPC-E0 Number System

The numeric system digit of a UPC-A symbol is normally transmitted at the beginning of scanned data. When using UPC-E Expand, the unit can be programmed so it will not transmit it. *Default = On.*

* On

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 = Off.*

On

* 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 = Off.*

On

UPENSX1.

* Off

UPENSX0.

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.*

2 Digit Addenda On

UPEAD21.

* 2 Digit Addenda Off

UPEAD20.

5 Digit Addenda On

UPEAD51.

* 5 Digit Addenda Off

UPEAD50.

UPC-E0 Addenda Required

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

Required

UPEARQ1.

* Not Required

UPEARQ0.

UPC-E0 Addenda Timeout

You can set a time during which the scanner 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-E0 Addenda Required (page 5-69). 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 on 0 - 9 (page 5-128) then scan Save on Save, Discard, Reset (page 5-131). *Default = 100.*

Note: The Addenda Timeout setting is applied to all addenda and coupon code searches

Addenda Timeout

DLYADD.

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 = Off.*

On

UPEADS1.

* Off

UPEADS0.

UPC-E0 Redundancy

If you are encountering errors when reading UPC-E0 bar codes, you may want to adjust the redundancy count. Redundancy adjusts the number of times a bar code is decoded before transmission, which may reduce the number of errors. Note that the higher the redundancy count, the longer it will take to decode the bar code. To adjust the redundancy, scan the **UPC-E0 Redundancy** bar code below, then scan a redundancy count between 0 and 10 on 0 - 9 (page 5-128) then scan Save on Save, Discard, Reset (page 5-131). *Default = 1.*

UPC-E0 Redundancy

UPEVOT.

EAN/JAN-13

Bar Code Decoder Engine = N43XX and N73XX

Scan the bar code below to set all EAN/JAN-13 parameters to their default value.

E13DFT.

EAN/JAN-13 On/Off

Default = On

* On

E13ENA1.

Off

E13ENA0.

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.*

* On

E13CKX1.

Off

E13CKX0.

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.*

2 Digit Addenda On

E13AD21.

* 2 Digit Addenda Off

E13AD20.

5 Digit Addenda On

E13AD51.

* 5 Digit Addenda Off

E13AD50.

EAN/JAN-13 Addenda Required

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

Required

E13ARQ1.

* Not Required

E13ARQ0.

EAN-13 Beginning with 2 Addenda Required

This setting programs the scanner to require a 2 digit addenda only on EAN-13 bar codes that begin with a “2.” The following settings can be programmed:

Require 2 Digit Addenda: All EAN-13 bar codes that begin with a “2” must have a 2 digit addendum. The EAN-13 bar code with the 2 digit addendum is then transmitted as a single, concatenated bar code. If a 2 digit addendum is not found within the Addenda Timeout period, the EAN-13 bar code is discarded.

Note: If you are using EAN-13 Beginning with 290 Addenda Required (page 5-74), that setting will take precedence over this one.

Don’t Require 2 Digit Addenda: If you have selected Require 2 Digit Addenda, and you want to disable this feature, scan Don’t Require 2 Digit Addenda. EAN-13 bar codes are transmitted, depending on the setting you are using for EAN/JAN-13 Addenda Required (page 5-73).

Default = Don’t Require 2 Digit Addenda.

* Don’t Require 2 Digit Addenda

ARQSY20.

Require 2 Digit Addenda

ARQSY21.

EAN-13 Beginning with 290 Addenda Required

This setting programs the scanner to require a 5 digit addenda only on EAN-13 bar codes that begin with “290.” The following settings can be programmed:

Require 5 Digit Addenda: All EAN-13 bar codes that begin with “290” must have a 5 digit addendum. The EAN-13 bar code with the 5 digit addendum is then transmitted as a single, concatenated bar code. If a 5 digit addendum is not found within the Addenda Timeout period, the EAN-13 bar code is discarded.

Note: If you are using EAN-13 Beginning with 2 Addenda Required (page 5-73), this setting will take precedence.

Don’t Require 5 Digit Addenda: If you have selected Require 5 Digit Addenda, and you want to disable this feature, scan Don’t Require 5 Digit Addenda. EAN-13 bar codes are transmitted, depending on the setting you are using for EAN/JAN-13 Addenda Required (page 5-73).

Default = Don’t Require 5 Digit Addenda.

* Don’t Require 5 Digit Addenda

ARQ2900.

Require 5 Digit Addenda

ARQ2901.

EAN-13 Beginning with 378/379 Addenda Required

This setting programs the scanner to require any combination of a 2 digit addenda or a 5 digit addenda on EAN-13 bar codes that begin with a “378” or “379.” The following settings can be programmed:

Require Addenda: All EAN-13 bar codes that begin with a “378” or “379” must have a 2 digit addenda, a 5 digit addenda, or a combination of these addenda. The EAN-13 bar code with the addenda is then transmitted as a single, concatenated bar code. If the required addenda is not found within the Addenda Timeout period, the EAN-13 bar code is discarded.

Don’t Require Addenda: If you have selected Require Addenda, and you want to disable this feature, scan **Don’t Require Addenda**. EAN-13 bar codes are transmitted, depending on the setting you are using for EAN/JAN-13 Addenda Required (page 5-73).

Default = Don’t Require Addenda.

* Don’t Require Addenda

ARQ3780.

Require 2 Digit Addenda

ARQ3781.

Require 5 Digit Addenda

ARQ3782.

Require 2 or 5 Digit Addenda

ARQ3783.

EAN-13 Beginning with 414/419 Addenda Required

This setting programs the scanner to require any combination of a 2 digit addenda or a 5 digit addenda on EAN-13 bar codes that begin with a “414” or “419.” The following settings can be programmed:

Require Addenda: All EAN-13 bar codes that begin with a “414” or “419” must have a 2 digit addenda, a 5 digit addenda, or a combination of these addenda. The EAN-13 bar code with the addenda is then transmitted as a single, concatenated bar code. If the required addenda is not found within the Addenda Timeout period, the EAN-13 bar code is discarded.

Don’t Require Addenda: If you have selected **Require Addenda**, and you want to disable this feature, scan **Don’t Require Addenda**. EAN-13 bar codes are transmitted, depending on the setting you are using for EAN/JAN-13 Addenda Required (page 5-73).

Default = Don’t Require Addenda.

* Don’t Require Addenda

ARQ4140.

Require 2 Digit Addenda

ARQ4141.

Require 5 Digit Addenda

ARQ4142.

Require 2 or 5 Digit Addenda

ARQ4143.

EAN-13 Beginning with 434/439 Addenda Required

This setting programs the scanner to require any combination of a 2 digit addenda or a 5 digit addenda on EAN-13 bar codes that begin with a “434” or “439.” The following settings can be programmed:

Require Addenda: All EAN-13 bar codes that begin with a “434” or “439” must have a 2 digit addenda, a 5 digit addenda, or a combination of these addenda. The EAN-13 bar code with the addenda is then transmitted as a single, concatenated bar code. If the required addenda is not found within the Addenda Timeout period, the EAN-13 bar code is discarded.

Don’t Require Addenda: If you have selected Require Addenda, and you want to disable this feature, scan Don’t Require Addenda. EAN-13 bar codes are transmitted, depending on the setting you are using for EAN/JAN-13 Addenda Required (page 5-73).

Default = Don’t Require Addenda.

* Don’t Require Addenda

ARQ4340.

Require 2 Digit Addenda

ARQ4341.

Require 5 Digit Addenda

ARQ4342.

Require 2 or 5 Digit Addenda

ARQ4343.

EAN-13 Beginning with 977 Addenda Required

This setting programs the scanner to require a 2 digit addenda only on EAN-13 bar codes that begin with “977.” The following settings can be programmed:

Require 2 Digit Addenda: All EAN-13 bar codes that begin with “977” must have a 2 digit addendum. The EAN-13 bar code with the 2 digit addendum is then transmitted as a single, concatenated bar code. If a 2 digit addendum is not found within the Addenda Timeout period, the EAN-13 bar code is discarded.

Don’t Require 2 Digit Addenda: If you have selected Require 2 Digit Addenda, and you want to disable this feature, scan Don’t Require 2 Digit Addenda. EAN-13 bar codes are transmitted, depending on the setting you are using for EAN/JAN-13 Addenda Required (page 5-73).

Default = Don’t Require 2 Digit Addenda.

* Don’t Require 2 Digit Addenda

ARQ9770.

Require 2 Digit Addenda

ARQ9771.

EAN-13 Beginning with 978 Addenda Required

This setting programs the scanner to require a 5 digit addenda only on EAN-13 bar codes that begin with “978.” The following settings can be programmed:

Require 5 Digit Addenda: All EAN-13 bar codes that begin with “978” must have a 5 digit addendum. The EAN-13 bar code with the 5 digit addendum is then transmitted as a single, concatenated bar code. If a 5 digit addendum is not found within the Addenda Timeout period, the EAN-13 bar code is discarded.

Don’t Require 5 Digit Addenda: If you have selected Require 5 Digit Addenda, and you want to disable this feature, scan Don’t Require 5 Digit Addenda. EAN-13 bar codes are transmitted, depending on the setting you are using for EAN/JAN-13 Addenda Required (page 5-73).

Default = Don’t Require 5 Digit Addenda.

* Don’t Require 5 Digit Addenda

ARQ9780.

Require 5 Digit Addenda

ARQ9781.

EAN-13 Beginning with 979 Addenda Required

This setting programs the scanner to require a 5 digit addenda only on EAN-13 bar codes that begin with “979.” The following settings can be programmed:

Require 5 Digit Addenda: All EAN-13 bar codes that begin with “979” must have a 5 digit addendum. The EAN-13 bar code with the 5 digit addendum is then transmitted as a single, concatenated bar code. If a 5 digit addendum is not found within the Addenda Timeout period, the EAN-13 bar code is discarded.

Don’t Require 5 Digit Addenda: If you have selected Require 5 Digit Addenda, and you want to disable this feature, scan Don’t Require 5 Digit Addenda. EAN-13 bar codes are transmitted, depending on the setting you are using for EAN/JAN-13 Addenda Required (page 5-73).

Default = Don’t Require 5 Digit Addenda.

* Don’t Require 5 Digit Addenda

ARQ9790.

Require 5 Digit Addenda

ARQ9791.

EAN/JAN-13 Addenda Timeout

You can set a time during which the scanner 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 EAN/JAN-13 Addenda Required. 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 on 0 - 9 (page 5-128) then scan Save on Save, Discard, Reset (page 5-131).. *Default = 100.*

Note: The Addenda Timeout setting is applied to all addenda and coupon code searches.

Addenda Timeout

DLYADD.

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 = Off.*

Note: If you want to enable or disable EAN13 with Extended Coupon Code, refer to UPC-A/EAN-13 with Extended Coupon Code (page 5-61).

On

E13ADS1.

* Off

E13ADS0.

EAN/JAN-13 Redundancy

If you are encountering errors when reading EAN/JAN-13 bar codes, you may want to adjust the redundancy count. Redundancy adjusts the number of times a bar code is decoded before transmission, which may reduce the number of errors. Note that the higher the redundancy count, the longer it will take to decode the bar code. To adjust the redundancy, scan the **EAN/JAN-13 Redundancy** bar code below, then scan a redundancy count between 0 and 10 on 0 - 9 (page 5-128) then scan Save on Save, Discard, Reset (page 5-131).. *Default = 0.*

EAN/JAN-13 Redundancy

E13VOT.

ISBN Translate

ISBNs are printed on books using the EAN-13 bar code symbology. To translate EAN-13 Bookland symbols into their equivalent ISBN number format, scan the **On** bar code below. *Default = Off.*

On

E13ISB1.

* Off

E13ISB0.

Convert ISBN to 13-Digit

When translating EAN-13 codes to the ISBN format, you can convert the bar code to a 13 digit format by scanning the **Convert to 13-Digit On** bar code below. *Default = Convert to 13-Digit Off.*

Convert to 13-Digit On

E13I131.

* Convert to 13-Digit Off

E13I130.

ISBN Reformat

In normal use, the first two or three digits of an EAN-13 bar code identify the country of origin. The country prefixes are 978 and 979. To reformat ISBN codes so the country prefix is dropped out, scan the **Reformat On** bar code below. *Default = Reformat Off.*

Reformat On

E13IBR1.

* Reformat Off

E13IBR0.

ISSN Translate

When **On** is scanned, EAN-13 977 Bookland symbols are translated into their equivalent 8-digit ISSN number format. For example, 9770123456787 will be transmitted as 01234560. *Default = Off.*

On

E13ISS1.

* Off

E13ISS0.

ISSN Reformat

When **Reformat On** is scanned, EAN-13 977 Bookland symbols are translated into their equivalent 8-digit ISSN number format, with hyphens added to the output. For example, 9770123456787 will be transmitted as 0123-456-0. (You must first scan **ISSN Translate On** before scanning **Reformat On**.) *Default = Reformat Off.*

Reformat On

E13ISR1.

* Reformat Off

E13ISR0.

EAN/JAN-8

Bar Code Decoder Engine = N43XX and N73XX

Scan the bar code below to set all EAN/JAN-8 parameters to their default value.

EA8DFT.

EAN/JAN-8 On/Off

Default = On

* On

EA8ENA1.

Off

EA8ENA0.

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.*

* On

EA8CKX1.

Off

EA8CKX0.

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.*

2 Digit Addenda On

EA8AD21.

* 2 Digit Addenda Off

EA8AD20.

5 Digit Addenda On

EA8AD51.

* 5 Digit Addenda Off

EA8AD50.

EAN/JAN-8 Addenda Required

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

Required

EA8ARQ1.

* Not Required

EA8ARQ0.

EAN/JAN-8 Addenda Timeout

You can set a time during which the scanner 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 EAN/JAN-8 Addenda Required. 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 on 0 - 9 (page 5-128) then scan Save on Save, Discard, Reset (page 5-131).. *Default = 100.*

Note: The Addenda Timeout setting is applied to all addenda and coupon code searches.

Addenda Timeout

DLYADD.

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 = Off.*

On

EA8ADS1.

* Off

EA8ADS0.

EAN/JAN-8 Redundancy

If you are encountering errors when reading EAN/JAN-8 bar codes, you may want to adjust the redundancy count. Redundancy adjusts the number of times a bar code is decoded before transmission, which may reduce the number of errors. Note that the higher the redundancy count, the longer it will take to decode the bar code. To adjust the redundancy, scan the **EAN/JAN-8 Redundancy** bar code below, then scan a redundancy count between 0 and 10 on 0 - 9 (page 5-128) then scan Save on Save, Discard, Reset (page 5-131).. *Default = 0*.

EAN/JAN-8 Redundancy

EA8VOT.

MSI

Bar Code Decoder Engine = N43XX and N73XX

Scan the bar code below to set all MSI parameters to their default value.

MSIDFT.

MSI On/Off

On

MSIENA1.

* Off

MSIENA0.

MSI Check Character

Different types of check characters are used with MSI bar codes. You can program the scanner 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 and Transmit**, the scanner 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, 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.

* Validate Type 10, but Don't Transmit

MSICHK0.

Validate Type 10 and Transmit

MSICHK1.

Validate 2 Type 10 Characters, but Don't Transmit

MSICHK2.

Validate 2 Type 10 Characters and Transmit

MSICHK3.

Disable MSI Check Characters

MSICHK6.

MSI Redundancy

If you are encountering errors when reading MSI bar codes, you may want to adjust the redundancy count. Redundancy adjusts the number of times a bar code is decoded before transmission, which may reduce the number of errors. Note that the higher the redundancy count, the longer it will take to decode the bar code. To adjust the redundancy, scan the MSI Redundancy bar code below, then scan a redundancy count between 0 and 10 on 0 - 9 (page 5-128) then scan Save on Save, Discard, Reset (page 5-131).. *Default = 0.*

MSI Redundancy

MSIVOT.

MSI Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 5-20) for additional information. Minimum and Maximum lengths = 1-80. *Minimum Default = 3, Maximum Default = 80.*

Minimum Message Length

MSIMIN.

Maximum Message Length

MSIMAX.

Plessey Code

Bar Code Decoder Engine = N43XX and N73XX

Scan the bar code below to set all Plessy Code parameters to their default value.

PLSDFT.

Plessey Code On/Off

Default = On

On

PLSENA1.

* Off

PLSENA0.

Plessey Code Check Character

No Check Character indicates that the scanner 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 Plessey 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**, the scanner only reads Plessey bar codes printed with a check character, and will transmit this character at the end of the scanned data.

Default = No Check Character.

* No Check Character

PLSCHK0.

Validate, but Don't Transmit

PLSCHK1.

Validate and Transmit

PLSCHK2.

Plessey Redundancy

If you are encountering errors when reading Plessey bar codes, you may want to adjust the redundancy count. Redundancy adjusts the number of times a bar code is decoded before transmission, which may reduce the number of errors. Note that the higher the redundancy count, the longer it will take to decode the bar code. To adjust the redundancy, scan the Plessey Redundancy bar code below, then scan a redundancy count between 0 and 10 on 0 - 9 (page 5-128) then scan Save on Save, Discard, Reset (page 5-131).. *Default = 0.*

Plessey Redundancy

PLSVOT.

Plessey Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 5-20) for additional information. Minimum and Maximum lengths = 1-80. *Minimum Default = 3, Maximum Default = 80.*

Minimum Message Length

PLSMIN.

Maximum Message Length

PLSMAX.

GS1 DataBar

Bar Code Decoder Engine = N43XX and N73XX

GS1 DataBar Omnidirectional (RSS Omnidirectional)

Scan the bar code below to set all GS1 DataBar Omnidirectional (RSS Omnidirectional) parameters to their default value.

RSSDFT.

GS1 DataBar Omnidirectional (RSS Omnidirectional) On/Off

* On

RSSENA1.

Off

RSSENA0.

GS1 DataBar Omnidirectional Redundancy

If you are encountering errors when reading GS1 DataBar Omnidirectional bar codes, you may want to adjust the redundancy count. Redundancy adjusts the number of times a bar code is decoded before transmission, which may reduce the number of errors. Note that the higher the redundancy count, the longer it will take to decode the bar code. To adjust the redundancy, scan the **GS1 DataBar Omnidirectional Redundancy** bar code below, then scan a redundancy count between 0 and 10 on 0 - 9 (page 5-128) then scan Save on Save, Discard, Reset (page 5-131).. *Default = 0.*

GS1 DataBar Omnidirectional Redundancy

RSSVOT.

GS1 DataBar Limited (RSS Limited)

Scan the bar code below to set all GS1 DataBar Limited (RSS Limited) parameters to their default value.

RSLDFT.

GS1 DataBar Limited (RSS Limited) On/Off

* On

RSLENA1.

Off

RSLENA0.

GS1 DataBar Limited Redundancy

If you are encountering errors when reading GS1 DataBar Limited bar codes, you may want to adjust the redundancy count. Redundancy adjusts the number of times a bar code is decoded before transmission, which may reduce the number of errors. Note that the higher the redundancy count, the longer it will take to decode the bar code. To adjust the redundancy, scan the **GS1 DataBar Limited Redundancy** bar code below, then scan a redundancy count between 0 and 10 on 0 - 9 (page 5-128) then scan Save on Save, Discard, Reset (page 5-131). *Default = 0.*

GS1 DataBar Limited Redundancy

RSLVOT.

GS1 DataBar Expanded (RSS Expanded)

Scan the bar code below to set all GS1 DataBar Expanded (RSS Expanded) parameters to their default value.

RSEDFT.

GS1 DataBar Expanded On/Off

Default = On

* On

RSEENA1.

Off

RSEENA0.

GS1 DataBar Expanded Redundancy

If you are encountering errors when reading **GS1 DataBar Expanded** bar codes, you may want to adjust the redundancy count. Redundancy adjusts the number of times a bar code is decoded before transmission, which may reduce the number of errors. Note that the higher the redundancy count, the longer it will take to decode the bar code. To adjust the redundancy, scan the **GS1 DataBar Expanded Redundancy** bar code below, then scan a redundancy count between 0 and 10 on 0 - 9 (page 5-128) then scan Save on Save, Discard, Reset (page 5-131). *Default = 0.*

GS1 DataBar Expanded Redundancy

RSEVOT.

GS1 DataBar Expanded Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 5-20) for additional information. Minimum and Maximum lengths = 1-80. *Minimum Default = 3, Maximum Default = 80.*

Minimum Message Length

RSEMIN.

Maximum Message Length

RSEMAX.

Trioptic Code

Bar Code Decoder Engine = N43XX and N73XX

Trioptic Code is used for labeling magnetic storage media. *Default = Off.*

On

TRIENA1.

* Off

TRIENA0.

GS1 Emulation

Bar Code Decoder Engine = N43XX and N73XX

The scanner 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 Chart (page 5-118).

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 Chart (page 5-118).

If **GS1 Code Expansion Off** is scanned, retail code expansion is disabled, and UPC-E expansion is controlled by the UPC-E0 Expand (page 5-65) setting. If the AIM ID is enabled, the value will be the GS1-128 AIM ID,]C1. See Symbology Chart (page 5-118).

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

Default = GS1 Emulation Off.

GS1-128 Emulation

GS1 DataBar Emulation

GS1 Code Expansion Off

EAN8 to EAN13 Conversion

* GS1 Emulation Off

EANEMU0.

Postal Codes

Bar Code Decoder Engine = N43XX and N73XX

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)

Scan the bar code below to set all China Post (Hong Kong 2 of 5) parameters to their default value.

CPCDFT.

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

On

CPCENA1.

* Off

CPCENA0.

China Post (Hong Kong 2 of 5) Redundancy

If you are encountering errors when reading China Post (Hong Kong 2 of 5) bar codes, you may want to adjust the redundancy count. Redundancy adjusts the number of times a bar code is decoded before transmission, which may reduce the number of errors. Note that the higher the redundancy count, the longer it will take to decode the bar code. To adjust the redundancy, scan the **China Post (Hong Kong 2 of 5) Redundancy** bar code below, then scan a redundancy count between 0 and 10 on 0 - 9 (page 5-128) then scan Save on Save, Discard, Reset (page 5-131). *Default = 0.*

China Post (Hong Kong 2 of 5) Redundancy

CPCVOT.

China Post (Hong Kong 2 of 5) Redundancy Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 5-20) for additional information. Minimum and Maximum lengths = 1-80. *Minimum Default = 3, Maximum Default = 80.*

Minimum Message Length

CPCMIN.

Maximum Message Length

CPCMAX.

Data Formatting

Bar Code Decoder Engine = N43XX and N73XX

Data Format Editor Introduction

You may use the Data Format Editor to change the scanner's output. For example, you can use the Data Format Editor to insert characters at certain points in bar code data as it is scanned. The selections in the following pages are used only if you wish to alter the output. *Default Data Format setting = None.*

Normally, when you scan a bar code, it gets outputted automatically; however when you create a format, you must use a "send" command , see Send Commands (page 5-108), within the format program to output data.

Multiple formats may be programmed into the scanner. They are stacked in the order in which they are entered. However, the following list presents the order in which formats are applied:

1. Specific Terminal ID, Actual Code ID, Actual Length
2. Specific Terminal ID, Actual Code ID, Universal Length
3. Specific Terminal ID, Universal Code ID, Actual Length
4. Specific Terminal ID, Universal Code ID, Universal Length
5. Universal Terminal ID, Actual Code ID, Actual Length
6. Universal Terminal ID, Actual Code ID, Universal Length
7. Universal Terminal ID, Universal Code ID, Actual Length
8. Universal Terminal ID, Universal Code ID, Universal Length

The maximum size of a data format configuration is 256 bytes, which includes header information. No format can contain more than 50 bytes.

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

To Add a Data Format

Step 1. Scan the **Enter Data Format** symbol (below).

Step 2. Select Primary/Alternate Format
Determine if this will be your primary data format, or one of 3 alternate formats. This allows you to save a total of 4 different data formats. To program your primary format, scan 0 on 0 - 9 (page 5-128) . If you are programming an alternate format, scan 1, 2, or 3, depending on which alternate format you are programming. See Primary/Alternate Data Formats (page 5-113) for further information.)

Step 3. Terminal Type
Refer to Terminal ID Table (page 5-107) and locate the Terminal ID number for your PC. Scan three numeric bar codes on 0 - 9 (page 5-128) to program the scanner for your terminal ID (you must enter 3 digits). For example, scan 0 0 3 for an AT wedge.
Note: The wildcard for all terminal types is 099.

Step 4. Code I.D.
In the Symbology Chart (page 5-118) find the symbology to which you want to apply the data format. Locate the Hex value for that symbology and scan the 2 digit hex value from the Programming Chart (page 5-128).

