

CUSTOMER-FACING SCANNER

MX72

Product Reference Guide

MN-005525-01EN Rev. A



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About this Guide

This guide provides general instructions for mounting, installation, scanning, and programming for the MX72 scanner.

Configurations

The table below contains a complete list of the scanner and accessory configurations.

Configuration	Description
MX72-SR000WW	Customer-facing scanner, MX72, includes left and right brackets.
MX72-SR001WW	Customer-facing scanner, MX72.

Notational Conventions

The following conventions make the content of this document easy to navigate.

- **Bold** text is used to highlight the following:
 - Dialog box, window, and screen names
 - Dropdown list and list box names
 - Checkbox and radio button names
 - Icons on a screen
 - Key names on a keypad
 - Button names on a screen
- Bullets (•) indicate:
 - Action items
 - List of alternatives
 - Lists of required steps that are not necessarily sequential
- Sequential lists (for example, those that describe step-by-step procedures) appear as numbered lists.

Service Information

If you have a problem with your equipment, contact Zebra Global Customer Support for your region.

Contact information is available at: zebra.com/support. When contacting support, please have the following information available:

- Serial number of the unit
- Model number or product name
- Software/firmware type and version number

Zebra responds to calls by email, telephone, or fax within the time limits set forth in support agreements.

If your problem cannot be solved by Zebra Customer Support, you may need to return your equipment for servicing and will be given specific directions. Zebra is not responsible for any damages incurred during shipment if the approved shipping container is not used. Shipping the units improperly can possibly void the warranty.

If you purchased your Zebra business product from a Zebra business partner, contact that business partner for support.

Getting Started

The MX72 customer-facing imager is specifically designed to be installed onto the MP72 and offers high-performance scanning on both 1D and 2D barcodes.

This section describes the imager's features and discusses the decoder/interface board.

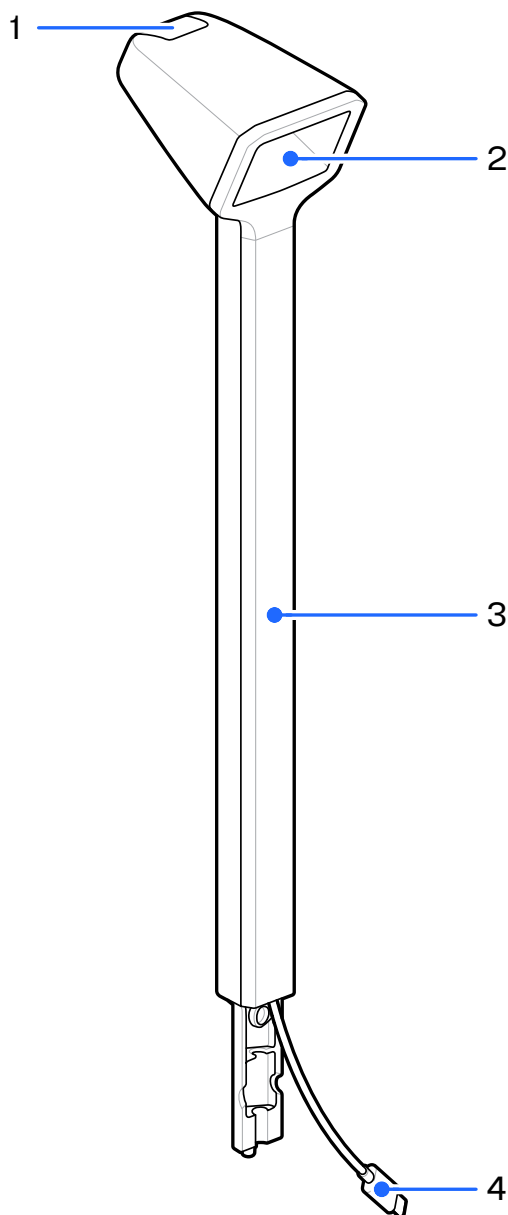
Unpacking the MX72

Unpack the scanner from its packaging.

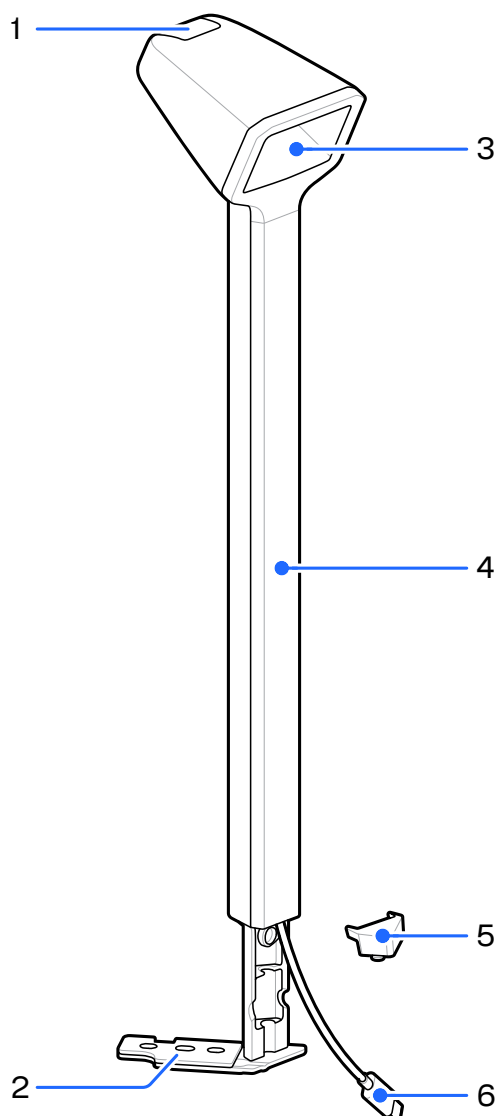
1. Carefully remove all protective material from the scanner and save the container for later storage and shipping.
2. Verify that the following are in the box:
 - MX72
 - Regulatory Guide
3. Inspect the equipment for any damage. If any equipment is missing or damaged, contact the Global Services Customer Support Center immediately.
4. Remove the protective shipping film before using the device for the first time.

MX72 Features

Figure1 MX72 Features (No Mounting)



Number	Item	Description
1	Indicator LED	Indicates scan status.
2	Scan window	Captures barcode data.
3	Pole	Connects the scanner to the host device.
4	USB cable	Provides communication between the scan engine and host computer.

Figure 2 MX72 Features

Number	Item	Description
1	Indicator LED	Indicates scan status.
2	Mounting flange	Secures the scanner to a host device.
3	Scan window	Captures barcode data.
4	Pole	Connects the scanner to the host device.
5	Filler cap	Connects to chassis and protects the USB cable.
6	USB cable	Provides communication between the scan engine and host computer.

MX72 Decoder/Interface Board

Power Management

USB Host Interface

The MX72 series automatically manages its power usage, including USB suspend mode. Additionally, when drawing power from the USB bus, the MX72 does not exceed the USB limit of 500 mA when the power provided is 5V +/- 5% and does not exceed 530mA when the power provided is outside +/- 5% and within 10%.

MX72 Decode Distances

The following table lists the typical distances for selected barcode densities. The minimum element width (or symbol density) is the width in mils of the narrowest element (bar or space) in the symbol.

Table 1 Typical Decode Distances

Symbol Density/Barcode Type	Near	Far
100% UPCA Data Matrix	2.0 cm / 0.8 in.*	36.1 cm / 14 in.
20 mil Code 39	2.0 cm / 0.8 in.*	48.5 cm / 14 in.
20 mil QR Code	4.6 cm / 1.8 in.	31.5 cm / 12 in.
*Field of view limited. The dedcode ranges tested using photographic quality barcodes, with a pitch of 15-20°.		

123Scan

123Scan is a software tool from Zebra Technologies that simplifies scanner setup and more.

Intuitive enough for first-time users, the 123Scan wizard guides users through a streamlined setup process. Settings are saved in a configuration file that can be printed as a single programming barcode for scanning, emailed to a smart phone for scanning from its screen or downloaded to the scanner using a USB cable.