Step 5. Length
Specify what length (up to 9999 characters) of data will be acceptable for this symbology. Scan the four digit data

length from the Programming Chart (page 5-128).
Note: 50 characters is entered as 0050. 9999 is a universal number, indicating all lengths.

Step 6. Editor Commands
Refer to Terminal ID Table (page 5-107). Scan the symbols that represent the command you want to enter. 94 alphanumeric characters may be entered for each symbology data format.

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

Enter Data Format

DFMBK3.

Save

MNUSAV.

Discard

MNUABT.

Other Programming Selections

Clear One Data Format

This deletes one data format for one symbology. If you are clearing the primary format, scan 0 from the 0 - 9 (page 5-128). If you are clearing an alternate format, scan 1, 2, or 3, depending on the format you are clearing. Scan the Terminal Type and Code ID, See Symbology Chart (page 5-118), and the bar code data length for the specific data format that you want to delete. All other formats remain unaffected.

Clear all Data Formats

This clears all data formats.

Save to exit and save your data format changes.

Discard to exit without saving any data format changes.

Clear One Data Format

DFMCL3.

Clear All Data Formats

DFMCA3.

Save

MNUSAV.

Discard

MNUABT.

Terminal ID Table

Terminal	Model(s)	Terminal ID
IBM	PC/AT and compatibles	003
	PS2 Keyboard	002
	USB SurePOS Handheld Scanner	128
	USB SurePOS Tabletop Scanner	129
RS232	True	000
	TTL	000
RS485		051
USB	Serial	130
	PC Keyboard	124
	Mac Keyboard	125
	Japanese Keyboard (PC)	134
	HID POS	131

Data Format Editor Commands

Send Commands

Send all characters

F1 Include in the output message all of the characters from the input message, starting from current cursor position, followed by an insert character. *Syntax = F1xx* where xx stands for the insert character's hex value for its ASCII code.
Refer to the ASCII Conversion Chart (Code Page 1252) (page 5-115) for decimal, hex and character codes.

Send a number of characters

F2 Include in the output message a number of characters followed by an insert character. Start from the current cursor position and continue for "nn" characters or through the last character in the input message, followed by character "xx." *Syntax = F2nnxx* where nn stands for the numeric value (00-99) for the number of characters, and xx stands for the insert character's hex value for its ASCII code.
Refer to the ASCII Conversion Chart (Code Page 1252) (page 5-115) for decimal, hex and character codes.

Send all characters up to a particular character

F3 Include in the output message all characters from the input message, starting with the character at the current cursor position and continuing to, but not including, the search character "ss," followed by an insert character. The cursor is moved forward to the "ss" character. *Syntax = F3ssxx* where ss stands for the search character's hex value for its ASCII code, and xx stands for the insert character's hex value for its ASCII code.
Refer to the ASCII Conversion Chart (Code Page 1252) (page 5-115) for decimal, hex and character codes.

Send all but the last characters

E9 Include in the output message all but the last "nn" characters, starting from the current cursor position. The cursor is moved forward to one position past the last input message character included. *Syntax = E9nn* where nn stands for the numeric value (00-99) for the number of characters that will not be sent at the end of the message.

Insert a character multiple times

F4 Insert the name of the bar code's symbology in the output message, without moving the cursor. Only symbologies with a Honeywell ID are included (see Symbology Chart).
Refer to the ASCII Conversion Chart (Code Page 1252) (page 5-115) for decimal, hex and character codes.

Insert symbology name

B3 Insert the name of the bar code's symbology in the output message, without moving the cursor. Only symbologies with a Honeywell ID are included (see Symbology Chart).
Refer to the ASCII Conversion Chart (Code Page 1252) (page 5-115) for decimal, hex and character codes.

Insert bar code length

B4 Insert the bar code's length in the output message, without moving the cursor. The length is expressed as a numeric string and does not include leading zeroes.

Move Commands

Move the cursor forward a number of characters

F5 Move the cursor ahead "nn" characters from current cursor position. *Syntax = F5nn* where nn is the numeric value (00-99) for the number of characters the cursor should be moved ahead.

Move the cursor backward a number of characters

F6 Move the cursor back "nn" characters from current cursor position. *Syntax = F6nn* where nn is the numeric value (00-99) for the number of characters the cursor should be moved back.

Move the cursor to the beginning

F7 Move the cursor to the first character in the input message. *Syntax = F7*.

Move the cursor to the end

EA Move the cursor to the last character in the input message. *Syntax = EA*.

Search Commands

Search forward for a character

F8 Search the input message forward for “xx” character from the current cursor position, leaving the cursor pointing to the “xx” character. *Syntax = F8xx* where xx stands for the search character’s hex value for its ASCII code.
Refer to the ASCII Conversion Chart (Code Page 1252) (page 5-115) for decimal, hex and character codes.

Search backward for a character

F9 Search the input message backward for “xx” character from the current cursor position, leaving the cursor pointing to the “xx” character. *Syntax = F9xx* where xx stands for the search character’s hex value for its ASCII code.
Refer to the ASCII Conversion Chart (Code Page 1252) (page 5-115) for decimal, hex and character codes.

Search forward for a string

B0 Search forward for “s” string from the current cursor position, leaving cursor pointing to “s” string. *Syntax = B0nnnnS* where nnnn is the string length (up to 9999), and S consists of the ASCII hex value of each character in the match string. For example, B0000454657374 will search forward for the first occurrence of the 4 character string “Test.”
Refer to the ASCII Conversion Chart (Code Page 1252) (page 5-115) for decimal, hex and character codes.

Search backward for a string

B1 Search backward for “s” string from the current cursor position, leaving cursor pointing to “s” string. *Syntax = B1nnnnS* where nnnn is the string length (up to 9999), and S consists of the ASCII hex value of each character in the match string. For example, B1000454657374 will search backward for the first occurrence of the 4 character string “Test.”
Refer to the ASCII Conversion Chart (Code Page 1252) (page 5-115) for decimal, hex and character codes.

Search forward for a non-matching character

E6 Search the input message forward for the first non-“xx” character from the current cursor position, leaving the cursor pointing to the non-“xx” character. *Syntax = E6xx* where xx stands for the search character’s hex value for its ASCII code.
Refer to the ASCII Conversion Chart (Code Page 1252) (page 5-115) for decimal, hex and character codes.

Search backward for a non-matching character

E7 Search the input message backward for the first non-“xx” character from the current cursor position, leaving the cursor pointing to the non- “xx” character. *Syntax = E7xx* where xx stands for the search character’s hex value for its ASCII code.
Refer to the ASCII Conversion Chart (Code Page 1252) (page 5-115) for decimal, hex and character codes.

Miscellaneous Commands

Suppress characters

FB Suppress all occurrences of up to 15 different characters, starting at the current cursor position, as the cursor is advanced by other commands. When the FC command is encountered, the suppress function is terminated. The cursor is not moved by the FB command. *Syntax = FBnnxxyy . .zz* where nn is a count of the number of suppressed characters in the list, and xxyy .. zz is the list of characters to be suppressed.

Stop suppressing characters

FC Disables suppress filter and clear all suppressed characters. *Syntax = FC*.

Replace characters

E4 Replaces up to 15 characters in the output message, without moving the cursor. Replacement continues until the E5 command is encountered. *Syntax =* $E4nnxx_1xx_2yy_1yy_2...zz_1zz_2$ where nn is the total count of the number of characters in the list (characters to be replaced plus replacement characters); xx_1 defines characters to be replaced and xx_2 defines replacement characters, continuing through zz_1 and zz_2.

Stop replacing characters

E5 Terminates character replacement. *Syntax = E5*.

Compare characters

FE Compare the character in the current cursor position to the character “xx.” If characters are equal, move the cursor forward one position. *Syntax = FExx* where xx stands for the comparison character’s hex value for its ASCII code. Refer to the ASCII Conversion Chart (Code Page 1252) (page 5-115) for decimal, hex and character codes.

Compare string

B2 Compare the string in the input message to the string “s.” If the strings are equal, move the cursor forward past the end of the string. *Syntax = B2nnnnS* where nnnn is the string length (up to 9999), and S consists of the ASCII hex value of each character in the match string. For example, B2000454657374 will compare the string at the current cursor position with the 4 character string “Test.”
Refer to the ASCII Conversion Chart (Code Page 1252) (page 5-115) for decimal, hex and character codes.

Check for a number

EC Check to make sure there is an ASCII number at the current cursor position. The format is aborted if the character is not numeric.

Check for non-numeric character

ED Check to make sure there is a non-numeric ASCII character at the current cursor position. The format is aborted if the character is numeric.

Insert a delay

EF Inserts a delay of up to 49,995 milliseconds (in multiples of 5), starting from the current cursor position. *Syntax = EFnnnn* where nnnn stands for the delay in 5ms increments, up to 9999. This command can only be used with keyboard wedge interfaces.

Data Formatter

When Data Formatter is turned Off, the bar code data is output to the host as read, including prefixes and suffixes.

Data Formatter Off

You may wish to require the data to conform to a data format you have created and saved. The following settings can be applied to your data format:

Data Formatter On, Not Required, Keep Prefix/Suffix

Scanned data is modified according to your data format, and prefixes and suffixes are transmitted.

Data Formatter On, Not Required, Drop Prefix/Suffix

Scanned data is modified according to your data format. If a data format is found for a particular symbol, those prefixes and suffixes are not transmitted.

Data Format Required, Keep Prefix/Suffix

Scanned data is modified according to your data format, and prefixes and suffixes are transmitted. Any data that does not match your data format requirements generates an error tone and the data in that bar code is not transmitted. If you wish to process this type of bar code without generating an error tone, see Data Format Non-Match Error Tone (page 5-112).

Data Format Required, Drop Prefix/Suffix

Scanned data is modified according to your data format. If a data format is found for a particular symbol, those prefixes and suffixes are not transmitted. Any data that does not match your data format requirements generates an error tone. If you wish to process this type of bar code without generating an error tone, see Data Format Non-Match Error Tone (page 5-112).

Choose one of the following options. *Default = Data Formatter On, Not Required, Keep Prefix/Suffix.*

* Data Formatter On, Not Required, Keep Prefix/ Suffix

Data Formatter On, Not Required, Drop Prefix/ Suffix

Data Format Required, Keep Prefix/Suffix

DFM_EN2.

Data Format Required, Drop Prefix/Suffix

DFM_EN4.

Data Format Non-Match Error Tone

When a bar code is encountered that doesn't match your required data format, the scanner normally generates an error tone. However, you may want to continue scanning bar codes without hearing the error tone. If you scan the Data Format Non-Match Error Tone Off bar code, data that doesn't conform to your data format is not transmitted, and no error tone will sound. If you wish to hear the error tone when a non-matching bar code is found, scan the Data Format Non-Match Error Tone On bar code. *Default = Data Format Non-Match Error Tone On*.

* Data Format Non-Match Error Tone On

DFMDEC0.

Data Format Non-Match Error Tone Off

DFMDEC1.

Primary/Alternate Data Formats

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

Primary Data Format

ALTFNM0.

Data Format 1

ALTFNM1.

Data Format 2

ALTFNM2.

Data Format 3

ALTFNM3.

Single Scan Data Format Change

You can also switch between data formats for a single scan. The next bar code is scanned using an alternate data format, then reverts to the format you have selected above (either Primary, 1, 2, or 3).

For example, you may have set your device to the data format you saved as Data Format 3. You can switch to Data Format 1 for a single button press by scanning the following **Single Scan-Data Format 1** bar code. The next bar code that is scanned uses Data Format 1, then reverts back to Data Format 3.

Single Scan-Primary Data Format

VSAF_0.

Single Scan-Data Format 1

VSAF_1.

Single Scan-Data Format 2

VSAF_2.

Single Scan-Data Format 3

VSAF_3.

ASCII Conversion Chart (Code Page 1252)

ASCII Char	Hexadecimal Value	Decimal Char		ASCII Char	Hexadecimal Value	Decimal Char
NUL	00	1		ESC	1B	27
SOH	01	2		FS	1C	28
STX	02	3		GS	1D	29
ETX	03	4		RS	1E	30
EOT	04	5		US	1F	31
ENQ	05	6		(space)	20	32
ACK	06	7		!	21	33
BEL	07	8		“	22	34
BS	08	9		#	23	35
HT	09	10		$	24	36
LF	0A	11		%	25	37
VT	0B	12		&	26	38
FF	0C	13		‘	27	39
CR	0D	14		(	28	40
SO	0E	15		)	29	41
SI	0F	16		*	2A	42
DLE	10	17		+	2B	43
DC1(XON)	11	18		‘	2C	44
DC2	12	19		–	2D	45
DC3 (XOFF)	13	20		.	2E	46
DC4	14	21		/	2F	47
NAK	15	22		0	30	48
SYN	16	23		1	31	49
ETB	17	24		2	32	50
CAN	18	25		3	33	51
EM	19	26		4	34	52
SUB	1A	27		5	35	53
6	36	54		V	56	86
7	37	55		W	57	87
8	38	56		X	58	88
9	39	57		Y	59	89
:	3A	58		Z	5A	90
;	3B	59		[	5B	91
<	3C	60		\	5C	92
=	3D	61		]	5D	93
>	3E	62		^	5E	94
?	3F	63		_	5F	95
@	40	64		`	60	96
A	41	65		a	61	97
B	42	66		b	62	98
C	43	67		c	63	99
D	44	68		d	64	100

ASCII Char	Hexadecimal Value	Decimal Char		ASCII Char	Hexadecimal Value	Decimal Char
E	45	69		e	65	101
F	46	70		f	66	102
G	47	71		g	67	103
H	48	72		h	68	104
I	49	73		i	69	105
J	4A	74		j	6A	106
K	4B	75		k	6B	107
L	4C	76		l	6C	108
M	4D	77		m	6D	109
N	4E	78		n	6E	110
O	4F	79		o	6F	111
P	50	80		p	70	112
Q	51	81		q	71	113
R	52	82		r	72	114
S	53	83		s	73	115
T	54	84		t	74	116
U	55	85		u	75	117
v	76	118		_	96	150
w	77	119		_	97	151
x	78	120		~	98	152
y	79	121		™	99	153
z	7A	122		š	9A	154
{	7B	123		>	9B	155
|	7C	124		œ	9C	156
}	7D	125			9D	157
~	7E	126		ž	9E	158
<DEL>	7F	127		Ÿ	9F	159
€	80	128			A0	160
	81	129		¡	A1	161
‚	82	130		¢	A2	162
ƒ	83	131		£	A3	163
„	84	132		¤	A4	164
…	85	133		¥	A5	165
†	86	134		¦	A6	166
‡	87	135		§	A7	167
ˆ	88	136		¨	A8	168
‰	89	137		©	A9	169
Š	8A	138		ª	AA	170
‹	8B	139		«	AB	171
Œ	8C	140		¬	AC	172
	8D	141		(soft hyphen)	AD	173
Ž	8E	142		®	AE	174
	8F	143		¯	AF	175

ASCII Char	Hexadecimal Value	Decimal Char		ASCII Char	Hexadecimal Value	Decimal Char
	90	144		°	B0	176
‘	91	145		±	B1	177
’	92	146		²	B2	178
“	93	147		³	B3	179
”	94	148		´	B4	180
•	95	149		µ	B5	181
¶	B6	182		Ö	D6	214
·	B7	183		×	D7	215
¸	B8	184		Ø	D8	216
¹	B9	185		Ù	D9	217
º	BA	186		Ú	DA	218
»	BB	187		Û	DB	219
¼	BC	188		Ü	DC	220
½	BD	189		Ý	DD	221
¾	BE	190		Þ	DE	222
¿	BF	191		ß	DF	223
À	C0	192		à	E0	224
Á	C1	193		á	E1	225
Â	C2	194		â	E2	226
Ã	C3	195		ã	E3	227
Ä	C4	196		ä	E4	228
Å	C5	197		å	E5	229
Æ	C6	198		æ	E6	230
Ç	C7	199		ç	E7	231
È	C8	200		è	E8	232
É	C8	201		é	E9	233
Ê	CA	202		ê	EA	234
Ë	CB	203		ë	EB	235
Ì	CC	204		ì	EC	236
Í	CD	205		í	ED	237
Î	CE	206		î	EE	238
Ï	CF	207		ï	EF	239
Ð	D0	208		ð	F0	240
Ñ	D1	209		ñ	F1	241
Ò	D2	210		ò	F2	242
Ó	D3	211		ó	F3	243
Ô	D4	212		ô	F4	244
Õ	D5	213		õ	F5	245
ö	F6	246		û	FB	251
÷	F7	247		ü	FC	252
ø	F8	248		ý	FD	253
ù	F9	249		þ	FE	254
ú	FA	250		ÿ	FF	255

Symbology Chart

Note: Not all symbologies are supported by your device.

Note: "m" represents the AIM modifier character. Refer to International Technical Specification, Symbology Identifiers, for AIM modifier character details.

Note: Prefix/Suffix entries for specific symbologies override the universal (All Symbologies, 99) entry.

Symbology	**AIM ID**	**Possible AIM ID Modifiers (*m*)**	**Code ID (hex)**
All Symbologies			(0x99)
Australian Post	]X0		A (0x41)
Aztec Code	]z*m*	0-9, A-C	z (0x7A)
British Post	]X0		B (0x42)
Canadian Post	]X0		C (0x43)
China Post	]X0		Q (0x51)
Chinese Sensible Code (Han Xin Code)	]X0		H (0x48)
Codabar	]F*m*	0-1	a (0x61)
Codablock A	]O6	0, 1, 4, 5, 6	V (0x56)
Codablock F	]O*m*	0, 1, 4, 5, 6	q (0x71)
Code 11	]H3		h (0x68)
Code 128	]C*m*	0, 1, 2, 4	j (0x6A)
GS1-128	]C1		I (0x49)
Code 32 Pharmaceutical (PARAF)	]X0		< (0x3C)
Code 39 (supports Full ASCII mode)	]A*m*	0, 1, 3, 4, 5, 7	b (0x62)
Code 49	]T*m*	0, 1, 2, 4	l (0x6C)
Code 93 and 93i	]G*m*	0-9, A-Z, a-m	i (0x69)
Data Matrix	]d*m*	0-6	w (0x77)
EAN-13 (including Bookland EAN)	]E0		d (0x64)
EAN-13 with Add-on	]E3		d (0x64)
EAN-13 with Extended Coupon Code	]E3		d (0x64)
EAN-8	]E4		D (0x44)
EAN-8 with Add-On	]E3		D (0x44)
GS1 Composite	]e*m*	0-3	y (0x79)
GS1 DataBar	]e*m*	0	y (0x79)
GS1 DataBar Limited	]e*m*		{ (0x7B)
GS1 DataBar Omnidirectional	]e*m*		y (0x79)
GS1 DataBar Expanded	]e*m*		} (0x7D)
InfoMail	]X0		, (0x2c)
Intelligent Mail Bar Code	]X0		M (0x4D)
Interleaved 2 of 5	]I*m*	0, 1, 3	e (0x65)
Japanese Post	]X0		J (0x4A)
KIX (Netherlands) Post	]X0		K (0x4B)
Korea Post	]X0		? (0x3F)
Matrix 2 of 5	]X0		m (0x6D)

Symbology	AIM ID	Possible AIM ID Modifiers (*m*)	Code ID (hex)
MaxiCode	]U*m*	0-3	x (0x7 8)
MicroPDF417	]L*m*	3-5	R (0x52)
MSI	]M*m*	0	g (0x67)
NEC 2 of 5	]X0		Y (0x59)
OCR MICR (E 13 B)	]o3		O (0x4F)
OCR SEMI Font	]o3		O (0x4F)
OCR-A	]o1		O (0x4F)
OCR-B	]o2		O (0x4F)
PDF417	]L*m*	0-2	r (0x72)
Planet Code	]X0		L (0x4C)
Postal-4i	]X0		N (0x4E)
Postnet	]X0		P (0x50)
QR Code and Micro QR Code	]Q*m*	0-6	s (0x73)
Straight 2 of 5 IATA	]R*m*	0, 1, 3	f (0x66)
Straight 2 of 5 Industrial	]S0		f (0x66)
TCIF Linked Code 39 (TLC39)	]L2		T (0x54)
Telepen	]B*m*		t (0x54)
UPC-A	]E0		c (0x63)
UPC-A with Add-On			c (0x63)
UPC-A with Extended Coupon Code			c (0x63)
UPC-E	]E0		E (0x45)
UPC-E with Add-on	]E3		E (0x45)
UPC-E1	]X0		E (0x45)

NX3XX Bar Codes Supported by Honeywell

Bar Code Decoder Engine = N43XX and N73XX

Scanner Parameters - General

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*
Reset Factory Defaults	Reset Factory Defaults	RESET
Set Custom Defaults	Set Custom Defaults	MNUCDF
Activate Custom Defaults	Activate Custom Defaults	DEFALT
Aimer Delay	Aimer Delay Off	SCNDLY#####
Reread Delay	Short (500 ms)	DLYRRD500
	* Medium (750 ms)	DLYRRD750
	Long (1000 ms)	DLYRRD1000
	Extra Long (2000 ms)	DLYRRD2000
User Specified Reread Delay	Range 0 - 30,000 ms	DLYRRD#####
Centering	Centering On	DECWIN1
	* Centering Off	DECWIN0
	Left of Centering Window (* 40%)	DECLFT##
	Right of Centering Window (* 60%)	DECRGT##
Laser Scan Angle	48° Scan Angle	LASANG0
	35° Scan Angle	LASANG1
Read Time-Out	Range 0 - 300,000 ms * 3,000 ms	TRGSTO####
Decode Security	* Low	PAPLS1
	Low/Medium	PAPLS2
	Medium/High	PAPLS3
	High	PAPLS4
Power Save Mode Timeout	Range 0-65535 seconds	PWRLPT#####
	* 600 seconds	PWRLPT600
Power Save Mode	Off	PWRMOD0
	Sleep Mode	PWRMOD1
	* Hibernate	PWRMOD2
Prefix/Suffix Selections	Add CR Suffix to All Symbologies	VSUFCR
Prefix	Add Prefix	PREBK2##
	Clear One Prefix	PRECL2
	* Clear All Prefixes	PRECA2
Suffix	Add Suffix	SUFBK2##
	Clear One Suffix	SUFCL2
	* Clear All Suffixes	SUFCA2

Scanner Parameters - Symbologies

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*
All Symbologies	All Symbologies Off	ALLENA0
	All Symbologies On	ALLENA1
Codabar	Default All Codabar Settings	CBRDFT
	* Off	CBRENA0
	On	CBRENA1
Codabar Start/Stop Char.	* Don't Transmit	CBRSSX0
	Transmit	CBRSSX1
Codabar Check Character	* No Check Character	CBRCK20
	Validate Modulo 16, But Don't Transmit	CBRCK21
	Validate Modulo 16, and Transmit	CBRCK22
	Validate Modulo 7 CD, But Don't Transmit	CBRCK23
	Validate Modulo 7 CD, and Transmit	CBRCK24
	Validate CLSI, But Don't Transmit	CBRCK25
	Validate CLSI, and Transmit	CBRCK26
Codabar Concatenation	Off	CBRCCT0
	*On	CBRCCT1
	Require	CBRCCT2
	Concatenation Timeout	DLYCCT
Codabar Redundancy	Range (0 - 10) * 0	CBRVOT##
Codabar Message Length	Minimum (1 - 80) * 3	CBRMIN##
	Maximum (1 - 80) *80	CBRMAX##
Code 39	Default All Code 39 Settings	C39DFT
	Off	C39ENA0
	* On	C39ENA1
Code 39 Start/Stop Character	* Don't Transmit	C39SSX0
	Transmit	C39SSX1
Code 39 Check Char.	* No Check Char.	C39CK20
	Validate, But Don't Transmit	C39CK21
	Validate, and Transmit	C39CK22
Code 39 Redundancy	Range (0 - 10) *0	C39VOT##
Code 39 Message Length	Minimum (1 - 80) *2	C39MIN##
	Maximum (1 - 80) *80	C39MAX##
Code 32 Pharmaceutical (PARAF)	* Off	C39B320
	On	C39B321
Code 39 Full ASCII	* Off	C39ASC0
	On	C39ASC1
Interleaved 2 of 5	Default All Interleaved 2 of 5 Settings	I25DFT
	Off	I25ENA0
	* On	I25ENA1

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*
Follett Formatting	* Off	I25FOL0
	On	I25FOL1
NULL Characters	* Off	I25NUL0
	On	I25NUL1
Interleaved 2 of 5 Check Digit	* No Check Char.	I25CK20
	Validate, But Don't Transmit	I25CK21
	Validate, and Transmit	I25CK22
Interleaved 2 of 5 Redundancy	Range (0 - 10) * 0	I25VOT##
Interleaved 2 of 5 Message Length	Minimum (1 - 80) * 14	I25MIN##
	Maximum (1 - 80) * 14	I25MAX##
NEC 2 of 5	Default All NEC 2 of 5 Settings	N25DFT
	* Off	N25ENA0
	On	N25ENA1
NEC 2 of 5 Check Digit	* No Check Char.	N25CK20
	Validate, But Don't Transmit	N25CK21
	Validate, and Transmit	N25CK22
NEC 2 of 5 Redundancy	Range (0 - 10) * 0	N25VOT##
NEC 2 of 5 Message Length	Minimum (1 - 80) * 3	N25MIN##
	Maximum (1 - 80) * 80	N25MAX##
Code 93	Default All Code 93 Settings	C93DFT
	Off	C93ENA0
	* On	C93ENA1
Code 93 Redundancy	Range (0 - 10) * 0	C93VOT##
Code 93 Message Length	Minimum (1 - 80) * 3	C93MIN##
	Maximum (1 - 80) * 80	C93MAX##
Straight 2 of 5 Industrial	Default All Straight 2 of 5 Industrial Settings	R25DFT
	* Off	R25ENA0
	On	R25ENA1
Straight 2 of 5 Industrial Redundancy	Range (0 - 10) * 0	R25VOT##
Straight 2 of 5 Industrial Message Length	Minimum (1 - 80) * 3	R25MIN##
	Maximum (1 - 80) * 80	R25MAX##
Straight 2 of 5 IATA	Default All Straight 2 of 5 IATA Settings	A25DFT
	* Off	A25ENA0
	On	A25ENA1
Straight 2 of 5 IATA Redundancy	Range (0 - 10) * 0	A25VOT##
Straight 2 of 5 IATA Message Length	Minimum (1 - 80) * 13	A25MIN##
	Maximum (1 - 80) * 15	A25MAX##
Matrix 2 of 5	Default All Matrix 2 of 5 Settings	X25DFT
	* Off	X25ENA0
	On	X25ENA1
Matrix 2 of 5 Redundancy	Range (0 - 10) * 0	X25VOT##

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*
Matrix 2 of 5 Message Length	Minimum (1 - 80) * 3	X25MIN##
	Maximum (1 - 80) * 80	X25MAX##
Matrix 2 of 5 Check Char.	* No Check Char.	X25CK20
	Validate, But Don't Transmit	X25CK21
	Validate and Transmit	X25CK22
Code 11	Default All Code 11 Settings	C11DFT
	* Off	C11ENA0
	On	C11ENA1
Code 11 Check Digits Required	1 Check Digit Required	C11CK20
	*2 Check Digits Required	C11CK21
	Auto Select Check Digits Required	C11CK22
Check Digit Validation	Validate and Transmit One Check Digit	C11CK23
	Validate and Transmit Two Check Digits	C11CK24
	Validate and Transmit Auto Select Check Digits	C11CK25
Code 11 Redundancy	Range (0 - 10) * 0	C11VOT##
Code 11 Message Length	Minimum (1 - 80) * 3	C11MIN##
	Maximum (1 - 80) * 80	C11MAX##
Code 128	Default All Code 128 Settings	128DFT
	Off	128ENA0
	* On	128ENA1
Code 128 Group Separator Output	* Off	128GSE0
	On	128GSE1
Code 128 Redundancy	Range (0 - 10) * 0	128VOT##
Code 128 Message Length	Minimum (1 - 80) * 3	128MIN##
	Maximum (1 - 80) * 80	128MAX##
GS1-128	Default All GS1-128 Settings	GS1DFT
	* On	GS1ENA1
	Off	GS1ENA0
GS1-128 Application Identifier Parsing	* Off	GS1EMU0
	Transmit Without Identifiers	GS1EMU1
	Transmit With Identifiers	GS1EMU2
GS1-128 Redundancy	Range (0 - 10) * 0	GS1VOT##
Telepen	Default All Telepen Settings	TELDFT
	* Off	TELENA0
	On	TELENA1
Telepen Output	* AIM Telepen Output	TELOLD0
	Original Telepen Output	TELOLD1
Telepen Redundancy	Range (0 - 10) *0	TELVOT##
Telepen MessageLength	Minimum (1 - 80) * 3	TELMIN##
	Maximum (1 - 80) * 80	TELMAX##

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*
UPC-A	Default All UPC-A Settings	UPADFT
	Off	UPAENA0
	* On	UPAENA1
UPC-A Number System	Off	UPANSX0
	* On	UPANSX1
UPC-A Check Digit	Off	UPACKX0
	* On	UPACKX1
UPC-A 2 Digit Addenda	* Off	UPAAD20
	On	UPAAD21
UPC-A 5 Digit Addenda	* Off	UPAAD50
	On	UPAAD51
UPC-A Addenda Required	* Not Required	UPAARQ0
	Required	UPAARQ1
Addenda Timeout	Range (0 - 65535) * 100	DLYADD#####
UPC-A Addenda Separator	* Off	UPAADS0
	On	UPAADS1
UPC-A Redundancy	Range (0 - 10) * 0	UPAVOT##
UPC-A/EAN-13 with Extended Coupon Code	*Off	CPNENA0
	Allow Concatenation	CPNENA1
	Require Concatenation	CPNENA2
UPC-A Number System 4 Addenda Required	* Don't Require Coupon Code	ARQSY40
	Require Coupon Code	ARQSY41
UPC-A Number System 5 Addenda Required	* Don't Require Coupon Code/Addenda	ARQSY50
	Require 2 Digit Addenda	ARQSY51
	Require 5 Digit Addenda	ARQSY52
	Require 2 or 5 Digit Addenda	ARQSY53
	Require Coupon Code	ARQSY54
	Require Coupon Code or 2 Digit Addenda	ARQSY55
	Require Coupon Code or 5 Digit Addenda	ARQSY56
	Require Coupon Code, 2 Digit Addenda, or 5 Digit Addenda	ARQSY57
Addenda Timeout	Range (0 - 65535) * 100	DLYADD#####
UPC-E0	Default All UPC-E Settings	UPEDFT
	Off	UPEEN00
	* On	UPEEN01
UPC-E0 Expand	* Off	UPEEXP0
	On	UPEEXP1
UPC-E0 Number System	* On	UPEEXN1
	Off	UPEEXN0
UPC-E0 Check Digit	Off	UPECKX0
	* On	UPECKX1

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*
UPC-E0 Leading Zero	* Off	UPENSX0
	On	UPENSX1
UPC-E0 Addenda	2 Digit Addenda On	UPEAD21
	* 2 Digit Addenda O	UPEAD20
	5 Digit Addenda On	UPEAD51
	* 5 Digit Addenda O	UPEAD50
UPC-E0 Addenda Required	Required	UPEARQ1
	* Not Required	UPEARQ0
Addenda Timeout	Range (0 - 65535) * 100	DLYADD#####
UPC-E0 Addenda Separator	On	UPEADS1
	* Off	UPEADS0
UPC-E0 Redundancy	Range (0 - 10) * 1	UPEVOT##
EAN/JAN-13	Default All EAN/ JAN Settings	E13DFT
	Off	E13ENA0
	* On	E13ENA1
EAN/JAN-13 Check Digit	Off	E13CKX0
	* On	E13CKX1
EAN/JAN-13 2 Digit Addenda	2 Digit Addenda On	E13AD21
	* 2 Digit Addenda Off	E13AD20
	5 Digit Addenda On	E13AD51
	* 5 Digit Addenda Off	E13AD50
EAN/JAN-13 Addenda Required	* Not Required	E13ARQ0
	Required	E13ARQ1
EAN-13 Beginning with 2 Addenda Required	* Don't Require 2 Digit Addenda	ARQSY20
	Require 2 Digit Addenda	ARQSY21
EAN-13 Beginning with 290 Addenda Required	* Don't Require 5 Digit Addenda	ARQ2900
	Require 5 Digit Addenda	ARQ2901
EAN-13 Beginning with 378/379 Addenda Required	* Don't Require Addenda	ARQ3780
	Require 2 Digit Addenda	ARQ3781
	Require 5 Digit Addenda	ARQ3782
	Require 2 or 5 Digit Addenda	ARQ3783
EAN-13 Beginning with 414/419 Addenda Required	* Don't Require Addenda	ARQ4140
	Require 2 Digit Addenda	ARQ4141
	Require 5 Digit Addenda	ARQ4142
	Require 2 or 5 Digit Addenda	ARQ4143
EAN-13 Beginning with 434/439 Addenda Required	* Don't Require Addenda	ARQ4340
	Require 2 Digit Addenda	ARQ4341
	Require 5 Digit Addenda	ARQ4342
	Require 2 or 5 Digit Addenda	ARQ4343
EAN-13 Beginning with 977 Addenda Required	* Don't Require 2 Digit Addenda	ARQ9770
	Require 2 Digit Addenda	ARQ9771

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*
EAN-13 Beginning with 978 Addenda Required	* Don't Require 5 Digit Addenda	ARQ9780
	Require 5 Digit Addenda	ARQ9781
EAN-13 Beginning with 979 Addenda Required	* Don't Require 5 Digit Addenda	ARQ9790
	Require 5 Digit Addenda	ARQ9791
Addenda Timeout	Range (0 - 65535) * 100	DLYADD#####
EAN/JAN-13 Addenda Separator	* Off	E13ADS0
	On	E13ADS1
EAN/JAN-13 Redundancy	Range (0 - 10) * 0	E13VOT##
ISBN Translate	* Off	E13ISB0
	On	E13ISB1
	Convert to 13-Digit On	E13I131
	* Convert to 13-Digit Off	E13I130
	Reformat On	E13IBR1
	* Reformat Off	E13IBR0
ISSN Translate	* Off	E13ISS0
	On	E13ISS1
	Reformat On	E13ISR1
	* Reformat Off	E13ISR0
EAN/JAN-8	Default All EAN/JAN 8 Settings	EA8DFT
	Off	EA8ENA0
	* On	EA8ENA1
EAN/JAN-8 Check Digit	Off	EA8CKX0
	* On	EA8CKX1
EAN/JAN-8 Addenda	*2 Digit Addenda Off	EA8AD20
	2 Digit Addenda On	EA8AD21
	*5 Digit Addenda Off	EA8AD50
	5 Digit Addenda On	EA8AD51
EAN/JAN-8 Addenda Required	* Not Required	EA8ARQ0
	Required	EA8ARQ1
Addenda Timeout	Range (0 - 65535) * 100	DLYADD#####
EAN/JAN-8 Addenda Separator	* Off	EA8ADS0
	On	EA8ADS1
EAN/JAN-8 Redundancy	Range (0 - 10) * 0	EA8VOT##
MSI	Default All MSI Settings	MSIDFT
	* Off	MSIENA0
	On	MSIENA1
MSI Check Character	*Validate Type 10, but Don't Transmit	MSICHK0
	Validate Type 10 and Transmit	MSICHK1
	Validate 2 Type 10 Chars, but Don't Transmit	MSICHK2
	Validate 2 Type 10 Chars and Transmit	MSICHK3
	Disable MSI Check Characters	MSICHK6
MSI Redundancy	Range (0 - 10) * 0	MSIVOT##

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*
MSI Message Length	Minimum (1 - 80) * 3	MSIMIN##
	Maximum (1 - 80) * 80	MSIMAX##
Plessey Code	Default All Plessey Code Settings	PLSDFT
	Off	PLSENA0
	*On	PLSENA1
Plessey Check Char.	*No Check Char.	PLSCHK0
	Validate, But Don't Transmit	PLSCHK1
	Validate, and Transmit	PLSCHK2
Plessey Redundancy	Range (0 - 10) *0	PLSVOT##
Plessey Message Length	Minimum (1 - 80) *3	PLSMIN##
	Maximum (1 - 80) *80	PLSMAX##
GS1 DataBar Omnidirectional	Default All GS1 DataBar Omnidirectional Settings	RSSDFT
	Off	RSSENA0
	* On	RSSENA1
GS1 DataBar Omnidirectional Redundancy	Range (0 - 10) *0	RSSVOT##
GS1 DataBar Limited	Default All GS1 DataBar Limited Settings	RSLDFT
	Off	RSLENA0
	* On	RSLENA1
GS1 DataBar Limited Redundancy	Range (0 - 10) *0	RSLVOT##
GS1 DataBar Expanded	Default All GS1 DataBar Expanded Settings	RSEDFT
	Off	RSEENA0
	* On	RSEENA1
GS1 DataBar Expanded Redundancy	Range (0 - 10) *0	RSEVOT##
GS1 DataBar Expanded Msg. Length	Minimum (1 - 80) *3	RSEMIN##
	Maximum (1 - 80) * 80	RSEMAX##
Trioptic Code	* Off	TRIENA0
	On	TRIENA1
GS1 Emulation	GS1-128 Emulation	EANEMU1
	GS1 DataBar Emulation	EANEMU2
	GS1 Code Expansion Off	EANEMU3
	EAN8 to EAN13 Conversion	EANEMU4
	* GS1 Emulation Off	EANEMU0
China Post (Hong Kong 2 of 5)	Default All China Post (Hong Kong 2 of 5) Settings	CPCDFT
	* Off	CPCENA0
	On	CPCENA1
China Post (Hong Kong 2 of 5) Redundancy	Range (0 - 10) *0	CPCVOT##
China Post (Hong Kong 2 of 5) Msg. Length	Minimum (1 - 80) *3	CPCMIN##
	Maximum (1 - 80) *80	CPCMAX##

Programming Chart

Bar Code Decoder Engine = N43XX and N73XX

0 - 9

0

1

2

3

4

5

K5K

6

K6K

7

K7K

8

K8K

9

K9K

A to F

A

KAK

B

KBK

C

KCK

D

KDK

E

KEK

F

KFK

Save, Discard, Reset

Save

MNUSAV.

Discard

MNUABT.

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 scan **Save** again.*

6 Symbol Laser Scanner

Introduction

Integrated Laser Engine	MX3Plus	MX7	MX7 Tecton	MX8	MX9

This section's explanations and instructions are directed toward devices with an integrated Symbol SE955 or SE1524SE Laser Scanner engine. Please do not scan the bar codes in this section with any other bar code reader engine.

Scan engine manufacturers may offer more bar codes and options than are contained in this section. Please note that the bar codes in this section are only those supported by Honeywell and the mobile devices it manufactures or supports. If you need assistance when using the bar codes in this section with your Mobile Device, please contact Technical Assistance (page 8-1).

The MX8 will beep twice when a configuration bar code is successfully scanned.

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

Bar Code Decoder Types

Bar code decoder engine types (for Honeywell equipment) covered in this section are:

- SE 955 [1] Integrated
- SE 1524ER [2] Integrated

To change a parameter value: Scan the appropriate bar code in this section. After Save, the new value replaces the standard default value in memory.

The following bar code symbologies are supported:

Symbology	Can be Decoded by ...
Chinese 2 of 5	SE 955 only
Codabar	SE 955 and SE1524
Code 11	SE 955 only
Code 128	SE 955 and SE1524
Code 39	SE 955 and SE1524
Code 93	SE 955 and SE1524
Discrete 2 of 5	SE 955 and SE1524
Interleaved 2 of 5	SE 955 and SE1524
MSI Plessey	SE 955 and SE1524
GS1 DataBar (RSS)	SE 955 and SE1524
GS1 Databar (RSS) and Composite Codes	SE 955 only
UPC/EAN	SE 955 and SE1524

1. Short Range Laser, SE955, Base Laser, and Ring Scanner
2. Multi-Range "LORAX" Laser, SE1524ER

Aiming Modes

There are many aiming “modes” for laser bar code readers – aiming dots, aiming patterns, aim duration, etc. All aiming “modes” concern the length of time the beam is sent out, how wide the beam is and what happens when the timer expires. The terms are used interchangeably and may be confusing for the novice bar code reader user.

Note: Decoding algorithms released by the bar code engine manufacturer often change upon each new release. Programming parameters that were available at one release may not be available upon a later software release. Honeywell supports the programming bar codes for the specific bar code reader engines in this guide only.

SE1524 Scan Engine

The SE1524 Standard scanners can have their aiming beam/aiming dot setup using these bar codes:

- Laser On Time (page 6-20) and
- Aim Duration (page 6-13)

SE955 Scan Engine

The scan engine can have it's aiming beam/aiming dot setup using these bar codes:

- Use Laser On Time (page 6-20)
- Aim Duration (page 6-13), and
- Scan Angle (SE955 only) (page 6-34)

Note: Base Laser scanner, 955E does not support aim mode. Any attempt to adjust the aiming beam using the 955 bar codes in this guide will fail. The Base Laser scanner does not decode Codablock, Code93i, or Telepen symbologies.

Aiming Dot

How to get an aiming dot when there is no “Aiming Dot” parameter

Set *Aim Duration* to .5 seconds and an aiming “dot” is sent while the scan trigger is held down. When the timer expires, the aiming beam widens and the bar code is read.

Pre-Configured Default Values - MX7, MX7 Tecton, MX9

Parameter	**Default SE955**	**Default SE1524**
Set Default Parameter	All Defaults	All Defaults
Scanning Options		
Aim Duration	0.0 sec	0.0 sec
Aiming Mode	Not Supported	Not Supported
Beeper Volume	Not Supported	Not Supported
Bi-directional Redundancy	Disable	Disable
Laser On Time	3.0 sec.	3.0 sec
Linear Code Type Security Levels	1	1
Parameter Pass Through	Disable	Disable
Parameter Scanning	Enable	Enable
Power Mode	Low Power	Low Power
Raster Expansion Rate	Not Supported	Not Supported
Raster Height	Not Supported	Not Supported
Scan Angle	Wide	Normal
Scanning Mode	Not Supported	Not Supported
Time Delay to Low Power	Not Supported	Not Supported
Time-out Between Different Symbols	Not Supported	Not Supported
Time-out Between Same Symbol	1.0 sec	1.0 sec
Transmit “No Read” Message	Disable	Disable
Trigger Mode	Level	Level
UPC/EAN		
UPC-A	Enable	Enable
UPC-E	Enable	Enable
UPC-E1	Disable	Disable
EAN-8	Enable	Enable
EAN-13	Enable	Enable
Bookland EAN	Disable	Disable
Bookland ISBN	Bookland ISBN-10	Bookland ISBN-10
Decode UPC/EAN Supplementals	Ignore	Ignore
Decode UPC/EAN Supplemental Redundancy	7	7
Transmit UPC-A Check Digit	Enable	Enable
Transmit UPC-E Check Digit	Enable	Enable
Transmit UPC-E1 Check Digit	Enable	Enable
UPC-A Preamble	System Character	System Character
UPC-E Preamble	System Character	System Character
UPC-E1 Preamble	System Character	System Character
Convert UPC-E to A	Disable	Disable
Convert UPC-E1 to A	Disable	Disable
EAN-8 Zero Extend	Disable	Disable
Convert EAN-8 to EAN-13 Type	Type is EAN-13	Type is EAN-13
UPC/EAN Security Level	0	0
UCC Coupon Extended Code	Disable	Disable

Parameter	Default SE955	Default SE1524
Linear UPC/EAN Decode	Not Supported	Not Supported
UPC Half Block Stitching	Not Supported	Not Supported
UPC Composite Mode	Not Supported	Not Supported
Code 128		
Code 128	Enable	Enable
GS1-128 (formerly UCC/EAN-128)	Enable	Enable
Code 128 Decode Performance	Not Supported	Not Supported
Code 128 Decode Performance Level	Not Supported	Not Supported
Code 39		
Code 39	Enable	Enable
Trioptic Code 39	Disable	Disable
Convert Code 39 to Code 32	Disable	Disable
Code 32 Prefix	Disable	Disable
Set Length(s) for Code 39	Length within Range: 02 – 55	02 - 55
Code 39 Check Digit Verification	Disable	Disable
Transmit Code 39 Check Digit	Disable	Disable
Code 39 Full ASCII Conversion	Disable	Disable
Code 39 Decode Performance	Not Supported	Not Supported
Code 39 Decode Performance Level	Not Supported	Not Supported
Code 93		
Code 93	Disable	Disable
Set Length(s) for Code 93	Length within Range: 04 – 55	04-55
Code 11		
Code 11	Not Supported	Not Supported
Set Lengths for Code 11	Length within Range: 04 – 55	Not Supported
Code 11 Check Digit Verification	Disable	Not Supported
Transmit Code 11 Check Digit(s)	Disable	Not Supported
Interleaved 2 of 5		
Interleaved 2 of 5	Enable	Enable
Set Length(s) for I 2 of 5	14	14
I 2 of 5 Check Digit Verification	Disable	Disable
Transmit I 2 of 5 Check Digit	Disable	Disable
Convert I 2 of 5 to EAN 13	Disable	Disable
Discrete 2 of 5		
Discrete 2 of 5	Disable	Disable
Set Length(s) for D 2 of 5	12	12
Chinese 2 of 5		
Chinese 2 of 5	Disable	Disable
Codabar		
CLSI Editing	Disable	Disable
Codabar	Disable	Disable
NOTIS Editing	Disable	Disable
Set Lengths for Codabar	Length within Range: 05-55	05-55

Parameter	Default SE955	Default SE1524
MSI Plessey		
MSI Plessey	Disable	Disable
Set Length(s) for MSI Plessey	Length within Range: 06-55	06-55
MSI Plessey Check Digits	One	One
Transmit MSI Plessey Check Digit	Disable	Disable
MSI Plessey Check Digit Algorithm	Mod 10/Mod 10	Mod 10/Mod 10
PDF417/MicroPDF417		
PDF417	Not Supported	Not Supported
MicroPDF417	Not Supported	Not Supported
Decode Linked Symbol	Not Supported	Not Supported
Code 128 Emulation	Not Supported	Not Supported
GS1 DataBar (RSS)		
GS1 DataBar Omnidirectional (RSS-14)	Disable	Disable
GS1 DataBar Limited (RSS Limited)	Disable	Disable
GS1 DataBar Expanded (RSS Expanded)	Disable	Disable
Convert GS1 DataBar (RSS) to UPC/EAN	Disable	Not Supported
Composite		
CC-C	Not Supported	Not Supported
CC-AB	Not Supported	Not Supported
TLC-39	Not Supported	Not Supported
Data Options		
Transmit Code ID Character	None	None
Prefix/Suffix Values Prefix Suffix 1 Suffix 2	 NULL LF CR	NULL LF CR
Scan Data Transmission Format	Data as is	Data as is
Decode Buffering	Not Supported	Not Supported
Simple Serial Interface (SSI) Options		
Baud Rate	9600	9600
Parity	None	None
Check Parity	Not Supported	Not Supported
Software Handshaking	Enable	Enable
Decode Data Packet Format	Unpacketed	Unpacketed
Stop Bit Select	1	1
Intercharacter Delay	0	0
Host Serial Response Time-out	2 sec	2 sec
Host Character Time-out	200 msec	200 msec
Macro PDF		
Macro PDF Transmit/Decode Mode	Not Supported	Not Supported
Transmit Each Symbol in Codeword Format	Not Supported	Not Supported
Transmit Unknown Codewords	Not Supported	Not Supported
Escape Character	Not Supported	Not Supported
ECI		

Parameter	Default SE955	Default SE1524
Delete Character Set ECIs	Not Supported	Not Supported
ECI Decoder	Not Supported	Not Supported
Transmit Macro PDF User-Selected Field		
Transmit File Name	Not Supported	Not Supported
Transmit Block Count	Not Supported	Not Supported
Transmit Time Stamp	Not Supported	Not Supported
Transmit Sender	Not Supported	Not Supported
Transmit Addressee	Not Supported	Not Supported
Transmit Checksum	Not Supported	Not Supported
Transmit File Size	Not Supported	Not Supported
Transmit Macro PDF Control Header	Not Supported	Not Supported
Last Block Marker	Not Supported	Not Supported
Flush Macro Buffer	Not Supported	Not Supported
Abort Macro PDF Entry	Not Supported	Not Supported

Note: Base Laser scanner, 955E does not support aim mode. Any attempt to adjust the aiming beam using the 955 bar codes in this guide will fail. The Base Laser scanner does not decode Codablock, Code93i, or Telepen symbologies.