Through 123Scan a user can:

- Configure a scanner using a wizard.
 - Program the following scanner settings.
 - Beeper tone/volume settings.
 - Enable/disable symbologies.
 - Communication settings.
 - Modify data before transmission to a host using:
 - Advanced Data Formatting (ADF) - Scans one barcode at a time.
 - Preferred Symbol - Single out one barcode on a label of many (select scanners).
- Load parameter settings to a scanner via the following:
 - Barcode scanning.
 - Scan a paper barcode.
 - Scan a barcode from a PC screen.
 - Scan a barcode from a smart phone screen.
 - Download over a USB cable.
 - Load settings to one scanner.
 - Stage up to 10 scanners simultaneously (Powered USB Hub recommended with 0.5 amp / port).
- Validate scanner setup.
 - View scanned data within the utility's Data view screen.
 - Capture an image and save it to a PC within the utility's Data view screen.
 - Review settings using the Parameter Report.
 - Clone settings from an already deployed scanner from the Start screen.

- Upgrade scanner firmware.
 - Load settings to one scanner.
 - Stage up to 10 scanners simultaneously (Powered USB Hub recommended with 0.5 amp/port).
- View statistics, such as:
 - Asset tracking information.
 - Time and usage information.
 - Barcodes scanned by symbology.
- Generate the following reports.
 - Barcode Report - Programming barcode, relevant parameter settings, and supported scanner models.
 - Parameter Report - Parameters programmed within a configuration file.
 - Inventory Report - Scanner asset tracking information.
 - Validation Report - Scanned data from the Data view.
 - Statistics Report - All statistics retrieved from the scanner.

For more information, go to zebra.com/123Scan.

Communication with 123Scan

Use a USB cable to connect the scanner to a Windows host computer running 123Scan.

123Scan Information

Use these links to learn more about using 123Scan and Zebra software tools.

For more information on 123Scan, go to zebra.com/123Scan

For a one-minute tour of 123Scan, go to [How-to Videos For Zebra Scanners](#)

To see a list of all of our software tools, go to zebra.com/scannersoftware

Scanner SDK, Other Software Tools, and Videos

Tackle all your scanner programming needs with our diversified set of software tools. Whether you need to stage a device or develop a fully featured application with image and data capture and asset management, these tools help you every step of the way.

To download any of the following free tools, go to: zebra.com/scannersoftware.

- 123Scan configuration utility
- SDKs
 - Scanner SDK for Windows
 - Scanner SDK for Linux
- Drivers
 - OPOS driver

- JPOS driver
- USB CDC driver
- Scanner Management Service (SMS) for Remote Management
 - Windows
 - Linux
- How-To-Videos



NOTE: For a list of SDK-supported scanner functionality by communication protocol, see Communication Protocol Functionality.

Installation

This section provides information on installing and connecting the imager with scan systems.

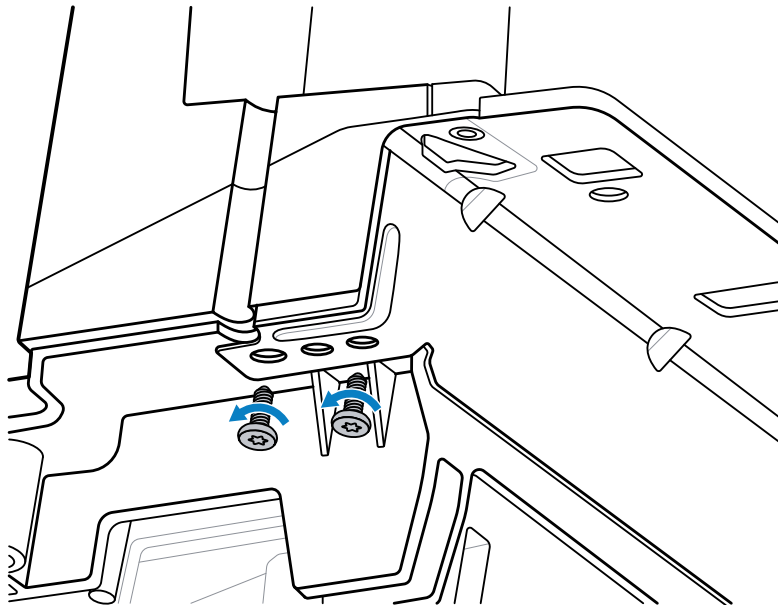
Installing the MX72

The Customer Facing Scanner (CFS) is an integrated device for the MP72 that supports scanning barcodes, coupons, and loyalty cards from a mobile screen or paper. Mount the CFS on either side of the MP72 and connect it to the USB-A port on the main PCB on the bottom of the MP72.

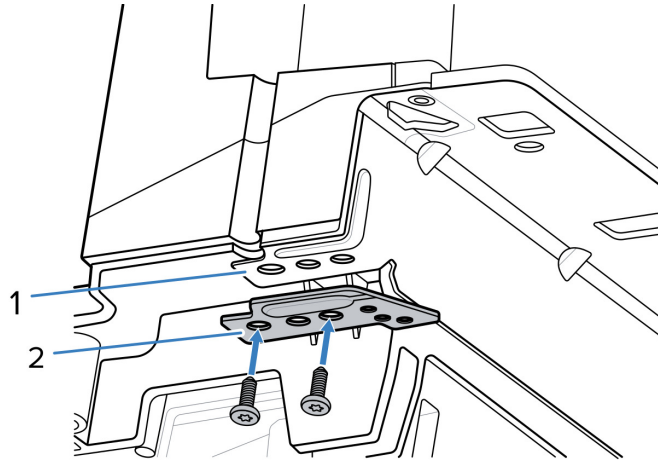


NOTE: The CFS kit MX72-SR000WW includes left and right brackets. Choose the bracket according to the CFS mounting side.

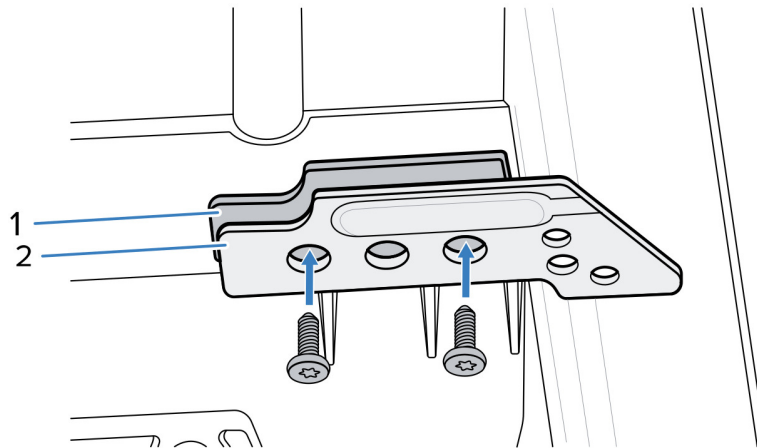
1. Remove the two screws on the system's flange (optional, only for the long-flanged configuration).



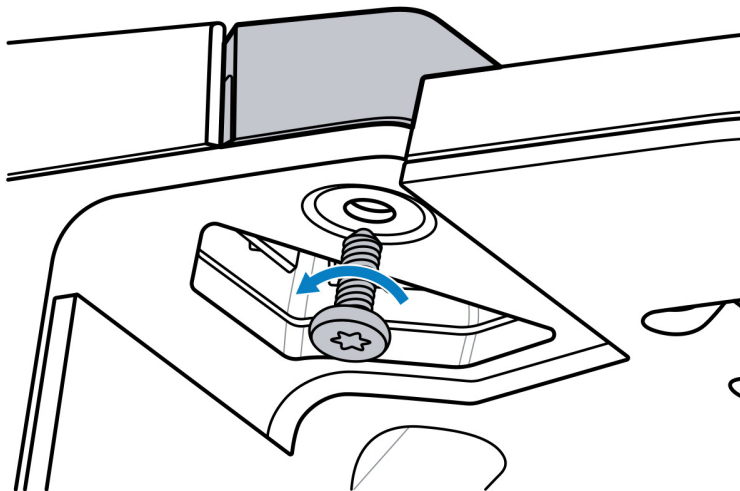
2. Place the bracket on the device.
 - Long-flanged configuration: Place the bracket (2) on the MP72 flange (1). MX72.