Pre-Configured Default Values - MX3Plus, MX8

SE 955 Parameter	**Default**
Set Default Parameter	All Defaults
Scanning Options	
Aim Duration	0.0 sec
Aiming Mode	Not Supported
Beeper Volume	Not Supported
Bi-directional Redundancy	Disable
Laser On Time	3.0 sec.
Linear Code Type Security Levels	1
Parameter Pass Through	Disable
Parameter Scanning	Enable
Power Mode	Low Power
Raster Expansion Rate	Not Supported
Raster Height	Not Supported
Scan Angle (SE955 only)	Wide
Scanning Mode	Not Supported
Time Delay to Low Power	Not Supported
Time-out Between Different Symbols	Not Supported
Time-out Between Same Symbols	1.0 sec
Transmit “No Read” Message	Disable
Trigger Mode	Level
UPC/EAN	
UPC-A	Enable
UPC-E	Enable
UPC-E1	Disable
EAN-8	Enable
EAN-13	Enable
Bookland EAN	Disable
Bookland ISBN Format	Bookland ISBN-10
Decode UPC/EAN Supplementals	Ignore
Decode UPC/EAN Supplemental Redundancy	7
Transmit UPC-A Check Digit	Enable
Transmit UPC-E Check Digit	Enable
Transmit UPC-E1 Check Digit	Enable
UPC-A Preamble	System Character
UPC-E Preamble	System Character
UPC-E1 Preamble	System Character
Convert UPC-E to A	Disable
Convert UPC-E1 to A	Disable
EAN-8 Zero Extend	Disable
Convert EAN-8 to EAN-13 Type	Type is EAN-13
UPC/EAN Security Level	0
UCC Coupon Extended Code	Disable

SE 955 Parameter	Default
Linear UPC/EAN Decode	Not Supported
UPC Half Block Stitching	Not Supported
UPC Composite Mode	Not Supported
Code 128	
Code 128	Enable
GS1-128 (formerly UCC/EAN-128)	Enable
Code 128 Decode Performance	Not Supported
Code 128 Decode Performance Level	Not Supported
Code 39	
Code 39	Enable
Trioptic Code 39	Disable
Convert Code 39 to Code 32	Disable
Code 32 Prefix	Disable
Set Length(s) for Code 39	Length within Range: 02 – 55
Code 39 Check Digit Verification	Disable
Transmit Code 39 Check Digit	Disable
Code 39 Full ASCII Conversion	Disable
Code 39 Decode Performance	Not Supported
Code 39 Decode Performance Level	Not Supported
Code 93	
Code 93	Disable
Set Length(s) for Code 93	Length within Range: 04 – 55
Code 11	
Code 11	Disable
Set Lengths for Code 11	Length within Range: 04 – 55
Code 11 Check Digit Verification	Disable
Transmit Code 11 Check Digit(s)	Disable
Interleaved 2 of 5	
Interleaved 2 of 5	Enable
Set Length(s) for I 2 of 5	14
I 2 of 5 Check Digit Verification	Disable
Transmit I 2 of 5 Check Digit	Disable
Convert I 2 of 5 to EAN 13	Disable
Discrete 2 of 5	
Discrete 2 of 5	Disable
Set Length(s) for D 2 of 5	12
Chinese 2 of 5	
Chinese 2 of 5	Disable
Codabar	
CLSI Editing	Disable
Codabar	Disable
NOTIS Editing	Disable
Set Lengths for Codabar	Length within Range: 05-55

SE 955 Parameter	Default
MSI Plessey	
MSI Plessey	Disable
Set Length(s) for MSI Plessey	Length within Range: 06-55
MSI Plessey Check Digits	One
Transmit MSI Plessey Check Digit	Disable
MSI Plessey Check Digit Algorithm	Mod 10/Mod 10
PDF417/MicroPDF417	
PDF417	Not Supported
MicroPDF417	Not Supported
Decode Linked Symbol	Not Supported
Code 128 Emulation	Not Supported
GS1 DataBar (RSS)	
GS1 DataBar Omnidirectional (RSS-14)	Disable
GS1 DataBar Limited (RSS Limited)	Disable
GS1 DataBar Expanded (RSS Expanded)	Disable
Convert GS1 DataBar (RSS) to UPC/EAN	Disable
Composite	
CC-C	Not Supported
CC-AB	Not Supported
TLC-39	Not Supported
Data Options	
Transmit Code ID Character	None
Prefix/Suffix Values Prefix Suffix 1 Suffix 2	 NULL LF CR
Scan Data Transmission Format	Data as is
Decode Buffering	Not Supported
Simple Serial Interface (SSI) Options	
Baud Rate	9600
Parity	None
Check Parity	Not Supported
Software Handshaking	Enable
Decode Data Packet Format	Unpacketed
Stop Bit Select	1
Intercharacter Delay	0
Host Serial Response Time-out	2 sec
Host Character Time-out	200 msec
Macro PDF	
Macro PDF Transmit/Decode Mode	Not Supported
Transmit Each Symbol in Codeword Format	Not Supported
Transmit Unknown Codewords	Not Supported
Escape Character	Not Supported
ECI	

SE 955 Parameter	Default
Delete Character Set ECIs	Not Supported
ECI Decoder	Not Supported
Transmit Macro PDF User-Selected Field	
Transmit File Name	Not Supported
Transmit Block Count	Not Supported
Transmit Time Stamp	Not Supported
Transmit Sender	Not Supported
Transmit Addressee	Not Supported
Transmit Checksum	Not Supported
Transmit File Size	Not Supported
Transmit Macro PDF Control Header	Not Supported
Last Block Marker	Not Supported
Flush Macro Buffer	Not Supported
Abort Macro PDF Entry	Not Supported

Note: Base Laser scanner, 955E does not support aim mode. Any attempt to adjust the aiming beam using the 955 bar codes in this guide will fail. The Base Laser scanner does not decode Codablock, Code93i, or Telepen symbologies.

Set Default Parameter

Bar Code Decoder Engine = SE955

Restore Defaults

If custom defaults were set by scanning Write Custom Defaults, scan Restore Defaults to retrieve and restore the bar code reader's custom default settings. If no custom defaults were set, scan Restore Defaults to restore the factory default values.

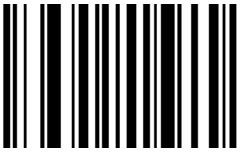
Set Factory Defaults

Restore the factory default values. If custom defaults were set, they are eliminated.

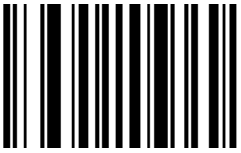
Write Custom Defaults

Store the current bar code reader settings as custom defaults. Once custom default settings are stored, they can be recovered at any time by scanning the Restore Defaults bar code.

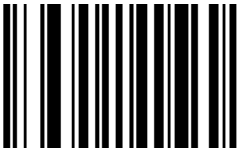
Restore Defaults



Set Factory Defaults



Write Custom Defaults



See Return to Factory Default Settings on page 1-2.

See Reset to Factory Defaults using the LXEReset Bar Code on page 6-12.

Set All Defaults

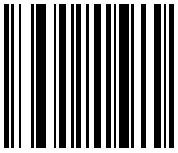
Bar Code Decoder Engine = SE1524

Use the Set All Defaults parameter to reset all bar code reader parameters to their default values.

Refer to **Pre-Configured Default Values** for an alphabetical listing of all default values.

Note: Scanning the Cancel bar code does not undo a Set All Defaults scan.

Set All Defaults



Max On Timer and the Laser On Time synchronization

When all parameters are reset to the default values, you must again set the Laser On Time (page 6-20) parameter to 1.5 seconds to match a device-specific default Max On Timer default value of 1.5 seconds.

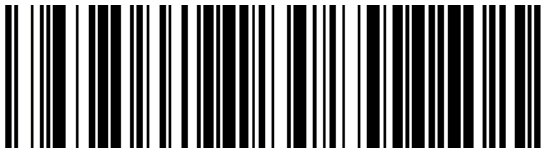
Laser On Time default value is 3.0 seconds.

Reset to Factory Defaults using the LXEReset Bar Code

The LXEReset bar code should only be scanned by mobile devices running Data Collection Wedge software.

This bar code must not be scanned by devices running Bar Code Scan Wedge software.

The following function-specific bar code is only used when it is necessary to return the decoder engine back to factory default values.



When the scan is successful, the mobile device emits a double beep and the Scan On indicator is amber. The decoding engine is not available for further bar code scanning until the Scan On indicator turns off. Scanning this bar code does not affect the mobile device's operating system, wireless client or installed software (e.g., AppLock) settings.

Scanner Parameters – General

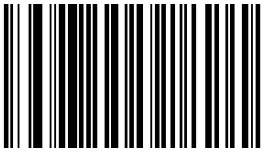
Aim Duration

Bar Code Decoder Engine = SE1524 and SE955

Note: For correct operation, reboot the mobile device after changing this value.

When a bar code reader with an aim mode is triggered either by a Scan button press, or a Start_Decode command, this parameter sets the duration the aiming pattern is seen before a scan attempt begins. It does not apply to the aim signal or the Aim_On command. It is programmable in 0.1 second increments from 0.0 to 9.9 seconds. No aim pattern is visible when the value is 0.0.

To **set aim duration**, scan the bar code below:



Next scan two numeric bar codes that correspond to the desired aim duration. Times less than 1.0 second must have a leading zero. For example, to set an aim duration of 0.5 seconds, scan the bar code above, then scan the “0” and “5” bar codes on the Keypad Number Symbols (page 6-91) page. If you make an error, or wish to change your selection, scan the Cancel bar code on the Keypad Number Symbols page.

Note: Base Laser scanner, 955E does not support aim mode. Any attempt to adjust the aiming beam using the 955 bar codes in this guide will fail. The Base Laser scanner does not decode Codablock, Code93i, or Telepen symbologies.

Bi-Directional Redundancy

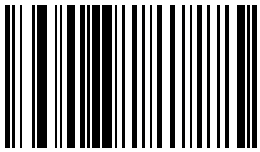
Bar Code Decoder Engine = SE1524 and SE955

Use this parameter to decide whether a bar code is successfully scanned in both directions before being decoded.

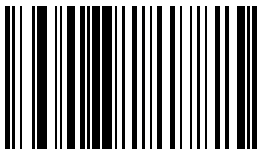
Note: This parameter is only valid when a Linear Code Type Security Level (Redundancy Level) (page 6-21) has been enabled. The default for Security Level parameter is Level 1.

Select an option by scanning either of the bar codes shown below.

Enable Bi-Directional Redundancy



* Disable Bi-Directional Redundancy



Disable All Symbologies

Bar Code Decoder Engine = SE955

Scan the bar code below to disable the decoding of all symbologies. Use this to simplify selecting a single symbology to decode by scanning this bar code, then scanning the desired enable code type bar code.

Note that the decoder can still decode parameter bar codes.

Data Options

Bar Code Decoder Engine = SE1524 and SE955

Prefix and Suffix

Note: Parameter Scan Data Transmission Format (page 6-15) must be set before selecting Prefix and Suffix values.

A prefix and/or one or two suffixes may be appended to scan data for use in data editing. These values are set by scanning four bar codes (resulting in a four digit number) that correspond to key codes for various mobile devices. See the table titled ASCII Character Equivalents (page 6-83).

If you wish to change your selection, scan this **Data Format Cancel** bar code:

Prefix

To begin setting **Prefix** values, scan this bar code:

Next, scan four numeric bar codes that correspond to the computer keycode using the Keypad Number Symbols (page 6-91). *Default = Null.*

If you wish to change your selection, scan Cancel on the *Keypad Number Symbols* page.

Suffix 1

To begin setting **Suffix 1** value, scan this bar code:

Next, scan four numeric bar codes that correspond to the computer keycode using Keypad Number Symbols (page 6-91). *Default = LF.*

If you wish to change your selection, scan Cancel on the *Keypad Number Symbols* page.

Suffix 2

To begin setting **Suffix 2** value, scan this bar code:

Next, scan four numeric bar codes that correspond to the computer keycode using Keypad Number Symbols (page 6-91). *Default = CR.*

If you wish to change your selection, scan Cancel on the *Keypad Number Symbols* page.

Scan Data Transmission Format

Bar Code Decoder Engine = SE1524 and SE955

Note: Parameter Prefix and Suffix (page 6-14) should be set after setting this parameter.

Use this option when you want to append a prefix and suffix to the decode data.

Set this parameter by scanning one of the following bar codes.

* Data As Is

[Data] [Suffix 1]

[Data] [Suffix 2]

[Data] [Suffix 1] [Suffix 2]

[Prefix] [Data]

[Prefix] [Data] [Suffix 1]

[Prefix] [Data] [Suffix 2]

[Prefix] [Data] [Suffix 1] [Suffix 2]

Now you are ready to scan one of the Prefix and Suffix (page 6-14) bar codes.

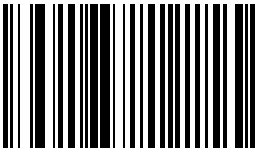
Transmit Code ID Character

Bar Code Decoder Engine = SE1524 and SE955

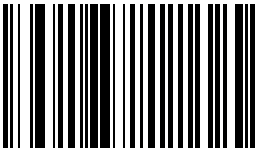
A code ID character identifies the code type of a scanned bar code. This may be useful when the bar code reader is decoding more than one code type. In addition to any single character prefix already selected, the code ID character is inserted between the prefix and the decoded symbol.

Scan one of the following bar codes to select either no code ID character, a Symbol Code ID character or an AIM Code ID character. *Default = No Code ID Character*.

Transmit No Code ID Character

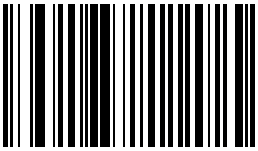


Transmit Symbol Code ID Character



A	UPC-A, UPC-E, UPC-E1, EAN-8, EAN-13
B	Code 39, Code 32
C	Codabar
D	Code 128
E	Code 93
F	Interleaved 2 of 5
G	Discrete 2 of 5 or Discrete 2 of 5 IATA
H	Code 11
J	MSI Plessey
K	UCC/EAN-128
L	Bookland EAN
M	Trioptic Code 39
N	Coupon Code
R	GS1 DataBar Omnidirectional (RSS-14), GS1 Limited (RSS-Limited), GS1 Expanded (RSS-Expanded)

Transmit AIM Code ID Character



Each AIM Code Identifier contains the three character string]cm where:

]= Flag Character (ASCII 93)

c= Code Character

A	Code 39
C	Code 128
E	UPC/EAN
F	Codabar
G	Code 93
H	Code 11
I	Interleaved 2 of 5
M	MSI Plessey
S	D2 of 5, IATA 2 of 5
X	Code 39 Trioptic, Bookland EAN
e	GS1 DataBar (RSS)

m= Modifier Character

The modifier character is the sum of the applicable option values based on the following table.

Code Type	Option Value	Option
Code 39		
	0	No Check character or Full ASCII processing.
	1	Reader has checked one check character.
	3	Reader has checked and stripped check character.
	4	Reader has performed Full ASCII character conversion.
	5	Reader has performed Full ASCII character conversion and checked one check character.
	7	Reader has performed Full ASCII character conversion and checked and stripped check character.
		Example:A Full ASCII bar code with check character W,A+I+MI+DW, is transmitted as]A7AimId where 7 = (3+4).
Trioptic Code 39		
	0	No option specified at this time. Always transmit 0.
		Example:A Trioptic bar code 412356 is transmitted as]X0412356
Code 128		
	0	Standard data packet, No Function code 1 in first symbol position.
	1	Function code 1 in first symbol character position.
	2	Function code 1 in second symbol character position.

Code Type	Option Value	Option
		Example: A Code (EAN) 128 bar code with Function 1 character in the first position, FNC1 Aim Id is transmitted as]CIAimId
Interleaved 2 of 5		
	0	No check digit processing.
	1	Reader has validated check digit.
	3	Reader has validated and stripped check digit .
		Example: An I 2 of 5 bar code without check digit, 4123, is transmitted as]I04123
Codabar		
	0	No check digit processing.
	1	Reader has checked check digit.
	3	Reader has stripped check digit before transmission.
		Example: A Codabar bar code without check digit, 4123, is transmitted as]F04123
Code 93		
	0	No options specified at this time. Always transmit 0.
		Example: A Code 93 bar code 012345678905 is transmitted as]G0012345678905
MSI (Plessey)		
	0	Single check digit checked.
	1	Two check digits checked.
	2	Single check digit verified and stripped before transmission.
	3	Two check digits verified and stripped before transmission.
		Example: An MSI Plessey bar code 4123, with a single check digit checked, is transmitted as]M04123
Discrete 2 of 5		
	0	No options specified at this time. Always transmit 0.
		Example: A D 2 of 5 bar code 4123, is transmitted as]S04123
UPC/EAN		
	0	Standard packet in full EAN country code format, which is 13 digits for UPC-A and UPC-E (not including supplemental data).
	1	Two digit supplement data only
	2	Five digit supplement data only
	4	EAN-8 data packet.
		Example: A UPC-A bar code 012345678905 is transmitted as]E00012345678905
Bookland EAN		
	0	No options specified at this time. Always transmit 0.
		Example: A Bookland EAN bar code 123456789X is transmitted as]X0123456789X

According to AIM standards, a UPC with supplemental bar code is transmitted in the following format:

]EO (UPC chars) (terminator)]E2 (supplemental) (terminator)

Therefore, a UPC with two supplemental characters, 01234567890510, is transmitted to the host as a 21-character string,]E00012345678905]E110.

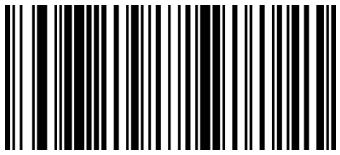
Laser On Time

Bar Code Decoder Engine = SE1524 and SE955

Note: For correct operation, reboot the Mobile Device after changing this value.

This parameter sets the maximum time decode processing continues during a scan attempt. It is programmable in 0.1 second increments from 0.50 to 25.5 seconds. If a label has not been decoded before this time expires and the session is terminated, the system regards it as a failed scan attempt.

To begin setting **Laser On Time**, scan this bar code:



Next, scan two numeric bar codes that correspond to the desired on time using the Keypad Number Symbols (page 6-91) at the end of this section. Times less than 1.0 second must have a leading zero. *Default = 3.0 seconds.*

If you wish to change your number selection, scan Cancel on the *Keypad Number Symbols* page.

See Laser On Time (superseded) on page 6-87.

Note: Base Laser scanner, 955E does not support aim mode. Any attempt to adjust the aiming beam using the 955 bar codes in this guide will fail. The Base Laser scanner does not decode Codablock, Code93i, or Telepen symbologies.

Linear Code Type Security Level (Redundancy Level)

Bar Code Decoder Engine = SE1524 and SE955

Use this parameter to determine the security level appropriate for bar code quality. The security level indicates how many times the bar code must be successfully read by the bar code reader before being decoded.

There are four security levels. Higher security levels are selected for decreasing levels of bar code quality. As security levels increase, the bar code reader's aggressiveness decreases.

Linear Security Level Rules

Level 1 Rules

The following code types must be successfully read twice before being decoded::

Codabar : All lengths

MSI Plessey : Length of 4 characters or less

D 2 of 5 : Length of 8 characters or less

I 2 of 5 : Length of 8 characters or less

Level 2 Rules

All code types must be successfully read twice before being decoded.

Level 3 Rules

Code types other than the following must be successfully read two times before being decoded. The following codes must be read three times:

MSI Plessey : Length of 4 characters or less

D 2 of 5 : Length of 8 characters or less

I 2 of 5 : Length of 8 characters or less

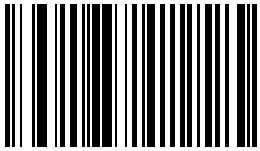
Level 4 Rules

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

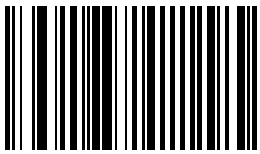
Select an option by scanning one of the bar codes shown below. If you wish to change your selection, scan Cancel on Keypad Number Symbols (page 6-91).

Note: Linear Code Type Security does not apply to Code 128.

* Level 1



Level 2



Level 3

Level 4

Parameter Pass Through

Bar Code Decoder Engine = SE955

Enable Parameter Pass Through to transmit bar codes in the following format, in Code 128, to the host:

<FNC3>L<any length data>

<FNC3>B<12 characters of data>

Note that the special Code 128 character <FNC3> must appear at the beginning of this data. However, if the appropriate data does not follow as shown above, it does not transmit to the host device.

Enable Parameter Pass Through

* Disable Parameter Pass Through

Parameter Scanning

Bar Code Decoder Engine = SE1524 and SE955

Use this parameter to decide whether bar code reader parameters can be set using the bar codes in this section.

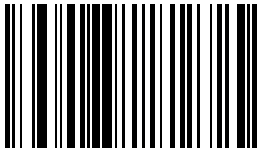
Note: When this parameter is disabled, scan the Set All Defaults (page 6-12) bar code to enable parameter scanning.

When disabled, either scan the Enable Parameter Scanning bar code or the Set All Defaults bar code (or set this parameter to 01h via a serial command) to reset the parameter and bar codes in this section can then be scanned.

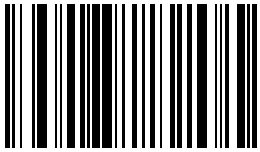
When enabled, bar code readers can be configured using the bar codes in this section.

Select a mode by scanning either of the bar codes shown below.

* Enable Parameter Scanning



Disable Parameter Scanning



Power Mode

Bar Code Decoder Engine = SE1524 and SE955

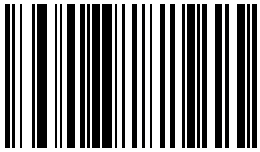
Note: Honeywell mobile devices are designed to be operated in Low Power Mode. Honeywell recommends leaving this value unchanged.

A parameter setting of **Continuous On** means the laser bar code reader will not power down until the mobile device is powered off.

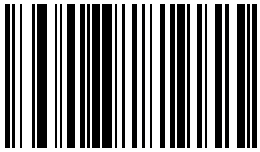
A parameter setting of **Low Power** means the laser bar code reader will enter low power mode after one second of waiting for a Scan button press. Pressing the Scan button will begin the decode sequence.

Select a Power Mode by scanning either of the bar codes shown below.

Continuous On



* Low Power



Simple Serial Interface (SSI) Options

Bar Code Decoder Engine = SE1524 and SE955

The SSI Options bar codes are directed toward the host programmer when writing host/bar code reader interface programs for different hosts. For help seeTechnical Assistance (page 8-1).

Note: Baud Rate Parameter must remain at 9600 bps at all times.

SSI Default Values

Bar Code Decoder Engine = SE1524 and SE955

The SSI Options bar codes are directed toward the host programmer when writing host/bar code reader interface programs for different hosts. For help seeTechnical Assistance (page 8-1).

Option	Default Value
Baud Rate	9600
Beep on < BEL >	Disable
Check Parity	Enable
Decode Data Packet Format	Unpacketed
Host Character Time-out	200 msec
Host Serial Response Time-out	2 sec
Intercharacter Delay	0
Parity	None
Software Handshaking	Enable
Stop Bit Select	1

Baud Rate

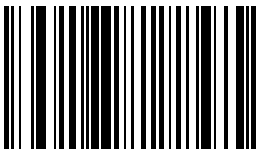
Bar Code Decoder Engine = SE1524 and SE955

Baud rate is the number of bits of data transmitted per second. The bar code readers baud rate setting should match the data rate setting of the host device. If not, data may not reach the host device or may reach it in distorted form. *Default = 9600 bps*.

Baud rate should always be set to 9600. If the baud rate is set to any other value but 9600, a transmit error will occur. Either scan the 9600 bps bar code or reset the mobile device to factory default (or last saved good default) values.

Set this parameter by scanning this bar code.

9600 bps



The SSI Options bar codes are directed toward the host programmer when writing host/bar code reader interface programs for different hosts. For help seeTechnical Assistance (page 8-1).

Decode Data Packet Format

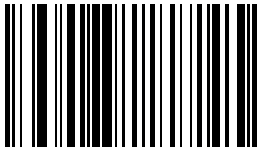
Bar Code Decoder Engine = SE1524 and SE955

This parameter selects whether decoded data is transmitted in raw format (unpacketed), or transmitted with the packet format as defined by the serial protocol.

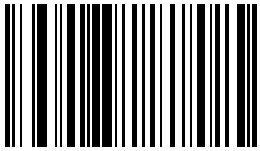
If the raw format is chosen, ACK/NAK handshaking is automatically disabled for decode data.

Set this parameter by scanning either of the following bar codes.

Send Raw Decode Data



* Send Packeted Decode Data



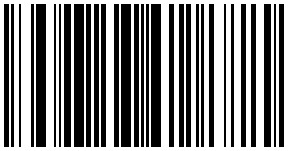
The SSI Options bar codes are directed toward the host programmer when writing host/bar code reader interface programs for different hosts. For help seeTechnical Assistance (page 8-1).