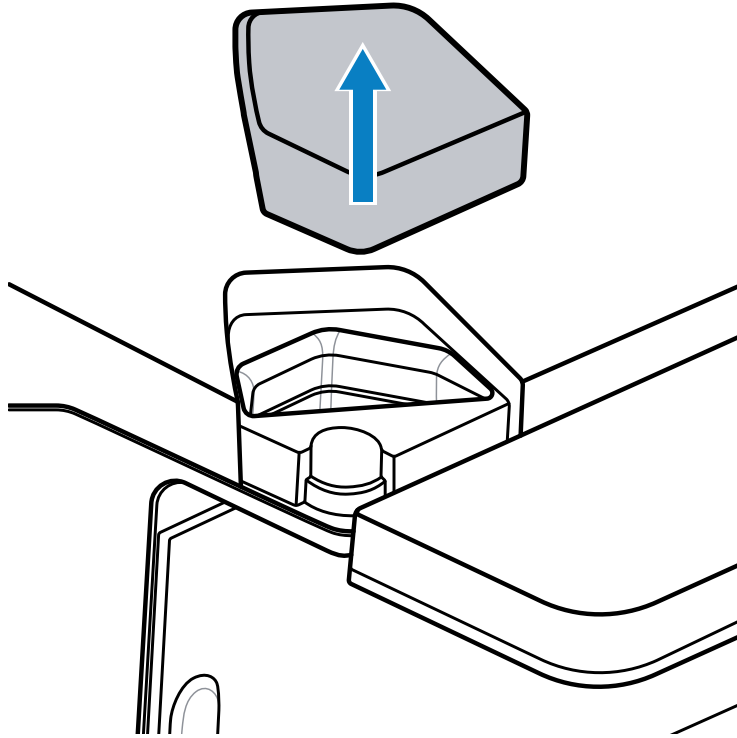
- Short/Medium (flangeless) configuration: Align the bracket (2) and spacer (1) with the screw holes in the MP72 chassis.



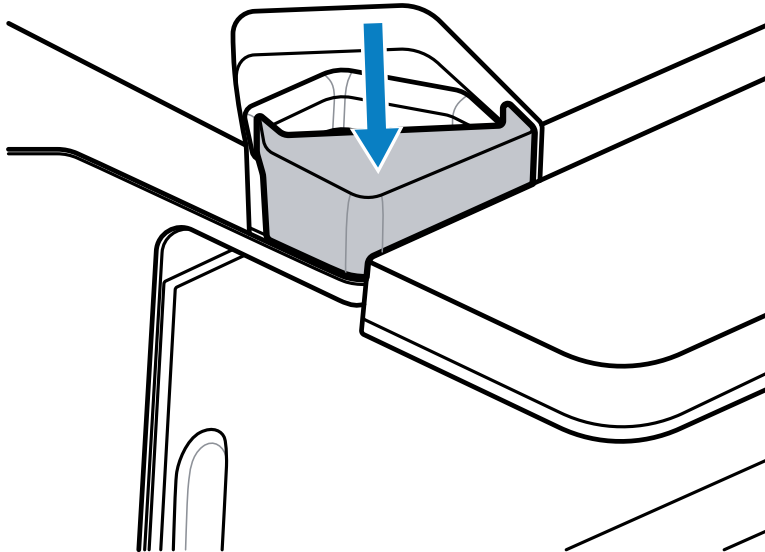
3. Secure the MX72 bracket to the MP72 flange using two T20 flange screws. Torque screws to 1.36 Nm $\pm$ 0.03 (12 in-lb $\pm$ 0.25).
4. Remove the MP72's filler cap mounting screw.



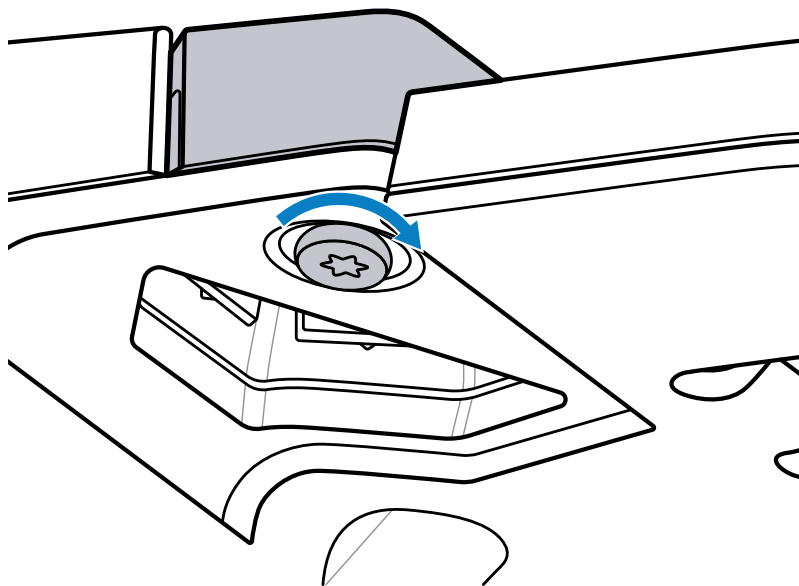
5. Remove the MP72 filler cap.



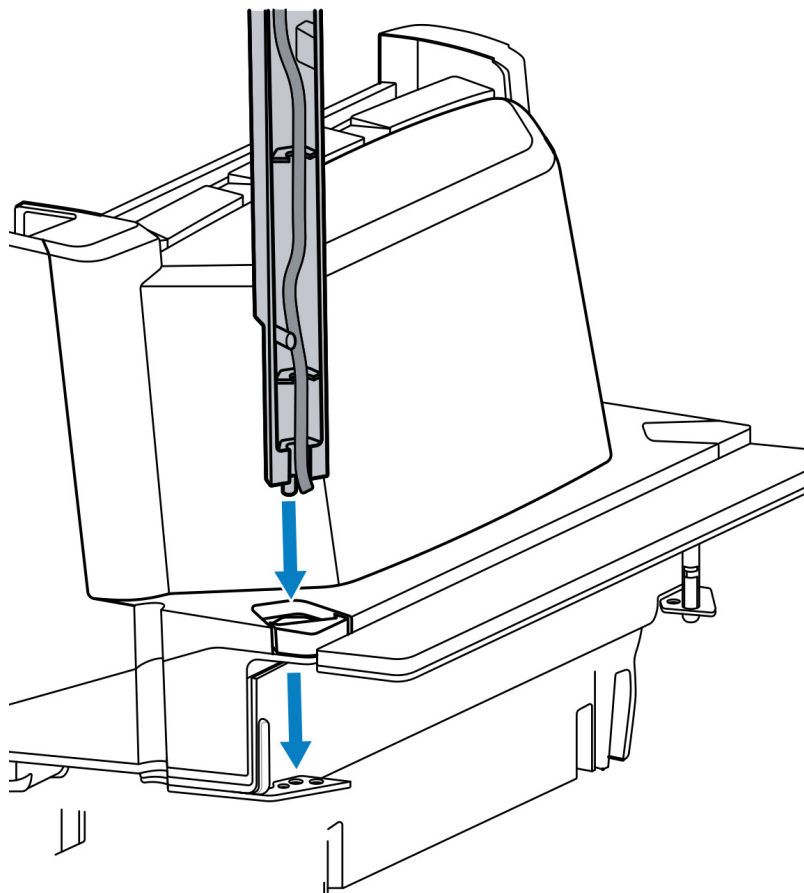
6. Insert the MX72 filler cap and hold it in place.



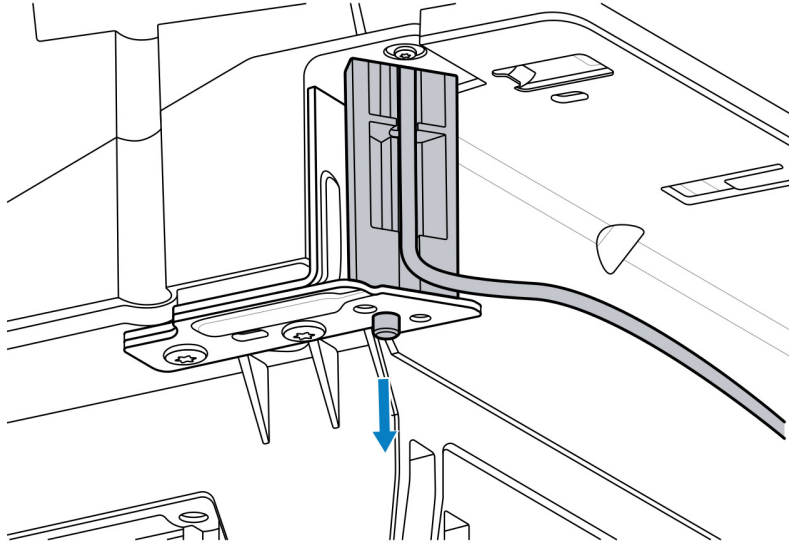
7. Secure the filler cap with the mounting screw from step 4. Torque to 0.23 Nm +/- 0.03 (2.00 in-lb +/- 0.25) until the filler cap is fully seated.



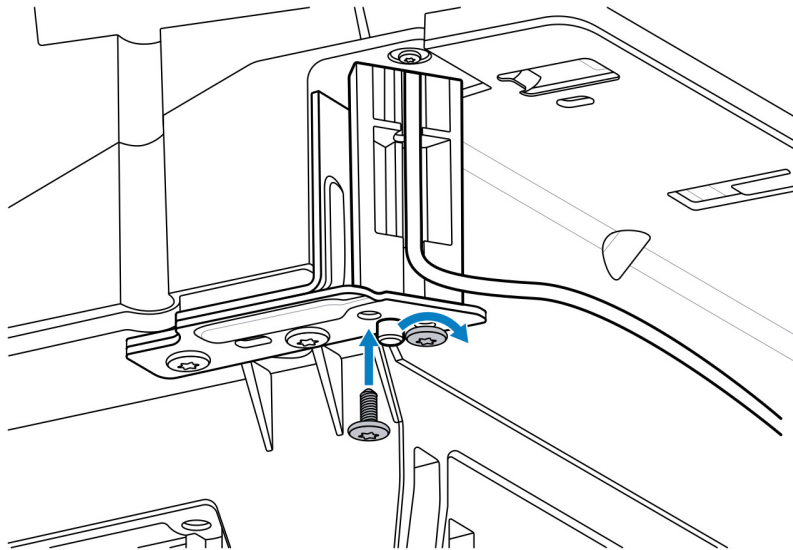
8. Route the USB cable from the MX72 through the MP72 opening, ensuring the cable is vertical in the pole slot.



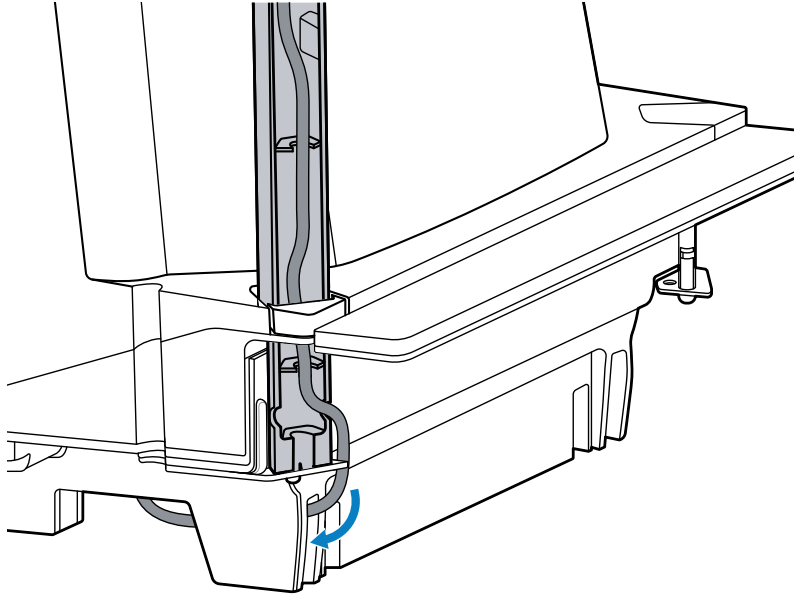
9. Align the pole such that the alignment pin enters the corresponding hole in the bracket.



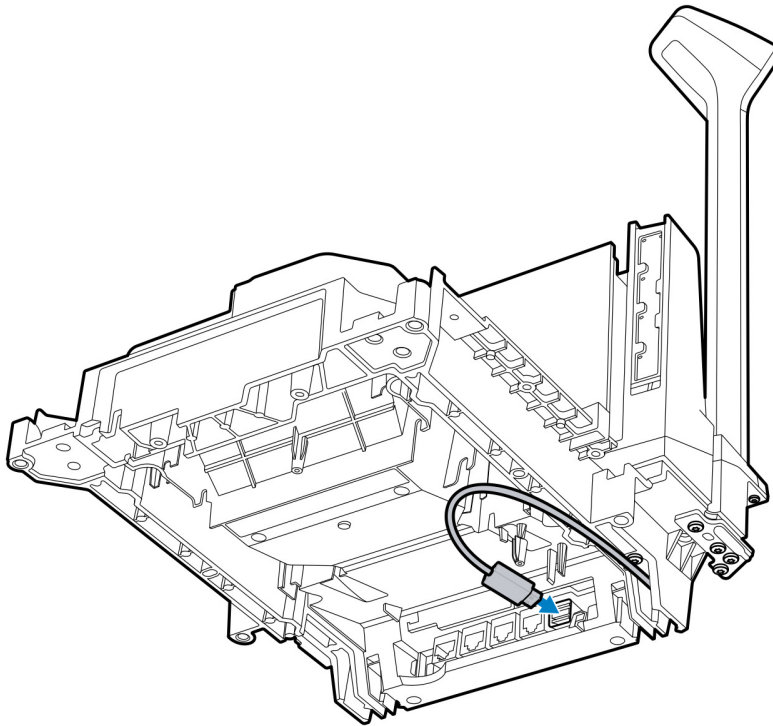
10. Attach two screws to mount the scanner pole to the bracket. Torque to 1.36 Nm $\pm$ 0.03 (12 in-lb $\pm$ 0.25).



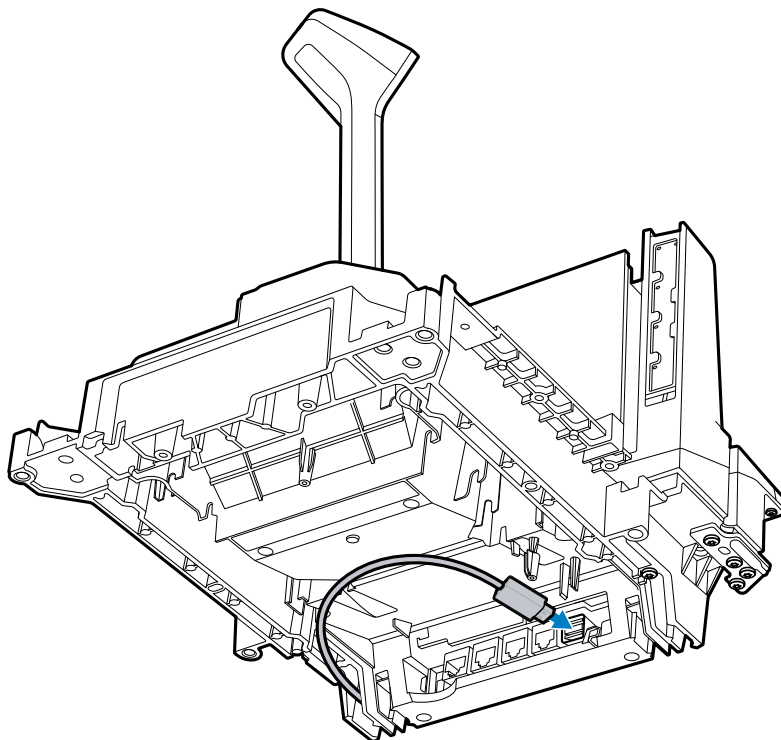
11. Route the USB cable towards the MP72 through an open guiding slot in the MX72 mount.



12. Pull the cable taut so that it remains in the pole slot after you finish installation.
13. Connect the USB cable to an open USB port.



NOTE: If the MX72 is mounted in the opposite direction of the system, the USB cable routes from the other direction.



User Preferences and Miscellaneous Options

You can program the scanner to perform various functions or activate different features. This section describes user preference features and provides programming barcodes for selecting these features.

The scanner ships with the settings shown in [User Preferences Parameter Defaults](#). If the default values suit requirements, programming is not necessary.