Host Character Time-out

Bar Code Decoder Engine = SE1524 and SE955

This parameter determines the maximum time the decoder waits between characters transmitted by the host before discarding the received data and declaring an error. The time-out is set in 0.01 second increments from 0.01 seconds to 0.99 seconds. After scanning the bar code below, scan two numerical bar codes to set the desired time-out. *Default = 200 msec.*

To begin setting the **time-out value**, scan this bar code:



Next, scan two numeric bar codes that correspond to the desired value using the Keypad Number Symbols (page 6-91) at the end of this section. Single digit numbers must have a leading zero. For example, a value of 300 msec is selected by scanning the “3” and the “0” numeric bar codes. A value of 30 msec is selected by scanning the “0” and the “3” bar codes.

If you wish to change your selection, scan Cancel on the Keypad Number Symbols page.

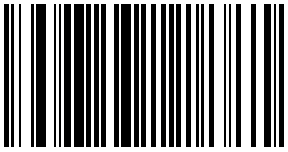
The SSI Options bar codes are directed toward the host programmer when writing host/bar code reader interface programs for different hosts. For help seeTechnical Assistance (page 8-1).

Host Serial Response Time-out

Bar Code Decoder Engine = SE1524 and SE955

This parameter determines the maximum time the decoder waits for an ACK or NAK before resending. Also, if the decoder wants to send, and the host has already been granted permission to send, the decoder waits for the designated time-out before declaring an error. The delay period can range from 0.0 to 9.9 seconds in 0.1 second increments. After scanning the bar code below, scan two numerical bar codes to set the delay. *Default = 2 seconds.*

To begin setting the **time-out value**, scan this bar code:



Next, scan two numeric bar codes that correspond to the desired value using the Keypad Number Symbols (page 6-91) at the end of this section. Time durations of less than 1.0 second require a leading zero. For example, a value of 4.5 seconds is selected by scanning the “4” and the “5” numeric bar codes. A value of 0.3 seconds is selected by scanning the “0” and the “3” bar codes.

If you wish to change your selection, scan Cancel on the Keypad Number Symbols page.

The SSI Options bar codes are directed toward the host programmer when writing host/bar code reader interface programs for different hosts. For help seeTechnical Assistance (page 8-1).

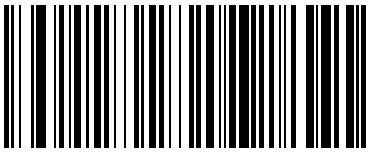
Intercharacter Delay

Bar Code Decoder Engine = SE1524 and SE955

Select the intercharacter delay option matching host requirements. The intercharacter delay gives the host system time to service its receiver and perform other tasks between characters.

The delay period can range from no delay to 99 msec in 1 msec increments. After scanning the bar code below, scan two numerical bar codes to set the delay. *Default = 0 msec.*

To begin setting the **delay value,** scan this bar code:



Next, scan two numeric bar codes that correspond to the desired value using the Keypad Number Symbols (page 6-91) at the end of this section. Time durations of less than 1 msec require a leading zero. For example, a value of 25 msec is selected by scanning the “2” and the “5” numeric bar codes. A value of 6 msec is selected by scanning the “0” and the “6” bar codes.

If you wish to change your selection, scan Cancel on the Keypad Number Symbols page.

The SSI Options bar codes are directed toward the host programmer when writing host/bar code reader interface programs for different hosts. For help seeTechnical Assistance (page 8-1).

Parity

Bar Code Decoder Engine = SE1524 and SE955

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

Odd Parity

The Odd parity bit has a value 0 or 1, based on data, to ensure that an odd number of 1 bits is contained in the coded character.

Even Parity

The Even parity bit has a value 0 or 1, based on data, to ensure that an even number of 1 bits is contained in the coded character.

Mark Parity

The parity bit is always 1.

Space Parity

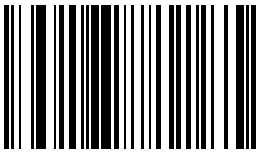
The parity bit is always 0.

No Parity

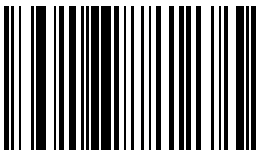
No parity is required.

Set this parameter by scanning one of the following bar codes.

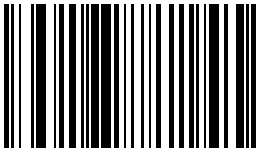
Odd Parity



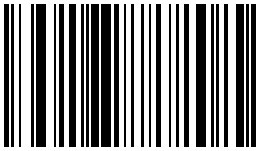
Even Parity



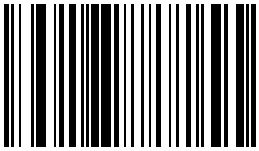
Mark Parity



Space Parity



* No Parity



The SSI Options bar codes are directed toward the host programmer when writing host/bar code reader interface programs for different hosts. For help seeTechnical Assistance (page 8-1).

Software Handshaking

Bar Code Decoder Engine = SE1524 and SE955

The SSI Options bar codes are directed toward the host programmer when writing host/bar code reader interface programs for different hosts. For help seeTechnical Assistance (page 8-1).

Default = Enable

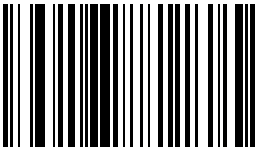
This parameter offers control of the data transmission process in addition to that offered by hardware handshaking.

Hardware handshaking is always enabled and cannot be disabled by the user.

Scan one of the following bar codes to set software handshaking.

Disable ACK/NAK Handshaking

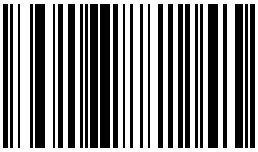
When this option is selected, the decoder will neither generate nor expect ACK/NAK handshaking packets.



Enable ACK/NAK Handshaking

When this option is selected, after transmitting data, the bar code reader expects either an ACK or NAK response from the host. The bar code reader will also ACK or NAK messages from the host when this option is selected.

The bar code reader waits up to the programmable Host Serial Response Time-out (page 6-27) to receive an ACK or NAK. If the bar code reader does not get a response in this time, it resends its data up to two times before discarding the data and declaring a transmit error.



Stop Bit Select

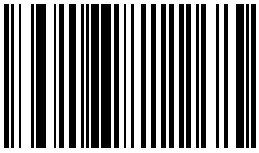
Bar Code Decoder Engine = SE1524 and SE955

The stop bit(s) at the end of each transmitted character marks the end of transmission of one character and prepares the receiving device for the next character in the serial data stream.

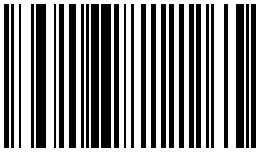
The number of stop bits selected (one or two) depends on the number the receiving computer is programmed to accommodate. Set the number of stop bits to match host device requirements.

Set this parameter by scanning one of the following bar codes.

* One Stop Bit



Two Stop Bits



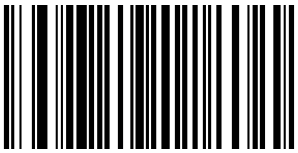
The SSI Options bar codes are directed toward the host programmer when writing host/bar code reader interface programs for different hosts. For help seeTechnical Assistance (page 8-1).

Time-out Between Decodes, Same Symbol

Bar Code Decoder Engine = SE1524 and SE955

Use this parameter to prevent the beeper from continuously beeping when a symbol is left in the bar code reader's field of view. *Default = 1.0 Second.*

To begin setting **differing symbol timeout values**, scan this bar code:



Using the Keypad Number Symbols (page 6-91) at the end of this section, scan two numeric bar codes that represent the desired interval, in 0.1 second increments. Valid values are between 0.0 and 9.9 seconds. Single digit values must be predefined by a leading zero. For example, to set a timeout of 0.5 seconds, scan the Timeout/Decodes – Same bar code, then scan the number 0 and 5 bar codes.

If you wish to change your number selection, scan Cancel on the Keypad Number Symbols page.

Transmit “No Read / Decode” Message

Bar Code Decoder Engine = SE1524 and SE955

Use this parameter to decide whether a message is sent to the host when a bar code symbol does not decode.

When enabled, and a symbol does not decode within either:

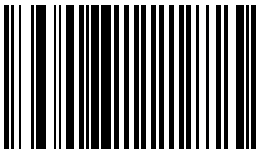
- A trigger pull activates the laser and decode processing, the processing continues until a trigger release, or
- The laser decode processing continues until the Laser On Timeout is reached.

A “NR” (No Read) is transmitted to the host. Any prefix or suffixes which have been enabled are appended around this message.

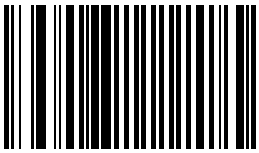
When disabled, and a symbol does not decode, no message is sent to the host.

Select an option by scanning either of the bar codes shown below.

Enable No Read



* Disable No Read



Trigger Mode

Bar Code Decoder Engine = SE1524 and SE955

Use this parameter to determine when the laser is activated and decoding begins, how long the laser remains on and what determines the cessation of the laser scan and decode process.

Level Mode

A trigger pull or Scan button press activates the laser and decode processing. The laser remains on and decode processing continues until a trigger release, a valid decode or the Laser On Time (page 6-20) time-out is reached.

Pulse Mode

A trigger pull or Scan button press activates the laser and decode processing. The laser remains on and decode processing continues until a valid decode, or the Laser On Time-out is reached.

Continuous Mode

The laser is always on and decoding.

See Time-out Between Decodes, Same Symbol on page 6-30.

Blinking Mode

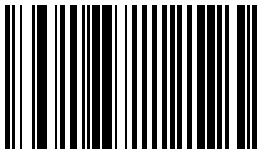
This trigger mode is used for triggerless scanning operations. Scanning range is reduced in this mode. This mode cannot be used with bar code readers that support an aim mode.

Host Mode

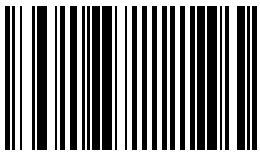
Triggering signal comes from a host command. Any actual trigger pull or Scan button press will be interpreted by the bar code reader engine as a Level triggering option.

Select a trigger mode by scanning the appropriate bar code. If you wish to change your selection, scan Cancel on the Keypad Number Symbols (page 6-91).

* Level



Pulse



Continuous

Blinking

Host

Scan Angle (SE955 only)

Bar Code Decoder Engine = SE955

Choose one of the options below to set the scan angle to narrow or wide. Once the parameter bar code is scanned, the Scan Angle setting is persistently stored.

Select an option by scanning one of the bar codes shown below.

Narrow Angle (35°)

* Wide Angle

See "Scan Angle (SE955 only) superseded)" on page 6-88.

Note: Base Laser scanner, 955E does not support aim mode. Any attempt to adjust the aiming beam using the 955 bar codes in this guide will fail. The Base Laser scanner does not decode Codablock, Code93i, or Telepen symbologies.

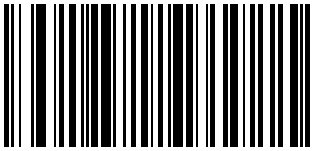
Scan Angle (SE1524 only)

Bar Code Decoder Engine = SE1524

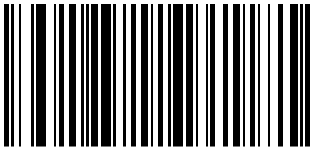
This parameter provides two options for the length of the laser bar code reading beam.

Select an option by scanning one of the bar codes shown below.

Alternate Angle



* Normal Angle



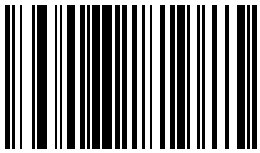
Scanner Parameters – Bar Code Type Specific

Chinese 2 of 5

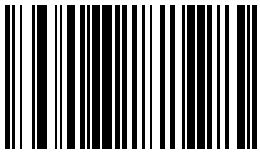
Bar Code Decoder Engine = SE1524 and SE955

When enabled, Chinese 2 of 5 symbols will be scanned, decoded and transmitted. Set this parameter by scanning either of the bar codes shown below.

Enable Chinese 2 of 5



* Disable Chinese 2 of 5

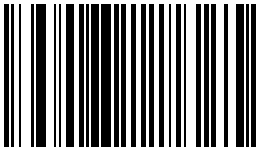


Codabar

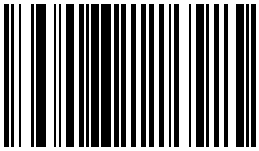
Bar Code Decoder Engine = SE1524 and SE955

When enabled, Codabar symbols will be scanned, decoded and transmitted. Set this parameter by scanning either of the bar codes shown below.

Enable Codabar



* Disable Codabar



CLSI Editing

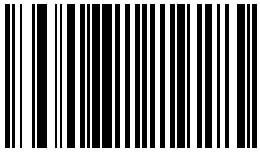
Bar Code Decoder Engine = SE1524 and SE955

When enabled, the start and stop characters are stripped from the bar code and a space is inserted after the 1st, 5th, and 10th characters of a 14 character Codabar symbol.

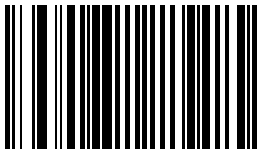
Set this parameter by scanning either of the bar codes shown below.

Note: Symbol length does not include start and stop characters.

Enable CLSI Editing



* Disable CLSI Editing

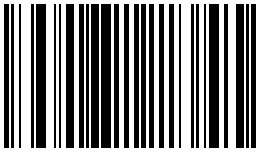


NOTIS Editing

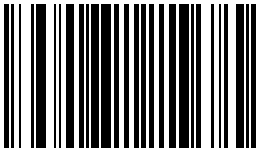
Bar Code Decoder Engine = SE1524 and SE955

When enabled, the start and stop characters are stripped from a decoded Codabar symbol. Set this parameter by scanning either of the bar codes shown below.

Enable NOTIS Editing



* Disable NOTIS Editing



Set Lengths for Codabar

Bar Code Decoder Engine = SE1524 and SE955

Lengths for Codabar may be set for:

- any length,
- one or two discrete lengths,
- or lengths within a specific range.

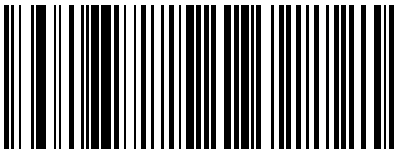
The length of a code refers to the number of characters, including check digits, the code contains. It also includes any start or stop characters.

See "ASCII Character Equivalents" on page 6-83.

One Discrete Length (Parameter L1)

This option decodes only those codes containing a selected length. For example, when you want to scan only Codabar symbols containing 14 characters, scan the “Codabar One Discrete Length” bar code and then “1” and “4” bar codes using the Keypad Number Symbols (page 6-91). *Default = 5.*

To begin setting **one discrete length**, scan this bar code:

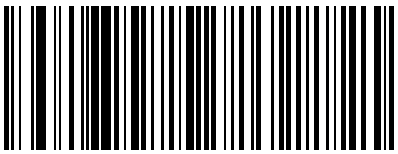


Next, scan two numeric bar codes that correspond to the desired value. Single digit numbers must have a leading zero. If you wish to change your number selection, scan Cancel on the Keypad Number Symbols page.

Two Discrete Lengths (Parameter L2)

This option decodes only those codes containing two selected lengths. For example, when you want to scan only Codabar symbols containing 2 or 14 characters, scan the “Codabar Two Discrete Lengths” bar code and then “0”, “2”, “1” and “4” bar codes using the Keypad Number Symbols (page 6-91) at the end of this section. *Default = 55.*

To begin setting **two discrete lengths**, scan this bar code:

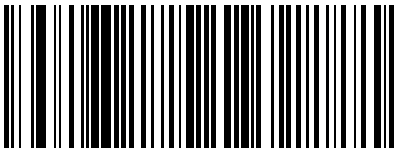


Next, scan four numeric bar codes that correspond to the desired value. Single digit numbers must have a leading zero. If you wish to change your number selection, scan Cancel on the Keypad Number Symbols page.

Length Within Range

This option decodes a code type within a specified minimum and maximum range. For example, when you want to scan only Codabar symbols containing between 4 and 12 characters, scan the “Codabar Length Within Range” bar code and then “0”, “4”, “1” and “2” bar codes using the Keypad Number Symbols (page 6-91) .

To begin setting **lengths within a range,** scan this bar code:

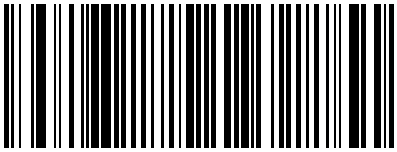


Next, scan numeric bar codes that correspond to the desired value using the Keypad Number Symbols. Single digit numbers must have a leading zero. If you wish to change your number selection, scan Cancel on the Keypad Number Symbols page.

Any Length

This option decodes Codabar bar codes containing any number of characters.

To set **any length**, scan this bar code:



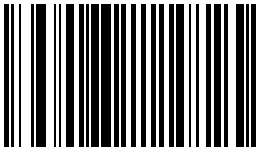
Code 11

Bar Code Decoder Engine = SE1524 and SE955

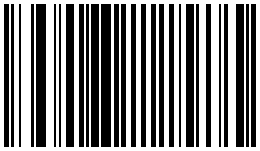
When enabled, Code 11 symbols will be scanned, decoded and transmitted.

Set this parameter by scanning either of the bar codes shown below.

Enable Code 11



* Disable Code 11



Set Lengths for Code 11

Bar Code Decoder Engine = SE1524 and SE955

Lengths for Code 11 may be set for:

- any length,
- one or two discrete lengths,
- or lengths within a specific range.

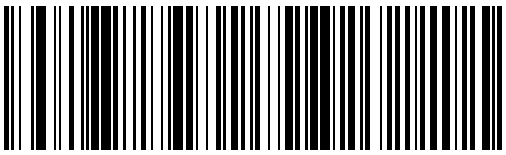
The length of a code refers to the number of characters, including check digits, the code contains. It also includes any start or stop characters.

See "ASCII Character Equivalents" on page 6-83.

One Discrete Length (Parameter L1)

This option decodes only those codes containing a selected length. For example, when you want to scan only Code 11 symbols containing 14 characters, scan the “Code 11 One Discrete Length” bar code and then “1” and “4” bar codes using the Keypad Number Symbols (page 6-91) . *Default = 4.*

To begin setting **one discrete length**, scan this bar code:

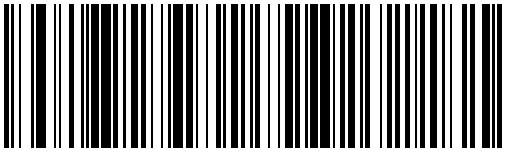


Next, scan two numeric bar codes that correspond to the desired value. Single digit numbers must have a leading zero. If you wish to change your number selection, scan Cancel on the Keypad Number Symbols page.

Two Discrete Lengths (Parameter L2)

This option decodes only those codes containing two selected lengths. For example, when you want to scan only Code 11 symbols containing 2 or 14 characters, scan the “Code 11 Two Discrete Lengths” bar code and then “0”, “2”, “1” and “4” bar codes using the Keypad Number Symbols (page 6-91) at the end of this section. *Default = 55.*

To begin setting **two discrete lengths**, scan this bar code:

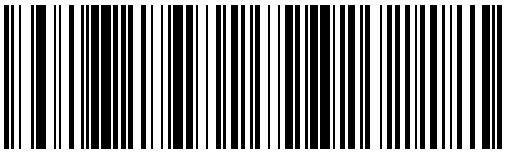


Next, scan four numeric bar codes that correspond to the desired value. Single digit numbers must have a leading zero. If you wish to change your number selection, scan Cancel on the Keypad Number Symbols page.

Length Within Range

This option decodes a code type within a specified minimum and maximum range. For example, when you want to scan only Code 11 symbols containing between 4 and 12 characters, scan the “Code 11 Length Within Range” bar code and then “0”, “4”, “1” and “2” bar codes using the Keypad Number Symbols (page 6-91).

To begin **setting lengths within a range**, scan this bar code:

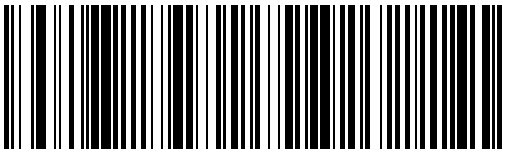


Next, scan numeric bar codes that correspond to the desired value using the Keypad Number Symbols. Single digit numbers must have a leading zero. If you wish to change your number selection, scan Cancel on the Keypad Number Symbols page.

Any Length

This option decodes Code 11 bar codes containing any number of characters.

To set **any length,** scan this bar code:



Code 11 Check Digit Verification

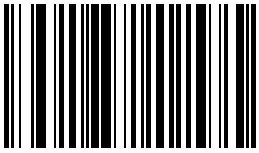
Bar Code Decoder Engine = SE1524 and SE955

When enabled, this parameter checks the integrity of a Code 11 symbol to ensure it complies with the specified check digit algorithm.

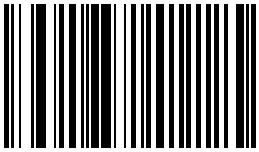
Note: Enable "Code 11 Check Digit Verification" when Transmit Code 11 Check Digits (page 6-43) is enabled.

Set this parameter by scanning one of the bar codes shown below.

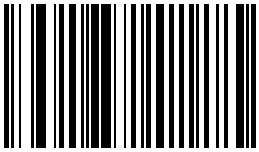
* Disable this feature



One Check Digit



Two Check Digits



Transmit Code 11 Check Digits

Bar Code Decoder Engine = SE1524 and SE955

Note: Code 11 Check Digit Verification (page 6-42) must be enabled for this parameter to function.

Transmit (Enable)

* Do Not Transmit (Disable)

Code 128

Bar Code Decoder Engine = SE1524 and SE955

Set this parameter by scanning either of the bar codes shown below.

* Enable Code 128

Disable Code 128

GS1-128 (formerly UCC/EAN-128)

Bar Code Decoder Engine = SE1524 and SE955

Set this parameter by scanning either of the bar codes shown below.

* Enable GS1-128

Disable GS1-128

GS1-128 is a convention for printing data fields with standard Code 128 bar code symbols. GS1-128 symbols are distinguished by a leading FNC 1 character as the first or second character in the symbol. Other FNC 1 characters are used to delineate fields.

When GS1-128 symbols are read, they are transmitted after special formatting strips off the leading FNC 1 character, and replaces other FNC 1 characters with the ASCII 29 (GS) control character.

When AIM symbology identifiers are transmitted, the modifier character indicates the position of the leading FNC 1 character according to AIM guidelines. For example,]c1 indicates a GS1-128 symbol with a leading FNC1 character.

Standard Code 128 bar codes which do not have a leading FNC 1 may still be used, but are not encoded according to the GS1-128 convention. Standard Code 128 and GS1-128 may be mixed in an application. The SE955 autodiscriminates between these symbols, and can enable or disable one or both code types.

The following table indicates the behavior of the SE955 in each of the four possible parameter settings.

Standard Code 128	UCC/EAN 128	Effect and Example
Disable	Disable	No Code 128 symbols can be read.
Disable	Enable	Read only symbols with leading FNC1.
		Examples:
		^{FNC1}ABCD^{FNC1}E are read as ABCD^{29}E
		A^{FNC1}BCD^{FNC1}E are read as ABCD^{29}E
		^{FNC1FNC1}ABCD^{FNC1}E are read as ABCD^{29}E
		ABCD^{FNC1}E cannot be read
		ABCDE cannot be read
Enable	Disable	Read only symbols without leading FNC1.
		Examples:
		^{FNC1}ABCD^{FNC1}E cannot be read
		A^{FNC1}BCD^{FNC1}E cannot be read
		^{FNC1FNC1}ABCD^{FNC1}E cannot be read
		ABCD^{FNC1}E is read as ABCD^{29}E
		ABCDE is read as ABCDE
Enable	Enable	Read both types of symbols.
		Examples:
		^{FNC1}ABCD^{FNC1}E are read as ABCD^{29}E
		A^{FNC1}BCD^{FNC1}E are read as ABCD^{29}E
		^{FNC1FNC1}ABCD^{FNC1}E are read as ABCD^{29}E
		ABCD^{FNC1}E is read as ABCD^{29}E
		ABCDE is read as ABCDE

Lengths for Code 128

Bar Code Decoder Engine = SE1524 and SE955

No length setting is required for Code 128. The default setting is Any Length.

Code 39

Bar Code Decoder Engine = SE1524 and SE955

Note: This parameter must be enabled when Convert Code 39 to Code 32 (page 6-47) is to be enabled.

Set this parameter by scanning either of the bar codes shown below.

* Enable Code 39

Disable Code 39

Code 39 Check Digit Verification

Bar Code Decoder Engine = SE1524 and SE955

When enabled, this parameter checks the integrity of a Code 39 symbol to ensure it complies with specified algorithms. Only those Code 39 symbols which include a modulo 43 check digit are decoded when this parameter is enabled.