User Preferences Parameter Defaults

Table 2 Parameter Defaults

Parameter	Parameter Number	SSI Number	Default
Parameter Barcode Scanning	236	ECh	Enable
Lock/Unlock Parameter Scanning	802	F2h 22h	0
Beep After Good Decode	56	38h	Beep
Beeper Volume	140	8Ch	High
Beeper Tone	145	91h	Medium
Beeper Duration	628	F1h 74h	Medium
Suppress Power Up Beeps	721	F1h D1h	Do Not Suppress Power-Up Beeps
Hands-free (Presentation) Decode Aiming Pattern	590	F1h 4Eh	Disable
Picklist Mode	402	F0h 92h	Disabled Always
Decode Session Timeout	136	88h	99
Hands-Free Decode Session Timeout	400	F0h 90h	15
Timeout Between Decodes, Same Symbol	137	89h	5

Table 2 Parameter Defaults (Continued)

Parameter	Parameter Number	SSI Number	Default
Timeout Between Decodes, Different Symbols	144	90h	1
Mobile Phone / Display Mode (Enhanced)	716	F1h CCh	Disabled Always
PDF Prioritization	719	F1h CFh	Disable
PDF Prioritization Timeout	720	F1h D0h	200
Presentation Mode Field of View	609	F1h 61h	Full
Mirrored Image	624	F1h70h	Normal Image
Decoding Illumination	298	F0h 2Ah	Disable
Low Light Scene Detection	810	F2h 2Ah	No Low Light Scene Detection
Product ID (PID) Type	1281	F8h 05h 01h	Host Type Unique
Product ID (PID) Value	1725	F8h 06h BDh	0
Scene Detect Sensitivity	1943	F8h 07h 97h	Low
Transmit Code ID Character	45	2Dh	None
Transmit No Read Message	94	5Eh	Disable
Unsolicited Heartbeat Interval	1118	F8h 04h 5Eh	0

User Preferences and Miscellaneous Options

You can program the scanner to perform various functions or activate different features. This section describes user preference features and provides programming barcodes for selecting these features.

The scanner ships with the settings shown in [User Preferences Parameter Defaults](#). If the default values suit requirements, programming is not necessary.

Setting User Preference Parameters

To set feature values, scan a single barcode or a short barcode sequence. The settings are stored in non-volatile memory and are preserved even when the scanner powers down.



NOTE: Most computer monitors allow scanning barcodes directly on the screen. When scanning from the screen, be sure to set the document magnification to a level where you can see the barcode clearly, and bars and/or spaces do not merge.

If not using the default host, select the host type (see each host section for specific host information) after the power-up beeps sound. This is only necessary upon the first power-up when connected to a new host.

To return all features to default values, see [Default Parameters](#). Throughout the programming barcode menus, asterisks indicate (*) default values.

User Preference Scanning Sequence Examples

In most cases, scanning one barcode sets the parameter value.

Other parameters require scanning several barcodes. Relevant parameters contain descriptions for this procedure.

User Preference Errors While Scanning

Unless otherwise specified, to correct an error during a scanning sequence, re-scan the correct parameter.

User Preferences

Set feature values by scanning the desired parameter values.

Default Parameters

Scan one of the following barcodes to reset the scanner to its default settings.

- Restore Defaults resets all default parameters as follows:
 - If you configured custom default parameter values via the Write to Custom Defaults barcode, scanning the Restore Defaults barcode restores these custom values.
 - If you did not configure custom default parameter values, scanning the Restore Defaults barcode restores the factory default values. Default values are available at the beginning of each section.
- Set Factory Defaults clears all custom default values and sets the factory default values. Default values are available at the beginning of each section.



Restore Defaults



Set Factory Defaults

Write to Custom Defaults

To create a set of custom defaults, select the desired parameter values in this guide and then scan Write to Custom Defaults.



Write to Custom Defaults

Parameter Barcode Scanning

Parameter # 236 (SSI # ECh)

This parameter selects whether to enable or disable the decoding of parameter barcodes, including the **Set Defaults** barcodes.



*Enable Parameter Barcode Scanning (1)



Disable Parameter Barcode Scanning (0)

Lock/Unlock Parameter Scanning

Lock Parameter # 802 (SSI # F2h 22h)

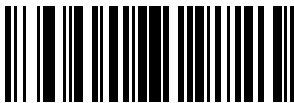
Unlock Parameter # 803 (SSI # F2h 23h)

This feature locks parameter settings with a 4-digit code to prevent the user from changing parameter values by scanning parameter barcodes. This provides an added level of security not offered via Disable Parameter Barcode Scanning.

After locking parameter settings, only the **Unlock** parameter barcode is accepted with the correct code.



NOTE: [Parameter Barcode Scanning](#) must be enabled in order to scan the Lock parameter barcode. Once parameter scanning is locked, using the Enable or Disable Parameter Barcode Scanning option results in a parameter error beep.



Lock



Unlock

Locking Parameter Scanning

1. Scan the Lock barcode.
2. Scan four barcodes from [Numeric Barcodes](#) that represent the desired code. Enter leading zeros for numbers below 1000, e.g., to program a code of 29, enter 0, 0, 2, 9. A lock beep sounds (two long high beeps) in addition to the parameter entry beep.

Unlocking Parameter Scanning

1. Scan the UnLock barcode.
2. Scan four barcodes from [Numeric Barcodes](#) that represents the correct code. An unlock beep sounds (two long low beeps) in addition to the parameter entry beep. Entering an incorrect code results in a parameter error beep.

Locking/Unlocking via the Host Interface

Parameter scanning can also be locked or unlocked using a host interface such as SSI or USB SNAPi. To lock parameter scanning using the host interface, store a 4-digit code within the range of 1-9999 in the Lock parameter. Values outside this range are ignored. To unlock parameter scanning, store this code in the Unlock parameter. To persist the lock/unlock status through a power cycle, make this parameter value permanent.

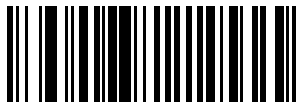


NOTE: Parameter values can be changed via host interface commands even when parameter scanning is locked.

Beep After Good Decode

Parameter # 56 (SSI # 38h)

This parameter determines whether or not the scanner beeps after a good decode. If you select **Disable Beep After Good Decode**, the beeper still operates during parameter menu scanning and to indicate error conditions.



*Enable Beep After Good Decode (1)



Disable Beep After Good Decode (0)

Beeper Volume

Parameter # 140 (SSI # 8Ch)

This parameter selects the volume of the beeper.



Low Volume (2)



Medium Volume (1)



*High Volume (0)

Beeper Tone

Parameter # 145 (SSI # 9th)

This parameter selects a beeper tone for a successful decode beep.



Disable Tone (3)



Low Tone (2)



*Medium Tone (1)



High Tone (0)



Medium to High Tone (2-tone) (4)

Beeper Duration

Parameter # 628 (SSI # F1h 74h)

This parameter selects the duration for the good decode beep.



Short Duration (0)



*Medium Duration (1)

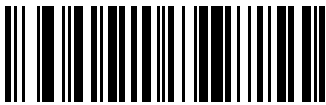


Long Duration (2)

Suppress Power Up Beeps

Parameter # 721 (SSI # F1h D1h)

This parameter selects whether or not to suppress the scanner's power-up beeps.



*Do Not Suppress Power Up Beeps (0)



Suppress Power Up Beeps (1)

Trigger Mode

Parameter # 138 (SSI # 8Ah)

This parameter allows you to change your scanner's behavior to initiate a decode.

Choose one of the following to select a trigger mode for the scanner:

- **Presentation (Blink)** - The scanner activates decode processing when it detects a barcode in its field of view. After a period of non-use, the LEDs turn off until the scanner senses motion.
- **Host** - A host command or trigger press issues the triggering signal, which is interpreted as a level trigger option.



*Presentation (Blink) (7)



Host (8)

Hands-free (Presentation) Decode Aiming Pattern

Parameter # 590 (SSI # F1h 4Eh)

This parameter selects when to project the aiming pattern in hands-free mode.

- Enable Hands-free (Presentation) Decode Aiming Pattern - This projects the aiming pattern during barcode capture.
- *Disable Hands-free (Presentation) Decode Aiming Pattern - This turns the aiming pattern off.
- Enable Hands-free (Presentation) Decode Aiming Pattern on PDF - This projects the aiming pattern when the scanner detects a PDF barcode.



NOTE: With [Picklist Mode](#) enabled, the decode aiming pattern flashes even when you have disabled the Hands-free Decode Aiming Pattern.