Set this parameter by scanning either of the bar codes shown below.

Enable Code 39 Check Digit Verification

* Disable Code 39 Check Digit Verification

Code 32 Prefix

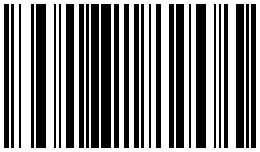
Bar Code Decoder Engine = SE1524 and SE955

This parameter adds the prefix character “A” to all Code 32 bar codes.

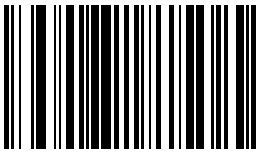
Note: When Code 32 Prefix is enabled, Convert Code 39 to Code 32 (page 6-47) parameter must also be enabled.

Set this parameter by scanning either of the bar codes shown below.

Enable Code 32 Prefix



* Disable Code 32 Prefix



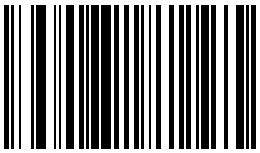
Convert Code 39 to Code 32

Bar Code Decoder Engine = SE1524 and SE955

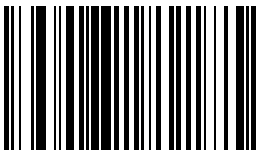
- Code 39 must be enabled in order for this parameter to function.
- When parameter Code 32 Prefix is to be enabled, this Convert Code 39 to Code 32 (Italian Pharma Code) parameter must also be enabled.

Set this parameter by scanning either of the bar codes shown below.

Enable Convert Code 39 to Code 32



* Disable Convert Code 39 to Code 32



Code 39 Full ASCII Conversion

Bar Code Decoder Engine = SE1524 and SE955

Note: Code 39 Full ASCII and Trioptic Code 39 not be enabled simultaneously.

When enabled, the ASCII character set assigns a code to letter, punctuation marks, numerals, and most control keystrokes on the keyboard.

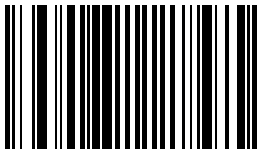
The first 32 codes are non-printable and are assigned to keyboard control characters such as [Backspace] and [Return or Enter]. The other 96 are called printable codes because all but [Space] and [Delete] produce visible characters.

Code 39 Full ASCII interprets the bar code special character ($ + % /) preceding a Code 39 character and assigns an ASCII character value to the pair.

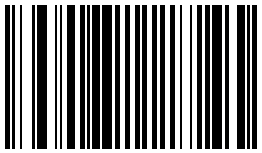
See ASCII Character Equivalents on page 6-83.

Set this parameter by scanning either of the bar codes shown below.

Enable Code 39 Full ASCII Conversion



* Disable Code 39 Full ASCII Conversion



Set Lengths for Code 39

Bar Code Decoder Engine = SE1524 and SE955

Lengths for Code 39 may be set for:

- any length,
- one or two discrete lengths,
- or lengths within a specific range.

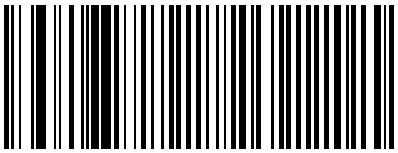
The length of a code refers to the number of characters, including check digits, the code contains. If Code 39 Full ASCII is enabled, “Length Within a Range” or “Any Length” are the preferred options.

See ASCII Character Equivalents on page 6-83.

Code 39 One Discrete Length (Parameter L1)

This option decodes only those codes containing a selected length. For example, when you want to scan only Code 39 symbols containing 14 characters, scan the “Code 39 One Discrete Length” bar code and then “1” and “4” bar codes using the Keypad Number Symbols (page 6-91) at the end of this section. *Default = 2.*

To begin setting **one discrete length**, scan this bar code:

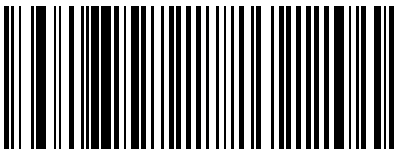


Next, scan two numeric bar codes that correspond to the desired value. Single digit numbers must have a leading zero. If you wish to change your number selection, scan Cancel on the Keypad Number Symbols page.

Code 39 Two Discrete Lengths (Parameter L2)

This option decodes only those codes containing two selected lengths. For example, when you want to scan only Code 39 symbols containing 2 or 14 characters, scan the “Code 39 Two Discrete Lengths” bar code and then “0”, “2”, “1” and “4” bar codes using the Keypad Number Symbols (page 6-91) at the end of this section. *Default = 55.*

To begin setting **two discrete lengths**, scan this bar code:

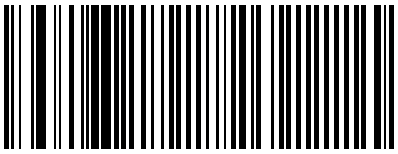


Next, scan four numeric bar codes that correspond to the desired value. Single digit numbers must have a leading zero. If you wish to change your number selection, scan Cancel on the Keypad Number Symbols page.

Code 39 Length Within Range

This option decodes a code type within a specified minimum and maximum range. For example, when you want to scan only Code 39 symbols containing between 4 and 12 characters, scan the “Code 39 Length Within Range” bar code and then “0”, “4”, “1” and “2” bar codes using the Keypad Number Symbols (page 6-91) .

To begin setting **lengths within a range**, scan this bar code:



Next, scan numeric bar codes that correspond to the desired value. Single digit numbers must have a leading zero. If you wish to change your number selection, scan Cancel on the Keypad Number Symbols page.

Code 39 Any Length

This option decodes Code 39 bar codes containing any number of characters.

To set **any length,** scan this bar code:

Transmit Code 39 Check Digit

Bar Code Decoder Engine = SE1524 and SE955

When enabled, the check digit is transmitted with the data.

Note: Parameter setting for "Code 39 Check Digit Verification" has no effect on this parameter value.

Set this parameter by scanning either of the bar codes shown below.

Enable Transmit Code 39 Check Digit

* Disable Transmit

Trioptic Code 39

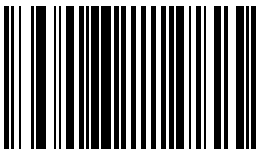
Bar Code Decoder Engine = SE1524 and SE955

Trioptic Code 39 symbols always contain six characters.

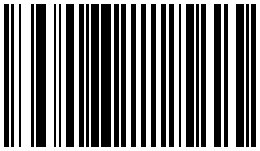
Note: When Trioptic Code 39 is enabled, set the Code 39 Full ASCII parameter to disabled. Both parameters should not be enabled simultaneously.

Set this parameter by scanning either of the bar codes shown below.

Enable Trioptic Code 39



* Disable Trioptic Code 39

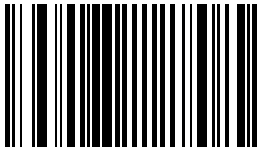


Code 93

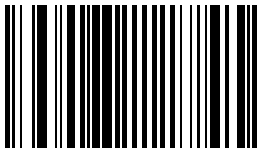
Bar Code Decoder Engine = SE1524 and SE955

When enabled, Code 93 symbols will be scanned, decoded and transmitted. Set this parameter by scanning either of the bar codes shown below.

Enable Code 93



* Disable Code 93



Set Lengths for Code 93

Bar Code Decoder Engine = SE1524 and SE955

Lengths for Code 93 may be set for:

- any length,
- one or two discrete lengths,
- or lengths within a specific range.

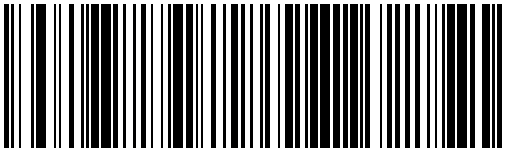
The length of a code refers to the number of characters, including check digits, the code contains.

See ASCII Character Equivalents on page 6-83.

One Discrete Length (Parameter L1)

This option decodes only those codes containing a selected length. For example, when you want to scan only Code 93 symbols containing 14 characters, scan the “Code 93 One Discrete Length” bar code and then “1” and “4” bar codes using the bar codes on the Keypad Number Symbols (page 6-91) . *Default = 4.*

To begin setting **one discrete length**, scan this bar code:

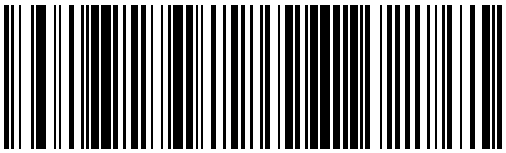


Next, scan two numeric bar codes that correspond to the desired value. Single digit numbers must have a leading zero. If you wish to change your number selection, scan Cancel on the Keypad Number Symbols page.

Two Discrete Lengths (Parameter L2)

This option decodes only those codes containing two selected lengths. For example, when you want to scan only Code 93 symbols containing 2 or 14 characters, scan the “Code 93 Two Discrete Lengths” bar code and then “0”, “2”, “1” and “4” bar codes using the Keypad Number Symbols (page 6-91) at the end of this section. *Default = 55.*

To begin setting **two discrete lengths**, scan this bar code:

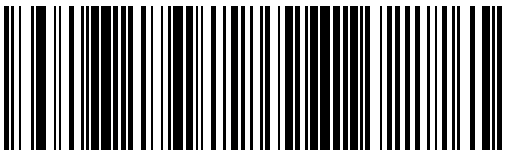


Next, scan four numeric bar codes that correspond to the desired value. Single digit numbers must have a leading zero. If you wish to change your number selection, scan Cancel on the Keypad Number Symbols page.

Length Within Range

This option decodes a code type within a specified minimum and maximum range. For example, when you want to scan only Code 93 symbols containing between 4 and 12 characters, scan the “Code 93 Length Within Range” bar code and then “0”, “4”, “1” and “2” bar codes using the Keypad Number Symbols (page 6-91) at the end of this section.

To begin setting **lengths within a range**, scan this bar code:

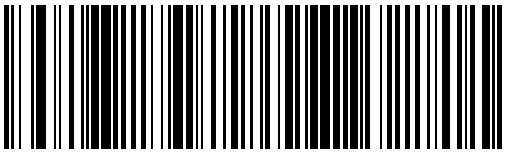


Next, scan numeric bar codes that correspond to the desired value. Single digit numbers must have a leading zero. If you wish to change your number selection, scan Cancel on the Keypad Number Symbols page.

Any Length

This option decodes Code 93 bar codes containing any number of characters.

To set **any length**, scan this bar code:

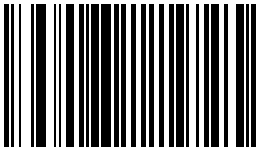


Discrete 2 of 5

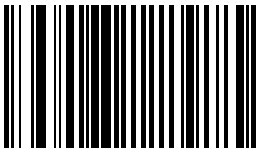
Bar Code Decoder Engine = SE1524 and SE955

When enabled, Discrete 2 of 5 (D 2 of 5) symbols will be scanned, decoded and transmitted. Set this parameter by scanning either of the bar codes shown below.

Enable Discrete 2 of 5



* Disable Discrete 2 of 5



Set Lengths for Discrete 2 of 5

Bar Code Decoder Engine = SE1524 and SE955

Lengths for D 2 of 5 may be set for:

- any length,
- one or two discrete lengths,
- or lengths within a specific range.

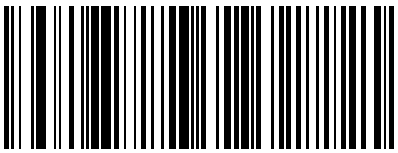
The length of a code refers to the number of characters, including check digits, the code contains.

See ASCII Character Equivalents on page 6-83.

One Discrete Length (Parameter L1)

This option decodes only those codes containing a selected length. For example, when you want to scan only D 2 of 5 symbols containing 14 characters, scan the “D 2 of 5 One Discrete Length” bar code and then “1” and “4” bar codes using the bar codes on the Keypad Number Symbols (page 6-91) . *Default = 12.*

To begin setting **one discrete length**, scan this bar code:

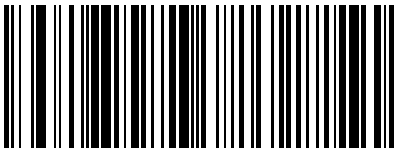


Next, scan two numeric bar codes that correspond to the desired value. Single digit numbers must have a leading zero. If you wish to change your number selection, scan Cancel on the Keypad Number Symbols page.

Two Discrete Lengths (Parameter L2)

This option decodes only those codes containing two selected lengths. For example, when you want to scan only D 2 of 5 symbols containing 2 or 14 characters, scan the “D 2 of 5 Two Discrete Lengths” bar code and then “0”, “2”, “1” and “4” bar codes using the Keypad Number Symbols (page 6-91). *Default = 12.*

To begin setting **two discrete lengths**, scan this bar code:

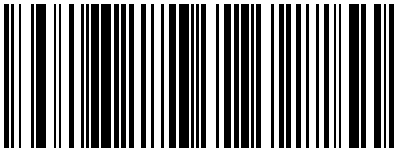


Next, scan four numeric bar codes that correspond to the desired value. Single digit numbers must have a leading zero. If you wish to change your number selection, scan Cancel on the Keypad Number Symbols page.

Length Within Range

This option decodes a code type within a specified minimum and maximum range. For example, when you want to scan only D 2 of 5 symbols containing between 4 and 12 characters, scan the “D 2 of 5 Length Within Range” bar code and then “0”, “4”, “1” and “2” bar codes using the Keypad Number Symbols (page 6-91).

To begin setting **lengths within a range**, scan this bar code:



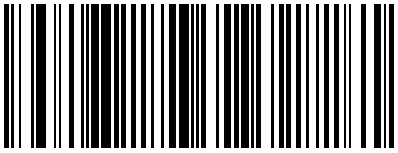
Next, scan numeric bar codes that correspond to the desired value. Single digit numbers must have a leading zero. If you wish to change your number selection, scan Cancel on the Keypad Number Symbols page.

Any Length

This option decodes D 2 of 5 bar codes containing any number of characters.

*Note: **Important** - Selecting this option may lead to misdecodes for D 2 of 5 codes.*

To set **any length,** scan this bar code:



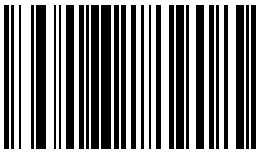
GS1 DataBar (RSS) Codes

Bar Code Decoder Engine = SE1524 and SE955

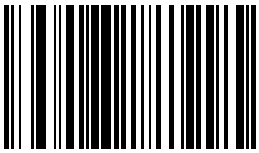
Default = Disabled

GS1 DataBar Omnidirectional (RSS-14)

Enable GS1 DataBar Omnidirectional (RSS-14)

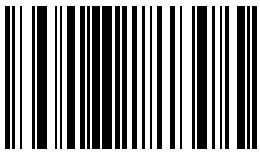


* Disable GS1 DataBar Omnidirectional (RSS-14)

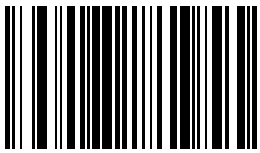


GS1 DataBar Limited (RSS-Limited)

Enable GS1 DataBar Limited (RSS-Limited)

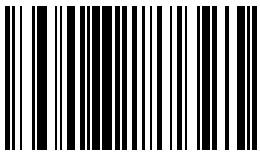


* Disable GS1 DataBar Limited (RSS-Limited)

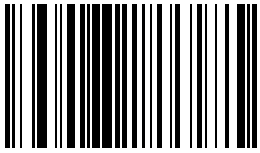


GS1 DataBar Expanded (RSS-Expanded)

Enable GS1 DataBar Expanded (RSS-Expanded)



* Disable GS1 DataBar Expanded (RSS-Expanded)

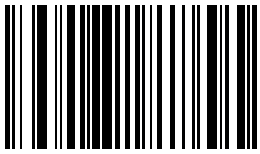


Convert GS1 DataBar (RSS) to UPC/EAN

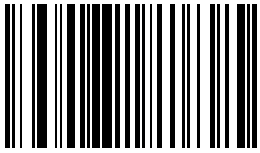
This parameter only applies to GS1 DataBar Omnidirectional (RSS-14) and GS1 DataBar Limited (RSS Limited) symbols. When this conversion is enabled, GS1 DataBar Omnidirectional (RSS-14) and GS1 DataBar Limited (RSS Limited) symbols encoding a single zero as the first digit have the leading ‘010’ stripped and the bar code reported as EAN-13.

Bar codes beginning with two or more zeros but not six zeros have the leading ‘0100’ stripped and the bar code reported as UPC-A. The UPC-A Preamble parameter to transmit the system character and country code applies to converted bar codes. Note that neither the system character nor the check digit can be stripped.

Enable Convert GS1 DataBar (RSS) to UPC/EAN



* Disable Convert GS1 DataBar (RSS) to UPC/EAN



Interleaved 2 of 5

Bar Code Decoder Engine = SE1524 and SE955

When enabled, Interleaved 2 of 5 (I 2 of 5) symbols will be scanned, decoded and transmitted.

Set this parameter by scanning either of the bar codes shown below.

* Enable Interleaved 2 of 5

Disable Interleaved 2 of 5

I 2 of 5 Digit Verification

Bar Code Decoder Engine = SE1524 and SE955

When enabled, this parameter checks the integrity of an I 2 of 5 symbol to ensure it complies with a specified algorithm, either USS (Uniform Symbology Specification) or OPCC (Optical Product Code Council).

Set this parameter by scanning one of the bar codes shown below.

* Disable I 2 of 5 Check Digit Verification

USS Check Digit

OPCC Check Digit

Convert I 2 of 5 to EAN-13

Bar Code Decoder Engine = SE1524 and SE955

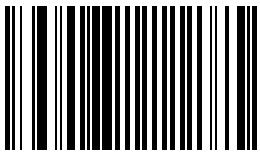
A successful bar code conversion requires the following to be true:

- Interleaved 2 of 5 scanning is enabled.
- One of the I 2 of 5 lengths is set to 14.
- The bar code has a leading zero.
- The bar code has a valid EAN-13 check digit.

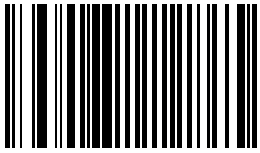
When enabled, the parameter converts a 14 character Interleaved 2 of 5 bar code into EAN-13 and transmits it to the host as EAN-13.

Set this parameter by scanning either of the bar codes shown below.

Enable Convert Interleaved 2 of 5 to EAN-13



* Disable Convert Interleaved 2 of 5 to EAN-13



Set Lengths for I 2 of 5

Bar Code Decoder Engine = SE1524 and SE955

Lengths for I 2 of 5 may be set for:

- any length,
- one or two discrete lengths,
- or lengths within a specific range.

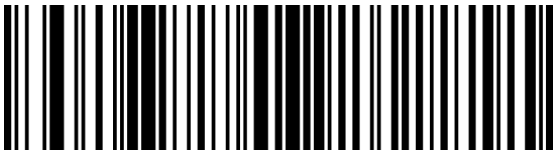
The length of a code refers to the number of characters, including check digits, the code contains. When settings lengths, single digit numbers must always be preceded by a leading zero.

See ASCII Character Equivalents on page 6-83.

One Discrete Length (Parameter L1)

This option decodes only those codes containing a selected length. For example, when you want to decode I 2 of 5 symbols containing only 14 characters, scan the “I 2 of 5 One Discrete Length” bar code and then the “1” and “4” bar codes using the Keypad Number Symbols (page 6-91). *Default = 14.*

To begin setting **one discrete length,** scan this “I 2 of 5 One Discrete Length” bar code:

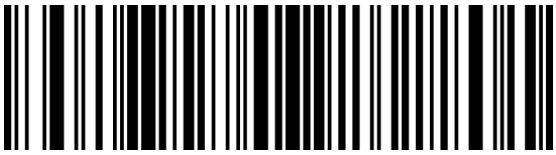


Next, scan two numeric bar codes that correspond to the desired value. Single digit numbers must have a leading zero. If you wish to change your number selection, scan Cancel on the Keypad Number Symbols page.

Two Discrete Lengths (Parameter L2)

This option decodes only those codes containing two selected lengths. For example, when you want to scan only I 2 of 5 symbols containing 6 or 14 characters, scan the “I 2 of 5 Two Discrete Lengths” bar code and then “0”, “6”, “1” and “4” bar codes to decode only I 2 of 5 symbols containing 6 or 14 characters. Use the Keypad Number Symbols (page 6-91) at the end of this section. *Default = 14.*

To begin setting **two discrete lengths**, scan this “I 2 of 5 Two Discrete Lengths” bar code:

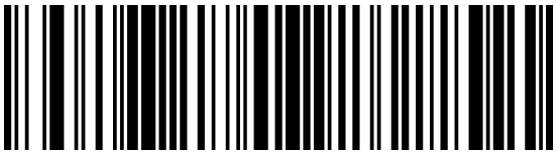


Next, scan four numeric bar codes that correspond to the desired value. Single digit numbers must have a leading zero. If you wish to change your number selection, scan Cancel on the Keypad Number Symbols page.

Length Within Range

This option decodes a code type within a specified minimum and maximum range. For example, when you want to scan only I 2 of 5 symbols containing between 4 and 12 characters, scan the “I 2 of 5 Length Within Range” bar code and then “0”, “4”, “1” and “2” bar codes using the Keypad Number Symbols (page 6-91) at the end of this section.

To begin setting **lengths within a range**, scan this “I 2 of 5 Length Within Range” bar code:



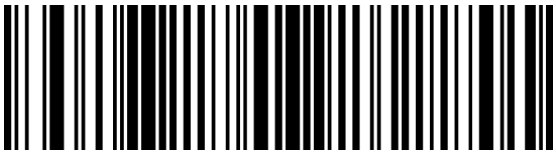
Next, scan numeric bar codes that correspond to the desired value. Single digit numbers must have a leading zero. If you wish to change your number selection, scan Cancel on the Keypad Number Symbols page.

Any Length

This option decodes I 2 of 5 bar codes containing any number of characters.

Note: Important: Selecting this option may lead to misdecodes for I 2 of 5 codes.

To set **any length**, scan this “I 2 of 5 Any Length” bar code:



See "Set Lengths for I 2 of 5 (superseded)" on page 6-89

Transmit I 2 of 5 Check Digit

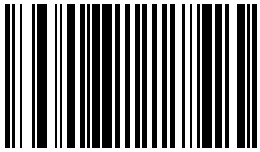
Bar Code Decoder Engine = SE1524 and SE955

When enabled, the check digit is transmitted with the data.

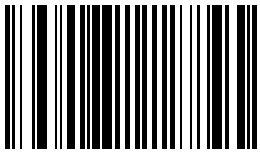
Parameter setting for I 2 of 5 Check Digit Verification has no effect on this parameter value.

Set this parameter by scanning either of the bar codes shown below.

Enable Transmit I 2 of 5 Check Digit



* Disable Transmit I 2 of 5 Check Digit



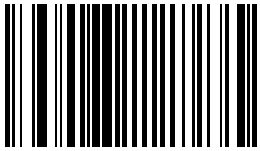
MSI Plessey

Bar Code Decoder Engine = SE1524 and SE955

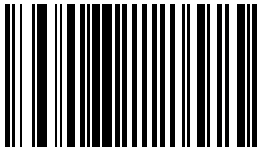
When enabled, MSI Plessey symbols will be scanned, decoded and transmitted.

Set this parameter by scanning either of the bar codes shown below.

Enable MSI Plessey



* Disable MSI Plessey



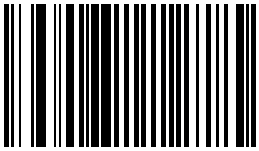
MSI Plessey Check Digit Algorithm

Bar Code Decoder Engine = SE1524 and SE955

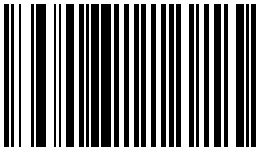
When the Two MSI Plessey Check Digits option is selected, an additional verification is required to ensure integrity. Either of the two following algorithms may be selected.

Set this parameter by scanning either of the algorithm bar codes shown below.

Mod 10/Mod 11



* Mod 10/Mod 10



MSI Plessey Check Digits

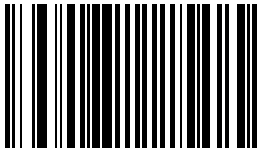
Bar Code Decoder Engine = SE1524 and SE955

Check digits placed at the end of the MSI Plessey bar code verify the integrity of the data. At least one check digit is always required. Check digits are not automatically transmitted with the data.

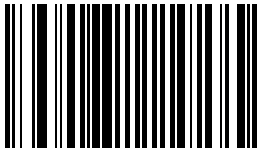
Note: When Two Check Digits is selected, an MSI Plessey Check Digit Algorithm (page 6-63) must also be selected.