Enable Hands-free (Presentation) Decode Aiming Pattern (1)



*Disable Hands-free (Presentation) Decode Aiming Pattern (0)



Enable Hands-free (Presentation) Decode Aiming Pattern on PDF (2)

Picklist Mode

Parameter # 402 (SSI # F0h 92h)

This parameter selects a Picklist Mode. In this mode, it allows you to pick and decode a specific barcode from a group of barcode printed close together. This is achieved by placing the aiming pattern on the desired barcode.



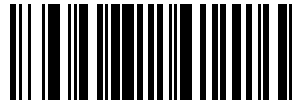
NOTE: Enabling Picklist Mode overrides the Disable Decode Aiming Pattern options. You can not disable the decode aiming pattern when Picklist Mode is enabled. Enabling Picklist Mode can slow decode speed and hinder the ability to decode longer barcodes.

- Enable Picklist Mode Always - Picklist Mode is always enabled.

- Enable Picklist Mode in Hand-held Mode - Picklist Mode is enabled when the scanner is out of hands-free mode and disabled when the scanner is in presentation mode.
- Enable Picklist Mode in Hands-free Mode - Picklist Mode is enabled when the scanner is in hands-free mode only.
- Disable Picklist Mode Always - Picklist Mode is always disabled.



Enable Picklist Mode Always (2)



Enable Picklist Mode in Hand-held Mode (1)



Enable Picklist Mode in Hands-free Mode (3)



*Disable Picklist Mode Always (0)

Decode Session Timeout

Parameter # 136 (SSI # 88h)

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. The default timeout is 9.9 seconds.

To set a Decode Session Timeout, scan the following barcode, and then scan two barcodes from Numeric Barcodes that correspond to the desired on time. Enter a leading zero for single digit numbers. For example, to set a Decode Session Timeout of 0.5 seconds, scan this barcode, and then scan the 0 and 5 barcodes. To correct an error or change the selection, scan [Cancel](#).



Decode Session Timeout

Hands-Free Decode Session Timeout

Parameter # 400 (SSI # F0 90)

This parameter is the hands-free compliment to the Decode Session Timeout. It configures the minimum and maximum decode processing time during a hands-free scan attempt..

The range for this parameter is 2 to 255 with a default value of 15.

The minimum decode processing time is defined as the time in which the scanner stops decoding when an object is removed or left stationary in the imaging field of view.

The maximum decode processing time is defined as the time in which the scanner stops decoding when an object remains in or is moving in the field of view.

Both the maximum and minimum times are configured using a single setting. The relationship of this setting is as follows:

Setting Value ^a	Minimum Time	Maximum Time
$X < 25$	250 ms	2.5 seconds
$X \geq 25$ $252 > X \geq 25$	$X * 10$ ms	$X * 100$ ms
$X = 255$	25 seconds	25 seconds

^a value must be three digits.

For example, a value of 100 causes the scanner to turn off for approximately 1 second after an object is removed from the field of view or 10 seconds while an object is in the field of view moving.

The default value of the setting is 15, which results in a minimum time of 150 and a maximum time of 1500.

Adjust this setting based on your requirements. For example, this parameter should be set to a value where the maximum time is above the PDF prioritization timeout value when the scanner uses PDF prioritization.

To set a three-digit value, scan the following barcode and then scan three barcodes from Numeric Barcodes. Enter a leading zero for single-digit numbers. To correct an error or change a selection, scan Cancel.



Hands-Free Decode Session Timeout

Timeout Between Decodes, Same Symbol

Parameter # 137 (SSI # 89h)

Use this option in Presentation Mode or Continuous Barcode Read Mode to prevent the scanner from continuously decoding the same barcode while it remains in the scanner's field of view. The barcode must be removed from the field of view for the timeout period before the scanner reads the same consecutive symbol.

Timeout Between Decodes, Same Symbol is programmable in 0.1 second increments from 0.0 to 9.9 seconds. The default interval is 5 seconds.

To select the timeout between decodes for the same symbol, scan the following barcode, and then scan two barcodes from Numeric Barcodes that correspond to the desired interval, in 0.1 second increments.



Timeout Between Decodes, Same Symbol

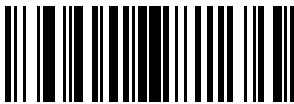
Timeout Between Decodes, Different Symbols

Parameter # 144 (SSI # 90h)

This parameter controls the time the scanner waits before decoding a different symbol. Use this parameter when the scanner is in Presentation Mode or Continuous Barcode Read.

Timeout Between Decodes, Different Symbols is programmable in 0.1 second increments from 0.1 to 9.9 seconds. The default is 0.1 seconds.

To set the timeout for decoding different symbols, scan the following barcode, and then scan two barcodes from Numeric Barcodes that correspond to the desired interval, in 0.1 second increments.



Timeout Between Decodes, Different Symbols

Triggered Timeout, Same Symbol

Parameter # 724 (SSI # F1h D4h)

Enable Triggered Timeout, Same Symbol to apply Timeout Between Decodes, Same Symbol in hand-held trigger mode.

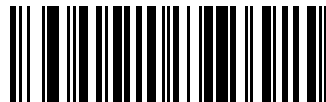


NOTE: This feature does not apply to Timeout Between Decodes, Different Symbols.

Subsequent scans of Enable Triggered Timeout, Same Symbol are ignored until Timeout Between Decodes, Same Symbol expires.



Enable Triggered Timeout, Same Symbol (1)



* Disable Triggered Timeout, Same Symbol (0)

Mobile Phone/Display Mode

Parameter # 716 (SSI # F1h CCh)

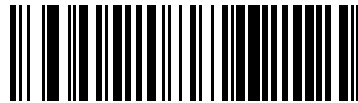
This mode improves barcode reading performance off mobile phones and electronic displays. Scan one of the following barcodes to select the desired mode.

Mobile barcodes include barcodes on mobile phone displays, PC displays, or other reflective surfaces such as clear plastic bags or cellophane wrapping. Printed barcodes include barcodes printed on paper or other non-reflective surfaces.

- 0 – Disable mobile phone display mode.
- 3 – Enable mobile phone display mode.



Enable Mobile Phone/Display Mode (3)



*Disable Mobile Phone/Display Mode (0)

PDF Prioritization

Parameter # 719 (SSI # F4h F1h CFh)

Enable this parameter to delay decoding certain 1D barcodes by the value specified in PDF Prioritization Timeout.

During the [PDF Prioritization Timeout](#) time, the scanner attempts to decode a PDF417 symbol (for example, on a US driver's license), and if successful, reports this only. If it does not decode (cannot find) a PDF417 symbol, it reports the 1D symbol after the timeout. The 1D symbol must be in the device's field of view for the scanner to report it. This parameter does not affect decoding other symbologies.

The 1D Code 128 barcode lengths include the following:

- 7 to 10 characters
- 14 to 22 characters
- 27 to 28 characters

In addition, a Code 39 barcode with the following lengths are considered to potentially be part of a US driver's license:

- 8 characters
- 12 characters



Enable PDF Prioritization (1)



*Disable PDF Prioritization (0)

PDF Prioritization Timeout

Parameter # 720 (SSI # F1h D0h)

If you enabled PDF Prioritization, set this timeout to indicate how long the scanner attempts to decode a PDF417 symbol before reporting the 1D barcode in the field of view.

The PDF Prioritization Timeout range is 0 to 5000 ms, and the default is 200 ms.

Scan the following barcode, and then scan four barcodes from Numeric Barcodes that specify the timeout in milliseconds. For example, to enter 400 ms, scan the following barcode, and then scan 0400.



PDF Prioritization Timeout

Presentation Mode Field of View

Parameter # 609 (SSI # F1h 61h)

This parameter sets the size of the search area.

In presentation mode, the default setting of Full Field of View allows the scanner to search the entire area of the imaging field of view.

Select Small Field of View or Medium Field of View to search for a barcode in a smaller centered region of the imaging field of view to speed up search time.



Small Field of View (0)



Medium Field of View (1)



*Full Field of View (2)

Mirrored Image

Parameter # 624 (SSI # F1h 70h)

This parameter enables the scanner to scan images in reverse, or mirrored, as if seen through a mirror. This mode is useful for applications requiring scanning through a mirror and using symbologies that do not decode in reverse.



Enable Mirrored Image (1)



*Disable Mirrored Image (0)

Decoding Illumination

Parameter # 298 (SSI # F0h 2Ah)

This parameter determines whether the scanner turns on illumination to aid decoding. Enabling illumination usually produces superior images and better decode performance. The effectiveness of the illumination decreases as the distance to the target increases.