Set the number of check digits to be included with the bar code by scanning either of the bar codes shown below.

* One MSI Plessey check digit



Two MSI Plessey check digits



Set Lengths for MSI Plessey

Bar Code Decoder Engine = SE1524 and SE955

Lengths for MSI Plessey may be set for:

- any length,
- one or two discrete lengths,
- or lengths within a specific range.

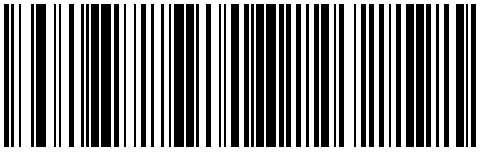
The length of a code refers to the number of characters, including check digits, the code contains.

See ASCII Character Equivalents on page 6-83.

One Discrete Length (Parameter L1)

This option decodes only those codes containing a selected length. For example, when you want to scan only MSI Plessey symbols containing 14 characters, scan the “MSI Plessey One Discrete Length” bar code and then “1” and “4” bar codes using the Keypad Number Symbols (page 6-91). *Default = 6.*

To begin setting **one discrete length**, scan this bar code:

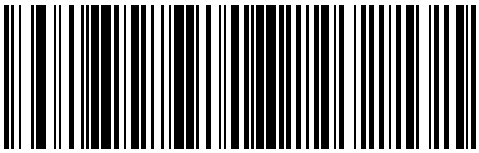


Next, scan two numeric bar codes that correspond to the desired value. Single digit numbers must have a leading zero. If you wish to change your number selection, scan Cancel on the Keypad Number Symbols page.

Two Discrete Lengths (Parameter L2)

This option decodes only those codes containing two selected lengths. For example, when you want to scan only MSI Plessey symbols containing 2 or 14 characters, scan the “MSI Plessey Two Discrete Lengths” bar code and then “0”, “2”, “1” and “4” bar codes using the Keypad Number Symbols (page 6-91). *Default = 55.*

To begin setting **two discrete lengths**, scan this bar code:

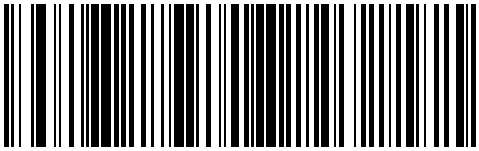


Next, scan four numeric bar codes that correspond to the desired value. Single digit numbers must have a leading zero. If you wish to change your number selection, scan Cancel on the Keypad Number Symbols page.

Length Within Range

This option decodes a code type within a specified minimum and maximum range. For example, when you want to scan only MSI Plessey symbols containing between 4 and 12 characters, scan the “MSI Plessey Length Within Range” bar code and then “0”, “4”, “1” and “2” bar codes using the Keypad Number Symbols (page 6-91).

To begin setting **lengths within a range**, scan this bar code:



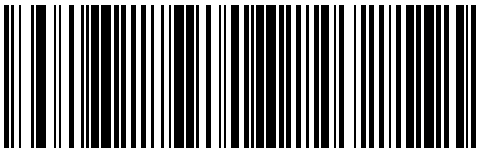
Next, scan numeric bar codes that correspond to the desired value. Single digit numbers must have a leading zero. If you wish to change your number selection, scan Cancel on the Keypad Number Symbols page.

Any Length

This option decodes MSI Plessey bar codes containing any number of characters.

*Note: Important**:** Selecting this option may lead to misdecodes for MSI Plessey codes.*

To set **any length,** scan this bar code:



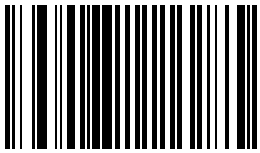
Transmit MSI Plessey Check Digit

Bar Code Decoder Engine = SE1524 and SE955

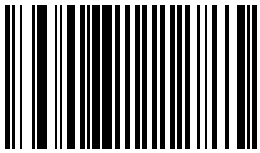
When enabled, the check digit is transmitted with the data.

Set this parameter by scanning either of the bar codes shown below.

Enable Transmit MSI Plessey Check Digit



* Disable Transmit MSI Plessey Check Digit



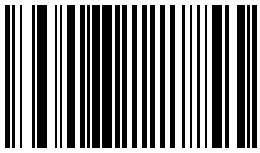
UPC/EAN

UPC-A

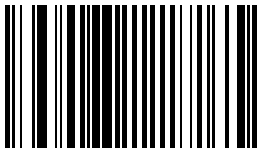
Bar Code Decoder Engine = SE1524 and SE955

Select an option by scanning either of the bar codes shown below.

* Enable UPC-A



Disable UPC-A



UPC-E

Bar Code Decoder Engine = SE1524 and SE955

Select an option by scanning either of the bar codes shown below.

* Enable

Disable

UPC-E1

Bar Code Decoder Engine = SE1524 and SE955

Select an option by scanning either of the bar codes shown below.

Enable UPC-E1

* Disable UPC-E1

EAN-8

Bar Code Decoder Engine = SE1524 and SE955

Select an option by scanning either of the bar codes shown below.

* Enable EAN-8

Disable EAN-8

EAN-13

Bar Code Decoder Engine = SE1524 and SE955

Select an option by scanning either of the bar codes shown below.

* Enable EAN-13

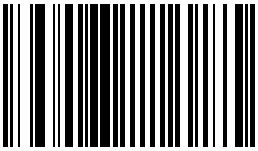
Disable EAN-13

Bookland EAN

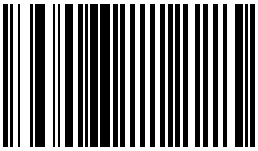
Bar Code Decoder Engine = SE1524 and SE955

Select an option by scanning either of the bar codes shown below.

Enable Bookland EAN



* Disable Bookland EAN



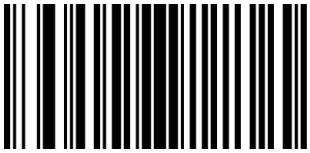
Bookland ISBN Format

Bar Code Decoder Engine = SE955

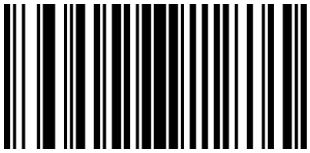
Select one of the following formats for Bookland data when Bookland EAN is enabled.

- **Bookland ISBN-10** - The bar code reader reports Bookland data starting with 978 in traditional 10-digit format with the special Bookland check digit for backward-compatibility. Data starting with 979 is not considered Bookland in this mode.
- **Bookland ISBN-13** - The bar code reader reports Bookland data (starting with either 978 or 979) as EAN-13 in 13-digit format to meet the 2007 ISBN-13 protocol.

* Bookland ISBN-10



Bookland ISBN-13



For Bookland EAN to function properly, first enable Bookland EAN using Enable/Disable Bookland EAN, then select either Decode UPC/EAN Supplementals, Autodiscriminate UPC/EAN Supplementals, or Enable 978/979 Supplemental Mode in Decode UPC/EAN Supplementals (page 6-76).

Check Digits

Bar Code Decoder Engine = SE1524 and SE955

Transmit UPC-A Check Digit

This parameter determines whether the symbol will be transmitted with or without the UPC-A check digit. Select an option by scanning either of the bar codes shown below.

* Enable Transmit UPC-A Check Digit

Disable Transmit UPC-A Check Digit

Transmit UPC-E Check Digit

This parameter determines whether the symbol will be transmitted with or without the UPC-E check digit. Select an option by scanning either of the bar codes shown below.

* Enable Transmit UPC-E Check Digit

Disable Transmit UPC-E Check Digit

Transmit UPC-E1 Check Digit

This parameter determines whether the symbol will be transmitted with or without the UPC-E1 check digit.

Select an option by scanning either of the bar codes shown below.

* Enable Transmit UPC-E1 Check Digit

Disable Transmit UPC-E1 Check Digit

Conversions

Bar Code Decoder Engine = SE1524 and SE955

Convert UPC-E to UPC-A

When this parameter is enabled, UPC-E (zero suppressed) decoded data is converted to UPC-A format before transmission. After conversion, data follows UPC-A format and is affected by UPC-A programming selections (e.g., Preamble, Check Digit, etc.).

When disabled, UPC-E (zero suppressed) decoded data is transmitted without conversion.

Select an option by scanning either of the bar codes shown below.

Enable UPC-E to UPC-A conversion

* Disable UPC-E to UPC-A conversion

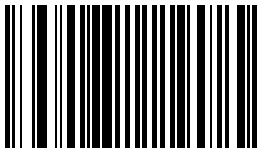
Convert UPC-E1 to UPC-A

When this parameter is enabled, UPC-E1 (zero suppressed) decoded data is converted to UPC-A format before transmission. After conversion, data follows UPC-A format and is affected by UPC-A programming selections (e.g., Preamble, Check Digit, etc.).

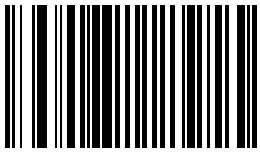
When disabled, UPC-E1 (zero suppressed) decoded data is transmitted without conversion.

Select an option by scanning either of the bar codes shown below.

Enable UPC-E1 to UPC-A conversion



* Disable UPC-E1 to UPC-A conversion



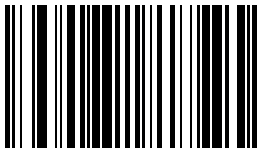
Convert EAN-8 to EAN-13 Type

When “EAN-8 Zero Extend” is enabled, this parameter setting labels the extended symbol as either an EAN-13 bar code or an EAN-8 bar code.

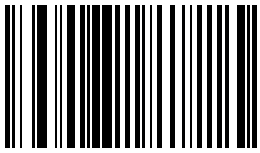
When “EAN-8 Zero Extend” is disabled, this parameter’s conversion setting is ignored.

Select an option by scanning either of the bar codes shown below.

* Type is EAN-13



Type is EAN-8



Preambles

Bar Code Decoder Engine = SE1524 and SE955

UPC-A Preamble

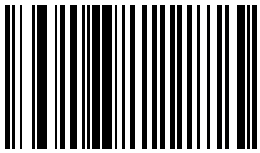
A preamble is a lead-in character for UPC-A symbols transmitted to the host device. The lead-in characters are considered part of the symbol.

Data is sent to the host in the following format:

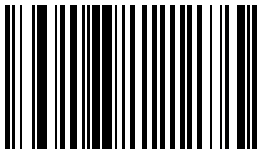
No Preamble	[data]
System Character	[schar] [data]
System Character and Country Code	[country code] [schar] [data]

Select an option by scanning one of the bar codes shown below.

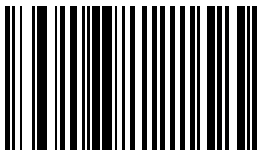
No UPC-A Preamble
<DATA>



* System Character
<SYSTEM CHARACTER><DATA>



System Character and Country Code
(“0” for USA)
<COUNTRY CODE> <SYSTEM CHARACTER> <DATA>



UPC-E Preamble

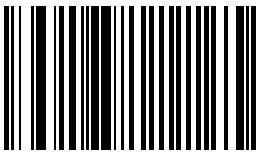
A preamble is a lead-in character for UPC-E symbols transmitted to the host device. The lead-in characters are considered part of the symbol.

Data is sent to the host in the following format:

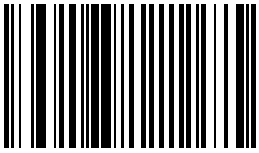
No Preamble	[data]
System Character	[schar] [data]
System Character and Country Code	[country code] [schar] [data]

Select an option by scanning one of the bar codes shown below.

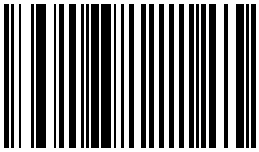
No UPC-E Preamble
<DATA>



* System Character
<SYSTEM CHARACTER><DATA>



System Character and Country Code
(“0” for USA)
<COUNTRY CODE> <SYSTEM CHARACTER> <DATA>



UPC-E1 Preamble

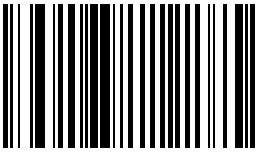
A preamble is a lead-in character for UPC-E1 symbols transmitted to the host device. The lead-in characters are considered part of the symbol.

Data is sent to the host in the following format:

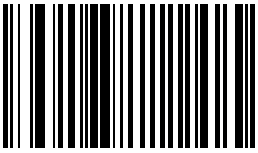
No Preamble	[data]
System Character	[schar] [data]
System Character and Country Code	[country code] [schar] [data]

Select an option by scanning one of the bar codes shown below.

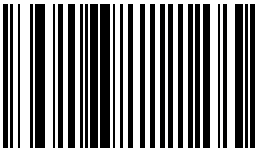
No UPC-E1 Preamble
<DATA>



* System Character
<SYSTEM CHARACTER><DATA>



System Character and Country Code
(“0” for USA)
<COUNTRY CODE> <SYSTEM CHARACTER> <DATA>



Supplementals

Bar Code Decoder Engine = SE1524 and SE955

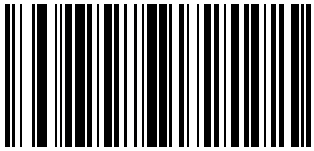
Decode UPC/EAN Supplementals

Note: In order to minimize the risk of invalid data transmission, Honeywell recommends that you select whether to read or ignore supplemental characters.

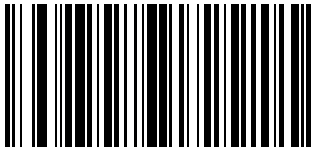
Supplementals are additionally appended characters (2 or 5) according to specific code format conventions (e.g., UPC-A + 2).

Select an option by scanning one of the bar codes shown below.

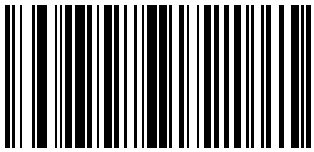
Decode UPC/EAN with Supplementals
UPC/EAN symbols without supplemental characters are not decoded.



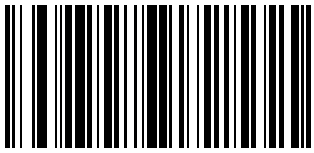
*** Ignore UPC/EAN with Supplementals**
When a UPC/EAN plus supplemental symbol is scanned, the UPC/EAN is decoded and the supplemental characters ignored.



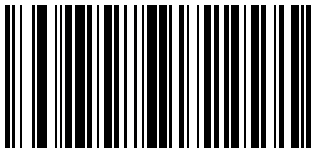
Autodiscriminate UPC/EAN Supplementals
When this option is selected you must assign a value to the Decode UPC/EAN Supplemental Redundancy (page 6-79) parameter. A value of 5 or more is recommended.



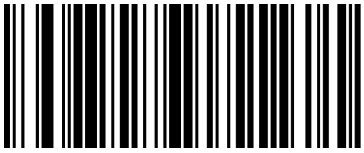
Enable 378/379 Supplemental Mode
The bar code reader will identify supplementals for EAN-13 bar codes that start with a 378 or 379 prefix only. All other UPC/EAN codes are decoded immediately and the supplemental characters ignored.



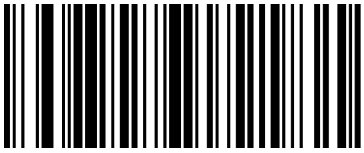
Enable 978/979 Supplemental Mode
If you select 978/979 Supplemental Mode and are scanning Bookland EAN bar codes, see Bookland EAN (page 6-69) to enable Bookland EAN, and select a format using Bookland ISBN Format (page 6-69).



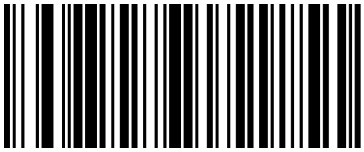
Enable 977 Supplemental Mode



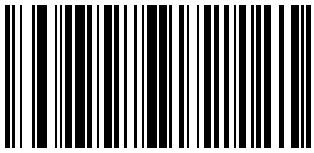
Enable 414/419/434/439 Supplemental Mode



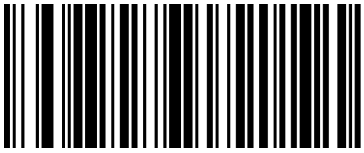
Enable 491 Supplemental Mode



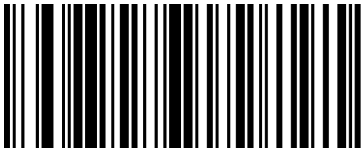
Enable Smart Supplemental Mode
Applies to EAN-13 bar codes starting with any prefix listed previously.



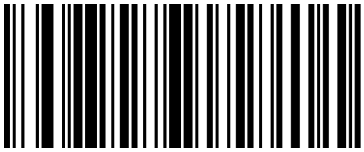
Supplemental User Programmable Type 1



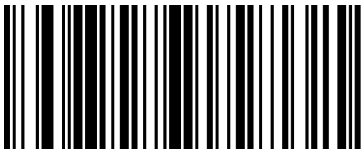
Supplemental User Programmable Type 1 and 2



Smart Supplemental Plus User Programmable 1



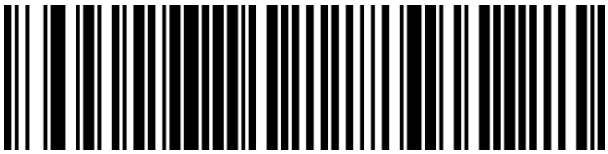
Smart Supplemental Plus User Programmable 1 and 2



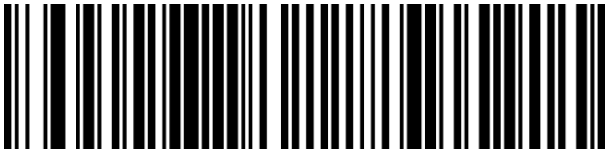
User-Programmable Supplementals

When Supplemental User-Programmable option is selected from Decode UPC/EAN Supplementals, select **User-Programmable Supplemental 1** to set the 3-digit prefix. Then select the 3 digits using the Keypad Number Symbols (page 6-91).

User-Programmable Supplemental 1



User-Programmable Supplemental 2

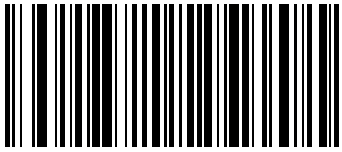


When Supplemental User-Programmable option is selected from Decode UPC/EAN Supplementals, select **User-Programmable Supplemental 2** to set the 3-digit prefix. Then select the 3 digits using the Keypad Number Symbols (page 6-91).

Decode UPC/EAN Supplemental Redundancy

With Autodiscriminate UPC/EAN Supplementals selected, this option adjusts the number of times a symbol without supplementals will be decoded before transmission. The range is from 2 to 20 times. Five or above is recommended when decoding a mix of UPC/EAN symbols with and without supplementals, and the autodiscriminate option is selected. *Default = 7 Times.*

To begin **setting the decode redundancy value**, scan this bar code:



Next, scan two numeric bar codes that correspond to the desired value using the Keypad Number Symbols (page 6-91) . Single digit numbers must have a leading zero.

If you wish to change your selection, scan Cancel on the Keypad Number Symbols page.

EAN-8 Zero Extend

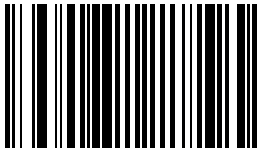
Bar Code Decoder Engine = SE1524 and SE955

When this parameter is enabled, five leading zeros are added to decoded EAN-8 symbols to make them compatible in format to EAN-13 symbols. Use parameter Convert EAN-8 to EAN-13 Type (page 6-72) to label the extended symbol.

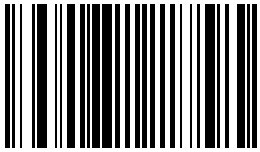
When disabled, EAN-8 symbols are transmitted as is and parameter “Convert EAN-8 to EAN-13 Type” setting is ignored.

Select an option by scanning either of the bar codes shown below.

Enable EAN-8 Zero Extend



* Disable EAN-8 Zero Extend



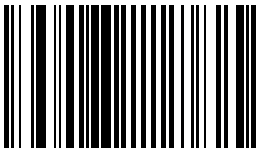
UCC Coupon Extended Code

Bar Code Decoder Engine = SE1524 and SE955

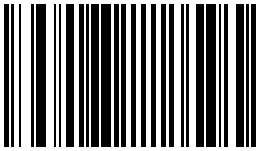
Note: UCC Coupon Extended Code replaces UPC/EAN Coupon Code.

The UCC Coupon Extended Code is an additional bar code adjacent to a UCC Coupon Code. To enable or disable UCC Coupon Extended Code, scan the appropriate bar code below.

Enable UCC Coupon Extended Code



* Disable UCC Coupon Extended Code



UPC/EAN Security Level

Bar Code Decoder Engine = SE1524 and SE955

Use this parameter to determine the security level appropriate for UPC/EAN bar code quality. There is an inverse relationship between security and bar code reader aggressiveness, so be sure to choose only that level of security necessary for any given application.

There are four decode security levels. Higher security levels are selected for decreasing levels of bar code quality. As security levels increase, the bar code reader aggressiveness decreases.

Security Level 0

The default setting.
Allows the bar code reader to operate in its most aggressive state, while providing sufficient security in decoding "in-spec" UPC/EAN bar codes.

Security Level 1

Misdecode 1,2,7,8
As bar code quality levels diminish, certain characters become prone to misdecodes before others (i.e., 1, 2, 7, 8). Select this level upon misdecodes of poorly printed labels that are limited to 1, 2, 7 and 8.

Security Level 2

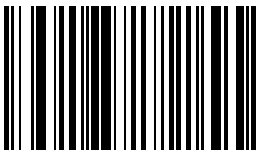
Misdecodes not 1,2,7,8
Select this security level upon experiencing misdecodes of poorly printed bar codes and the misdecodes are not limited to characters 1,2,7 and 8.

Security Level 3

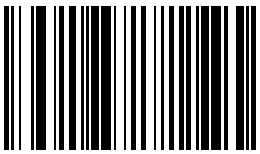
Select this security level if you have tried security level 2 and are still experiencing misdecodes.
Using this level is an extreme measure against misdecoding severely out of spec bar codes. This level significantly impairs the decoding ability of the bar code reader. If this level of security is necessary, you should try to improve the quality of your bar codes.

Select an option by scanning one of the bar codes shown below. If you wish to change your selection, scan Cancel on the Keypad Number Symbols (page 6-91) .

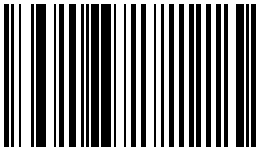
* Level 0



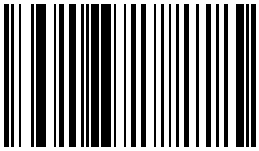
Level 1



Level 2



Level 3



ASCII Character Equivalents

Values from 1128 through 1255 (hex values 80h through FFh) may also be set. But the conversion of those characters to printable characters is not standardized. Therefore, they are not included in the table.