Enable Decoding Illumination (1)



*Disable Decoding Illumination (0)

Illumination Brightness

Parameter # 669 (SSI # F1h 9Dh)

This parameter sets the illumination brightness by altering LED power.

Illumination Brightness values range from 1 to 10, with 10 being the highest level of brightness. The default is .

To set the illumination brightness, scan the following barcode, and then scan two barcodes in [Numeric Barcodes](#) that correspond to the value of desired illumination brightness. For example, to set illumination brightness to 8, scan the Illumination Brightness barcode, and then scan the 0 and 8 barcodes.



Illumination Brightness

Low Light Scene Detection

Parameter # 810 (SSI # F2h 2Ah)

This parameter allows the scanner to detect motion in dim to dark illumination environments when in presentation mode.



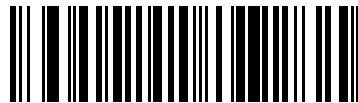
NOTE: This parameter only applies to scene detect mode (presentation configuration).

- No Low Light Scene Detection - The scanner attempts to detect motion using the aiming pattern and illumination turned off when the scanner is idle.
- Aiming Pattern Low Light Assist Scene Detection - Illumination is off, but the aiming pattern is on when the scanner is idle to assist in scene detection.
- Dim Illumination Low Light Assist Scene Detection - The aiming pattern is off, but illumination is on at a dim level to assist in scene detection.

The default setting is: No Low Light Scene Detection.



*No Low Light Assist Scene Detection (0)



Aiming Pattern Low Light Assist Scene Detection (1)

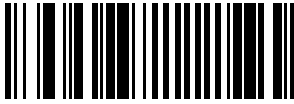


Dim Illumination Low Light Assist Scene Detection (2)

Product ID (PID) Type

Parameter # 1281 (SSI # F8h 05h 01h)

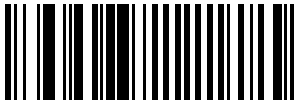
This parameter defines the PID value reported in USB enumeration.



*Host Type Unique (0)



Product Unique (1)



IBM Unique (2)

Product ID (PID) Value

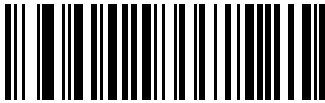
Parameter # 1725 (SSI # F8h 06h BDh)

This parameter sets a Product ID (PID) value.



NOTE: This parameter applies to customers using a Firmware Flash Update per the Toshiba Global Commerce Solutions (TGCS) Universal Serial Bus OEM Point-of-Sale Device Interface.

To set a Product ID value, scan **Set PID Value**, and then scan four numeric barcodes in Numeric Barcodes that correspond to the value. Enter a leading zero for single-digit numbers. To correct an error, or change a selection, scan [Cancel](#). The range is (0 - 1649). The default is 0.



Set PID Value

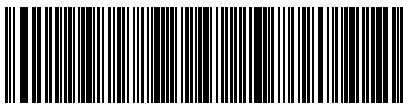
Miscellaneous Scanner Parameters

This section provides additional barcodes and parameters for miscellaneous options.

Enter Key

This parameter adds an Enter key (carriage return or line feed) after scanned data.

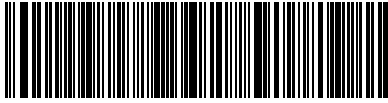
To program other prefixes and/or suffixes, see [Prefix/Suffix Values](#).



Add Enter Key (Carriage Return/Line Feed)

Tab Key

This parameter adds a Tab key after scanned data.



Tab Key

Transmit Code ID Character

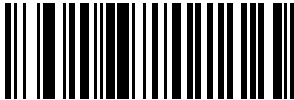
Parameter # 45 (SSI # 2Dh)

A Code ID character identifies the code type of a scanned barcode. This is useful when decoding more than one code type. In addition to any single character prefix selected, the Code ID character is inserted between the prefix and the decoded symbol.

The Code ID character options are:

- No Code ID character
- Symbol Code ID character
- AIM Code ID character

For Code ID characters, see [Symbol Code Identifiers](#) and [AIM Code Identifiers](#).



Symbol Code ID Character (2)



AIM Code ID Character (1)



*None (0)

Selecting a FN1 Substitution Value

Select a FN1 substitution value via the following barcode menus.

1. Scan the following barcode.



Set FN1 Substitution Value

2. Locate the keystroke desired for FN1 Substitution in the ASCII Character Set table for the current host interface, and enter the 4-digit ASCII value by scanning four barcodes from Numeric Barcodes.

To correct an error or change the selection, scan [Cancel](#).

To enable FN1 substitution for USB HID keyboard, scan the [Enable FN1 Substitution](#) barcode.

Report Software Version

When contacting support, a support representative may ask you to scan the bar code below to determine the version of software installed in the scanner.



Report Software Version

Transmit No Read Message

Parameter # 94 (SSI # 5Eh)

This parameter sets an option for transmitting the No Read (NR) characters.



NOTE: If you enable Transmit No Read, and also enable Symbol Code ID Character or AIM Code ID Character for [Transmit Code ID Character](#), the scanner appends the code ID for Code 39 to the NR message.

This does not apply in presentation mode.

- Enable No Read - transmits the characters NR when a successful decode does not occur before trigger release or the Decode Session Timeout expires.
- Disable No Read - sends nothing to the host if a symbol does not decode.



Enable No Read (1)



*Disable No Read (0)

Unsolicited Heartbeat Interval

Parameter # 1118 (SSI # F8h 04h 5Eh)

When this parameter is enabled, the scanner can send unsolicited heartbeat messages to assist in diagnostics. The range is 0 - 9999.

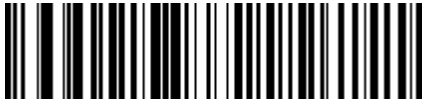
The heartbeat event is sent as decode data (with no decode beep) in the form of:

MOTEVTHB : nnn

Where: nnn is a three-digit sequence number starting at 001 and wrapping after 100.

To enable this parameter and set the desired unsolicited heartbeat interval, scan one of the following time interval barcodes, or scan Set Another Interval followed by four barcodes from [Numeric Barcodes](#) that correspond to the desired number of seconds.

Scan Disable Unsolicited Heartbeat Interval to turn off the feature.



10 Seconds (10)



1 Minute (60)



Set Another Interval



*Disable Unsolicited Heartbeat Interval (0)

securPharm Output Formatting Barcodes

Scan a barcode below to format the securPharm output.



*No Formatting (0)



Insert Tab (1)



Insert New Line (2)



Insert Tab and New Line (3)

USB Interface

This section describes how to set up the scanner with a USB host. The scanner connects directly to a USB host, or a powered USB hub, which powers it.

The scanner ships with the settings shown in USB Parameter Defaults. If the default values suit requirements, programming is not necessary.

USB Parameter Defaults

Table 3 Parameter Defaults

Parameter	Default
USB Device Type	USB HID Keyboard
Symbol Native API (SNAPI) Status Handshaking	Enable
USB Keystroke Delay	No Delay
USB Caps Lock Override	Disable
USB Barcodes with Unknown Characters	Send Barcodes with Unkown
USB Convert Unknown to Code 39	Disable
USB Fast HID	Enable
USB Polling Interval	3 msec
USB Quick Keypad Emulation	Enable
Keypad Emulation with Leading Zero	Enable
USB Keyboard FN1 Substitution	Disable
Keypad Emulation	Enable
USB Function Key Mapping	Disable
USB Simulated Caps Lock	Disable
USB Convert Case	No Conversion
USB Static CDC	Enable
TGCS (IBM) USB Beep Directive	Enable
TGCS (IBM) USB Barcode Configuration Directive	Enable

Table 3 Parameter Defaults (Continued)

Parameter	Default
TGCS (IBM) USB Specification Version	Version 2.2

USB Interface

This section describes how to set up the scanner with a USB host. The scanner connects directly to a USB host, or a powered USB hub, which powers it.

The scanner ships with the settings shown in USB Parameter Defaults. If the default values suit requirements, programming is not necessary.

USB Interface Connection

Connect the scanner directly to the host computer.

Figure 3 USB Connection

NOTE: When connecting via USB use the shielded connector cable (e.g., p/n CBA-U21-S07ZAR). Refer to Solution Pathways for guidance about cables.

The scanner connects to USB-capable hosts including:

- TGCS (IBM) terminals
- Apple™ desktop and notebooks
- Other network computers that support more than one keyboard.