Scan Value	Hex Value	Full ASCII Code 39 Encode Char.	Keystroke	ASCII Character
1000	00h	%U	CTRL 2	NUL
1001	0lh	$A	CTRL A	SOH
1002	02h	$B	CTRL B	STX
1003	03h	$C	CTRL C	ETX
1004	04h	$D	CTRL D	EOT
1005	05h	$E	CTRL E	ENQ
1006	06h	$F	CTRL F	ACK
1007	07h	$G	CTRL G	BELL
1008	08h	$H	CTRL H	BCKSPC
1009	09h	$I	CTRL I	HORIZ TAB
1010	0Ah	$J	CTRL J	LF/NW LN
1011	0Bh	$K	CTRL K	VT
1012	0Ch	$L	CTRL L	FF
1013	0Dh	$M	CTRL M	CR/ENTER
1014	0Eh	$N	CTRL N	SO
1015	0Fh	$O	CTRL O	SI
1016	10h	$P	CTRL P	DLE
1017	1lh	$Q	CTRL Q	DC1/XON
1018	12h	$R	CTRL R	DC2
1019	13h	$S	CTRL S	DC3/XOFF
1020	14h	$T	CTRL T	DC4
1021	15h	$U	CTRL U	NAK
1022	16h	$V	CTRL V	SYN
1023	17h	$W	CTRL W	ETB
1024	18h	$X	CTRL X	CAN
1025	19h	$Y	CTRL Y	EM
1026	lAh	$Z	CTRL Z	SUB
1027	lBh	%A	CTRL [	ESC
1028	lCh	%B	CTRL \	FS
1029	lDh	%C	CTRL]	GS
1030	lEh	%D	CTRL 6	RS
1031	lFh	%E	CTRL -	US
1032	20h	Space	Space	Space
1033	21h	/A	!	!
1034	22h	/B	"	"
1035	23h	/C	#	#
1036	24h	/D	$	$
1037	25h	/E	%	%
1038	26h	/F	&	&

Scan Value	Hex Value	Full ASCII Code 39 Encode Char.	Keystroke	ASCII Character
1039	27h	/G	’	'
1040	28h	/H	(	(
1041	29h	/I	)	)
1042	2Ah	/J	*	*
1043	2Bh	/K	+	+
1044	2Ch	/L	,	,
1045	2Dh	-	-	-
1046	2Eh	.	.	.
1047	2Fh	/	/	/
1048	30h	0	0	0
1049	31h	1	1	1
1050	32h	2	2	2
1051	33h	3	3	3
1052	34h	4	4	4
1053	35h	5	5	5
1054	36h	6	6	6
1055	37h	7	7	7
1056	38h	8	8	8
1057	39h	9	9	9
1058	3Ah	/Z	:	:
1059	3Bh	%F	;	;
1060	3Ch	%G	<	<
1061	3Dh	%H	=	=
1062	3Eh	%I	>	>
1063	3Fh	%J	?	?
1064	40h	%V	@	@
1065	41h	A	A	A
1066	42h	B	B	B
1067	43h	C	C	C
1068	44h	D	D	D
1069	45h	E	E	E
1070	46h	F	F	F
1071	47h	G	G	G
1072	48h	H	H	H
1073	49h	I	I	I
1074	4Ah	J	J	J
1075	4Bh	K	K	K
1076	4Ch	L	L	L
1077	4Dh	M	M	M
1078	4Eh	N	N	N
1079	4Fh	O	O	O
1080	50h	P	P	P
1081	51h	Q	Q	Q

Scan Value	Hex Value	Full ASCII Code 39 Encode Char.	Keystroke	ASCII Character
1082	52h	R	R	R
1083	53h	S	S	S
1084	54h	T	T	T
1085	55h	U	U	U
1086	56h	V	V	V
1087	57h	W	W	W
1088	58h	X	X	X
1089	59h	Y	Y	Y
1090	5Ah	Z	Z	Z
1091	5Bh	%K	[	[
1092	5Ch	%L	\	\
1093	5Dh	%M	]	]
1094	5Eh	%N	^	^
1095	5Fh	%O	_	_
1096	60h	%W	‘	`
1097	61h	+A	a	a
1098	62h	+B	b	b
1099	63h	+C	c	c
1100	64h	+D	d	d
1101	65h	+E	e	e
1102	66h	+F	f	f
1103	67h	+G	g	g
1104	68h	+H	h	h
1105	69h	+I	i	i
1106	6Ah	+J	j	j
1107	6Bh	+K	k	k
1108	6Ch	+L	1	l
1109	6Dh	+M	m	m
1110	6Eh	+N	n	n
1111	6Fh	+O	o	o
1112	70h	+P	p	p
1113	71h	+Q	q	q
1114	72h	+R	r	r
1115	73h	+S	s	s
1116	74h	+T	t	t
1117	75h	+U	u	u
1118	76h	+V	v	v
1119	77h	+W	w	w
1120	78h	+X	x	x
1121	79h	+Y	y	y
1122	7Ah	+Z	z	z
1123	7Bh	%P	{	{
1124	7Ch	%Q	|	|

Scan Value	Hex Value	Full ASCII Code 39 Encode Char.	Keystroke	ASCII Character
1125	7Dh	%R	}	}
1126	7Eh	%S	~	~
1127	7Fh		Undefined	Undefined

Appendix

This appendix contains information that is superseded by newer information.

It contains programming bar codes for Symbol SE955 scan engines only.

Laser On Time (superseded)

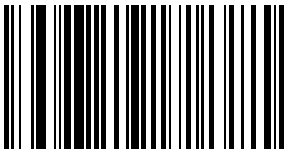
Bar Code Decoder Engine = SE955

For correct operation, reboot the Mobile Device after changing this value.

Note: The bar code on this page has been replaced with a newer bar code. See Laser On Time on page 6-20.

This parameter sets the maximum time decode processing continues during a scan attempt. It is programmable in 0.1 second increments from 0.5 to 9.9 seconds. If a label has not been decoded before this time expires and the session is terminated, the system regards it as a failed scan attempt.

To begin setting **Laser On Time**, scan this bar code:



Next, scan two numeric bar codes that correspond to the desired on time using the Keypad Number Symbols at the end of this section. Times less than 1.0 second must have a leading zero. *Default = 3.0 seconds.*

If you wish to change your number selection, scan Cancel on the Keypad Number Symbols (page 6-91).

Note: Base Laser scanner, 955E does not support aim mode. Any attempt to adjust the aiming beam using the 955 bar codes in this guide will fail. The Base Laser scanner does not decode Codablock, Code93i, or Telepen symbologies.

Scan Angle (SE955 only) superseded)

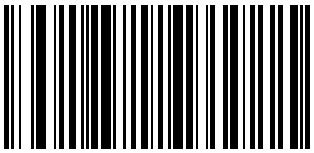
Bar Code Decoder Engine = SE955

Note: The bar code on this page has been replaced with a newer bar code. See Scan Angle (SE955 only) on page 6-34.

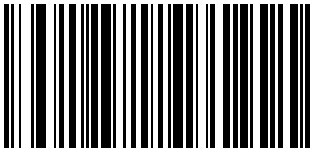
Choose one of the options below to set the scan angle to narrow or wide. Once the parameter bar code is scanned, the Scan Angle setting is persistently stored.

Select an option by scanning one of the bar codes shown below.

Narrow Angle (35°)



* Wide Angle



Note: Base Laser scanner, 955E does not support aim mode. Any attempt to adjust the aiming beam using the 955 bar codes in this guide will fail. The Base Laser scanner does not decode Codablock, Code93i, or Telepen symbologies.

Set Lengths for I 2 of 5 (superseded)

Bar Code Decoder Engine = SE955

Note: The bar codes on this page have been replaced with newer bar codes. See Set Lengths for I 2 of 5 on page 6-61.

Lengths for I 2 of 5 may be set for:

- any length,
- one or two discrete lengths,
- or lengths within a specific range.

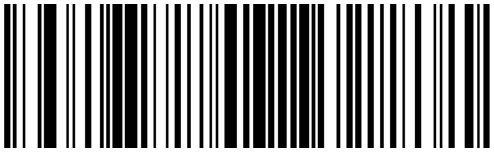
The length of a code refers to the number of characters, including check digits, the code contains.

See ASCII Character Equivalents on page 6-83.

One Discrete Length (Parameter L1)

This option decodes only those codes containing a selected length. For example, when you want to scan only I 2 of 5 symbols containing 14 characters, scan the “I 2 of 5 One Discrete Length” bar code and then the “1” and “4” bar codes using the Keypad Number Symbols (page 6-91). *Default = 14.*

To begin setting **one discrete length,** scan this “I 2 of 5 One Discrete Length” bar code:

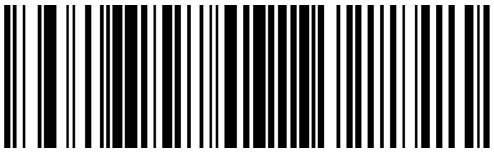


Next, scan two numeric bar codes that correspond to the desired value. Single digit numbers must have a leading zero. If you wish to change your number selection, scan Cancel on the Keypad Number Symbols page.

Two Discrete Lengths (Parameter L2)

This option decodes only those codes containing two selected lengths. For example, when you want to scan only I 2 of 5 symbols containing 2 or 14 characters, scan the “I 2 of 5 Two Discrete Lengths” bar code and then “0”, “2”, “1” and “4” bar codes using the Keypad Number Symbols (page 6-91) at the end of this section. *Default = 14.*

To begin setting **two discrete lengths**, scan this “I 2 of 5 Two Discrete Lengths” bar code:

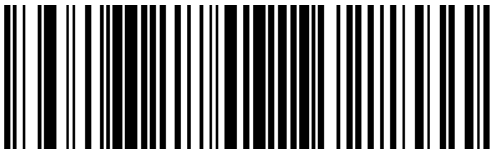


Next, scan four numeric bar codes that correspond to the desired value. Single digit numbers must have a leading zero. If you wish to change your number selection, scan Cancel on the Keypad Number Symbols page.

Length Within Range

This option decodes a code type within a specified minimum and maximum range. For example, when you want to scan only I 2 of 5 symbols containing between 4 and 12 characters, scan the “I 2 of 5 Length Within Range” bar code and then “0”, “4”, “1” and “2” bar codes using the Keypad Number Symbols (page 6-91) at the end of this section.

To begin setting **lengths within a range**, scan this “I 2 of 5 Length Within Range” bar code:



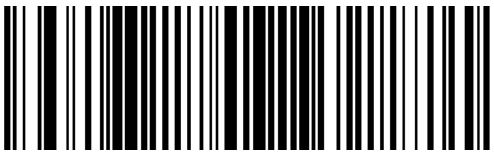
Next, scan numeric bar codes that correspond to the desired value. Single digit numbers must have a leading zero. If you wish to change your number selection, scan Cancel on the Keypad Number Symbols page.

Any Length

This option decodes I 2 of 5 bar codes containing any number of characters.

Important: Selecting this option may lead to misdecodes for I 2 of 5 codes.

To set **any length**, scan this “I 2 of 5 Any Length” bar code:



Keypad Number Symbols

The bar code labels shown below represent a numeric keypad, with decimal values 0 through 9. Each label can be scanned individually to enter a numeric value. Use these numeric value symbols to enter numeric input in the course of performing a scan engine system configuration.

0

1

2

3

4

5

6

7

8

9

Cancel

7 Decode Zones

Introduction

The scan ranges listed in the following tables are based on the following factors:

- Decode zone is a function of various symbol characteristics including density, print contrast, wide-to-narrow ratio and edge acuity. Symbols test labels are examples of optimum quality bar codes.
- As distance decreases the visible scan line also decreases (visible scan length = 1.8 x distance to label x TAN (scan angle / 2). The useable scan length is approximately 90% of visible scan line and must fully encompass the bar code label to be successfully decoded. On larger symbol densities of 20 mil, 40 mil and 55 mil, this affects minimum decode distance.
- + / - 5° pitch is used to reduce the inhibiting effects of spectral reflection (glare) near 0° of the scan head aspect to the bar code. Optimal operation is obtained at 2° to 15° pitch offset.
- Scan rate of 25 + / - scans second with bi-directional redundancy.
- The long range and advanced long range scanners support the aim-mode feature which allows generation of the laser for aiming prior to actual bar code decoding with a duration from 1 sec to 8 sec.

The following "good scan and decode" ranges (decode zones) are related to a specific scan engine either integrated or connected to your mobile device. If you do not see your type of scan engine listed, you may be using a tethered Bluetooth bar code scanner or a serial port connected bar code scanner (these types of external scanners are not included in this list).

Note: When MX7 is listed in the 'Valid for' table, it represents the MX7 running Windows® CE 5.

Bar Code Reader and Device Chart

Device	***BTRS***	***HX2***	***HX3***	***Marathon***	***MX3Plus***	***MX7***	***MX7 Tecton***	***MX8***	***MX9***
Reader									
1524 Multi-Range LORAX Laser						X	X		X
4400 Ring Imager	X	X	X						
5300 2D Area Imager							X	X	X
5380 2D Area Imager						X			
955E Base Laser	X	X	X			X	X	X	
955I Short Range Laser					X	X	X	X	X
EV-15 1D Linear Imager						X		X	
Hybrid 2D Imager				X					
N43XX Laser							X	X	
N73XX Laser							X		

Bluetooth Ring Scanner and Ring Imager (BTRS) programming bar codes are contained in the *Bluetooth Ring Scanner Programming Guide*.

HX2 and HX3 Ring Scanner and Ring Imager programming bar codes are contained in the *Ring Scanner/Ring Imager Programming Guide*.

Marathon 2D Imager programming bar codes are contained in the *Marathon Programming Guide*.

N43XX Laser Scanner

Valid for	MX7 Tecton	MX8

Symbol Density	Typical Working Ranges		Guaranteed Working Ranges	
	Near	**Far**	**Near**	**Far**
4 mil Code 39	4.3 in / 109 mm	5.9 in / 149 mm	4.6 in / 117 mm	5.6 in / 141 mm
5 mil Code 39	3.7 in / 94 mm	7.9 in / 201 mm	4.2 in / 106 mm	7.5 in / 190 mm
7.5 mil Code 39	2.7 in / 68 mm	12.0 in / 305 mm	3.6 in / 92 mm	11.1 in / 281 mm
10 mil Code 39	2.2 in / 55 mm	15.0 in / 381 mm	2.6 in / 66 mm	14.6 in / 371 mm
13 mil 100% UPC	2.0 in / 52 mm	18.0 in / 457 mm	2.0 in / 52 mm	18 in / 457 mm
15 mil Code 39	1.77 in / 45 mm	21.5 in / 547 mm	1.77 in / 45 mm	21.5 in / 547 mm
20 mil Code 39	1.7 in / 43 mm	26.8 in / 680 mm	1.7 in / 43 mm	26.8 in / 680 mm
40 mil Code 39	3.4 in / 85 mm	35.1 in / 891 mm	3.8 in / 96 mm	29.1 in / 734 mm
55 mil Code 39	4.7 in / 119 mm	38.4 in / 976 mm	5.3 in / 135 mm	34.3 in / 872 mm

Note: Performance may be impacted by bar code quality and environmental conditions.

N73XX Laser Scanner

Valid for	MX7 Tecton

Symbol Density	Typical Working Ranges		Guaranteed Working Ranges	
	Near	**Far**	**Near**	**Far**
7.5 mil	5.0 in / 12.70 cm	20.0 in / 50.8 cm	6.0 in / 15.24 cm	15.0 in / 38.10 cm
10 mil	5.5 in / 13.97 cm	34.0 in / 86.36 cm	6.0 in / 15.24 cm	30.0 in / 76.20 cm
13 mil 100% UPC	4.5 in / 11.43 cm	48.0 in / 12.19 cm	6.0 in / 15.24 cm	37.0 in / 94.00 cm
15 mil	5.5 in / 13.97 cm	64.0 in / 162.56 cm	7.0 in / 17.78 cm	50.0 in / 127.00 cm
20 mil	6.0 in / 15.24 cm	88.0 in / 223.52 cm	7.0 in / 17.78 cm	70.0 in / 177.80 cm
55 mil	15.0 in / 38.10 cm	180.0 in / 457.20 cm	17.0 in / 43.18 cm	155.0 in / 393.70 cm
70 mil reflective	27.5 in / 60.85 cm	500.0 in / 127.00 cm	30.0 in / 76.20 cm	325.0 in / 825.50 cm
100 mil reflective	40.0 in / 101.60 cm	672.0 in / 1706.88 cm	45.0 in / 114.3 cm	480.0 in / 121.92 cm

Note: Performance may be impacted by bar code quality and environmental conditions.

1D Linear Imager, EV-15

Valid for	MX7	MX8

Near ranges are largely dependent upon the width of the bar code and the scan angle.

Symbol Density	Measured Working Ranges		Guaranteed Working Ranges	
	Near	Far	Near	Far
5 mil	2.6 in / 6.6 cm	6.7 in / 17.0 cm	3.9 in / 9.9 cm	6.7 in / 17.0 cm
10 mil	1.8 in / 4.6 cm	12.0 in / 30.5 cm	2.4 in / 6.1 cm	9.4 in / 23.9 cm
20 mil	1.1 in / 2.8 cm	12.3 in / 31.2 cm	1.6 in / 4.1 cm	12.2 in / 31.9 cm
40 mil	2.5 in / 6.3 cm	21.3 in / 54.1 cm	3.0 in / 7.6 cm	15.7 in / 39.9 cm

2D Area Imager, 5300

Valid for	MX7 Tecton	MX8	MX9

Honeywell supports the following scan ranges in light levels above 10 lux.

Code Size	Distance (Smart Focus [SF])	
	Near	Far
MaxiCode 35 mil	2 inches / 5.1 cm	10 inches / 25.4 cm
Data Matrix 8.3 mil	3.4 inches / 8.6 cm	5.7 inches / 14.5 cm
Data Matrix 15 mil (ECC200)	1.8 inches / 4.6 cm	7.5 inches / 19 cm
PDF417 10 mil (ECL4)	2.2 inches / 5.6 cm	7.6 inches / 19.3 cm
PDF417 8.3 mil (ECL4)	2.4 inches / 6.1 cm	6.8 inches / 17.3 cm
PDF417 6.6 mil (ECL4)	2.8 inches / 7.1 cm	6.0 inches / 15.2 cm
Code 39 15 mil	1.5 inches / 3.8 cm	9.2 inches / 23.4 cm
Code 39 10 mil	2.2 inches / 5.6 cm	7.6 inches / 19.3 cm
Code 39 8 mil	2.3 inches / 5.8 cm	6.8 inches / 17.3 cm
Code 39 7.5 mil	2.5 inches / 6.4 cm	6.5 inches / 16.5 cm
Code 39 5 mil	3.6 inches / 9.1 cm	4.2 inches / 10.7 cm
UPC 13 mil, 100%	2 inches / 5.1 cm	8.9 inches / 22.6 cm
QR Code 8.3 mil	3.3 inches / 8.4 cm	5.4 inches / 13.7 cm
QR Code 15 mil	2.2 inches / 5.6 cm	7.2 inches / 18.3 cm

2D Area Imager, 5380

Valid for	MX7

Honeywell supports the following scan ranges in light levels above 10 lux.

Code Size	Distance (Smart Focus [SF])	
	Near	**Far**
MaxiCode 35 mil	2 inches / 5.1 cm	10 inches / 25.4 cm
Data Matrix 8.3 mil	3.4 inches / 8.6 cm	5.7 inches / 14.5 cm
Data Matrix 15 mil (ECC200)	1.8 inches / 4.6 cm	7.5 inches / 19 cm
PDF417 10 mil (ECL4)	2.2 inches / 5.6 cm	7.6 inches / 19.3 cm
PDF417 8.3 mil (ECL4)	2.4 inches / 6.1 cm	6.8 inches / 17.3 cm
PDF417 6.6 mil (ECL4)	2.8 inches / 7.1 cm	6.0 inches / 15.2 cm
Code 39 15 mil	1.5 inches / 3.8 cm	9.2 inches / 23.4 cm
Code 39 10 mil	2.2 inches / 5.6 cm	7.6 inches / 19.3 cm
Code 39 8 mil	2.3 inches / 5.8 cm	6.8 inches / 17.3 cm
Code 39 7.5 mil	2.5 inches / 6.4 cm	6.5 inches / 16.5 cm
Code 39 5 mil	3.6 inches / 9.1 cm	4.2 inches / 10.7 cm
UPC 13 mil, 100%	2 inches / 5.1 cm	8.9 inches / 22.6 cm
QR Code 8.3 mil	3.3 inches / 8.4 cm	5.4 inches / 13.7 cm
QR Code 15 mil	2.2 inches / 5.6 cm	7.2 inches / 18.3 cm

Short Range Laser Scanner (SE955I)

Valid for	MX3Plus	MX7	MX7 Tecton	MX8	MX9

Factory Default Scan Angle -- Wide (47°)

Symbol Density	Typical Working Ranges		Guaranteed Working Ranges	
	Near	**Far**	**Near**	**Far**
4 mil	1.0 in / 2.50 cm	5.50 in / 13.97 cm	2.20 in / 5.60 cm	3.20 in / 8.13 cm
5 mil	1.25 in / 3.18 cm	8.00 in / 20.32 cm	2.20 in / 5.60 cm	5.50 in / 13.97 cm
7.5 mil	1.50 in / 3.81 cm	13.00 in / 33.02 cm	2.00 in / 5.08 cm	9.50 in / 24.13 cm
10 mil	1.50 in / 3.81 cm	18.00 in / 45.72 cm	1.75 in / 4.45 cm	14.00 in / 35.56 cm
13 mil	1.50 in / 3.81 cm	24.00 in / 60.96 cm	1.75 in / 4.45 cm	18.00 in / 45.72 cm
15 mil	1.50 in / 3.81 cm	28.00 in / 71.12 cm	1.75 in 4.45 cm	21.00 in / 53.34 cm
20 mil	1.75 in / 4.45 cm	33.00 in / 83.82 cm	*	27.00 in / 68.58 cm
40 mil	*	36.00 in / 91.44 cm	*	28.00 in / 71.12 cm
55 mil	*	45.00 in / 114.30 cm	*	34.00 in / 86.36 cm

* Near ranges are largely dependent upon the width of the bar code and the scan angle.

Base Laser Scanner (SE955E)

Valid for	MX7	MX7 Tecton	MX8

Note: Base Laser scanner, 955E does not support aim mode. Any attempt to adjust the aiming beam using the 955 bar codes in this guide will fail. The Base Laser scanner does not decode Codablock, Code93i, or Telepen symbologies.

Factory Default Scan Angle -- Wide (47°)

Symbol Density	**Typical Working Ranges**		**Guaranteed Working Ranges**	
	Near	**Far**	**Near**	**Far**
4 mil	1.50 in / 3.81 cm	5.50 in / 13.97 cm	*	3.20 in / 8.13 cm
5 mil	1.80 in / 4.57 cm	8.00 in / 20.32 cm	*	5.50 in / 13.97 cm
7.5 mil	2.20 in / 5.59 cm	13.00 in / 33.02 cm	*	9.00 in / 22.06 cm
10 mil	2.20 in / 5.59 cm	18.00 in / 45.72 cm	*	13.00 in / 33.02 cm
13 mil	2.20 in / 5.59 cm	24.00 in / 60.96 cm	2.5 in / 6.35 cm	17.00 in / 43.18 cm
15 mil	2.20 in / 5.59 cm	25.00 in / 63.50 cm	*	18.00 in / 45.72 cm
20 mil	2.50 in / 6.35 cm	26.00 in / 66.04 cm	*	18.00 in / 45.72 cm
40 mil	*	28.00 in / 71.12 cm	*	19.00 in / 48.26 cm
55 mil	*	32.00 in / 81.28 cm	*	23.00 in / 58.42 cm

* Near ranges are largely dependent upon the width of the bar code and the scan angle.

Multi-Range "LORAX" Laser (SE1524ER)

Valid for	MX7	MX7 Tecton	MX9

Factory Default Scan Angle -- 13.5 degrees

Symbol Density	**Typical Working Ranges**		**Guaranteed Working Ranges**	
	Near	**Far**	**Near**	**Far**
7.5 mil	2.0 in / 5.08 cm	22.00 in / 55.88 cm	6.00 in / 15.24 cm	15.0 in / 38.10 cm
10 mil	4.0 in / 10.16 cm	34.0 in / 86.36 cm	6.0 in / 15.24 cm	30.0 in / 76.20 cm
15 mil	5.0 in / 12.70 cm	71.0 in / 180.34 cm	7.0 in / 17.78 cm	50.0 in / 127.00 cm
20 mil	5.0 in / 12.70 cm	96.0 in / 243.84 cm	7.0 in / 17.78 cm	70.0 in / 177.80 cm
55 mil	15.0 in / 38.10 cm	180.0 in / 457.20 cm	17.0 in / 43.18 cm	155.0 in / 393.70 cm
70 mil reflective	See note	367.0 in / 932.18 cm	See note	325.0 in / 825.50 cm
100.mil reflective	See note	542.0 in / 1376.68 cm	See note	480.0 in / 1219.20 cm
Note: Near range on reflective bar codes determined by degree of reflectivity and width of bar code.				

* Near ranges are largely dependent upon the width of the bar code and the scan angle. Working range specifications at temperature 23° C.

8 Technical Assistance

If you need assistance installing or troubleshooting your device, please contact us by using one of the methods below:

Knowledge Base: www.hsmknowledgebase.com

Our Knowledge Base provides thousands of immediate solutions. If the Knowledge Base cannot help, our Technical Support Portal (see below) provides an easy way to report your problem or ask your question.

Technical Support Portal: www.hsmsupportportal.com

The Technical Support Portal not only allows you to report your problem, but it also provides immediate solutions to your technical issues by searching our Knowledge Base. With the Portal, you can submit and track your questions online and send and receive attachments.

Web form: www.hsmcontactsupport.com

You can contact our technical support team directly by filling out our online support form. Enter your contact details and the description of the question/problem.

Telephone: www.honeywellaidc.com/locations

For our latest contact information, please check our website at the link above.

Product Service and Repair

Honeywell International Inc. provides service for all of its products through service centers throughout the world. To obtain warranty or non-warranty service, please visit www.honeywellaidc.com and select **Support > Contact Service and Repair** to see your region's instructions on how to obtain a Return Material Authorization number (RMA #). You should do this prior to returning the product.

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