The following operating systems support the scanner through USB:

- Windows® XP, 7, 8, 10, 11
- MacOS 8.5 - MacOS 10.6
- TGCS (IBM) 4690/TCx Sky OS

The scanner also interfaces with other USB hosts that support USB Human Interface Devices (HID).

Connecting a USB Interface

You can connect a device by a USB interface cable.



NOTE: Interface cables vary depending on configuration. Any connectors illustrated are examples only. While connectors might be different than those illustrated, the steps to connect the scanner are the same.

1. Connect the modular connector of the USB interface cable to the cable interface port on the scanner.
2. Plug the series A connector in the USB host or hub, or plug the Plus Power connector in an available port of the IBM Sure POS terminal.
3. If applicable, connect a power supply between the power port on the interface cable and an AC outlet.

4. The scanner automatically detects the host and uses the default USB device type. If the default (*) does not meet your requirements, select another USB device type by scanning the appropriate barcode from [USB Device Type](#).
5. On first installation when using Windows, the software may prompt to select or install the Human Interface Device driver. To install this driver, provided by Windows, click Next at all choices and click Finished on the last choice. The scanner powers up during this installation.
6. To modify any other parameter options, scan the appropriate barcodes in this section.

If problems occur with the system, see Troubleshooting.

USB Device Type

This parameter defines the type of USB device the scanner communicates with.

- When changing USB device types, the scanner resets and issues the standard startup beep sequences.
- When connecting two scanners to a host, IBM does not allow selecting two of the same device type. If you require two connections, select an IBM Table-top USB for one scanner and an IBM Hand-held USB for the second scanner.
- Select OPOS (IBM Hand-held with Full Disable) to completely shut off the scanner when an IBM register issues a Scan Disable command, including aim, illumination, decoding, and data transmission.
- Before selecting USB CDC Host, ensure your host OS has a USB CDC driver installed. For reference, Windows 11 includes a native (built-in) USB CDC driver. To recover a scanner stalled (non-functional) in USB CDC mode:
 - Install a USB CDC Driver
- Select USB HID POS to communicate over a USB cable with Microsoft's Universal Windows Platform (UWP) applications running on Windows 11 devices.



*USB HID Keyboard



IBM Table-top USB



IBM Hand-held USB



OPOS (IBM Hand-held with Full Disable)



USB CDC Host



SSI over USB CDC



Symbol Native API (SNAPI) with Imaging Interface



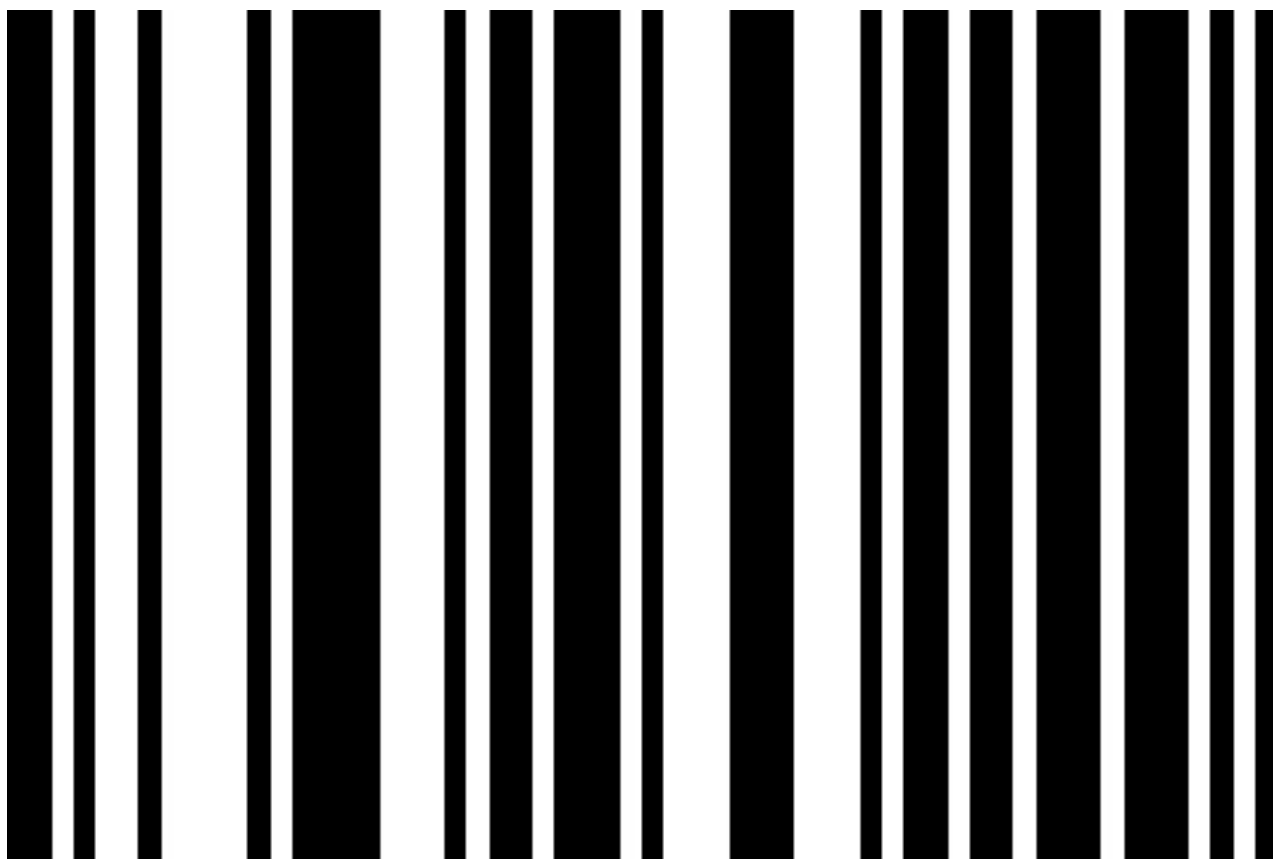
Symbol Native API (SNAPI) without Imaging Interface



USB HID POS (Windows 10 devices only)

Symbol Native API (SNAPI) Status Handshaking

After selecting a SNAPI interface as the USB device type, select an option to enable or disable status handshaking.



*Enable SNAPI Status Handshaking



Disable SNAPI Status Handshaking

USB Keystroke Delay

This parameter sets the delay, in milliseconds, between emulated keystrokes. Select a longer delay for hosts that require slower data transmission.



*No Delay



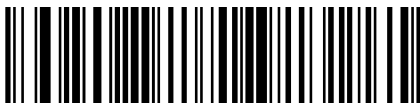
Medium Delay (20 msec)



Long Delay (40 msec)

USB Caps Lock Override

This option applies only to the USB HID Keyboard device. Select Override Caps Lock Key to preserve the case of the data regardless of the state of the Caps Lock key. This setting is always enabled for the Japanese Windows (ASCII) keyboard type and cannot be disabled.



Override Caps Lock Key (Enable)



*Do Not Override Caps Lock Key (Disable)

USB Barcodes with Unknown Characters

This option applies only to the USB HID Keyboard and IBM devices. Unknown characters are characters the host does not recognize. Select Send Barcodes With Unknown Characters to send all barcode data except for unknown characters. The scanner does not issue error beeps.

Select Do Not Send Barcodes With Unknown Characters for IBM devices to prevent sending barcodes that contain at least one unknown character to the host, or for USB HID Keyboard devices to send the barcode characters up to the unknown character. The scanner issues an error beep.



*Send Barcodes with Unknown Characters



Do Not Send Barcodes with Unknown Characters

USB Convert Unknown to Code 39

This option applies only to the IBM hand-held, IBM table-top, and OPOS devices. Select an option to enable or disable converting unknown barcode type data to Code 39.



Enable Convert Unknown to Code 39



*Disable Convert Unknown to Code 39

USB Fast HID

Select Enable USB Fast HID to transmit USB HID data at a faster rate.



NOTE: Disable this option if transmission issues occur.



*Enable USB Fast HID



Disable USB Fast HID

USB Polling Interval

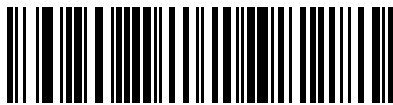
This parameter defines the rate at which data is transmitted between the scanner and host computer (polling interval). A lower number indicates a faster data rate.



NOTE: When changing the USB polling interval, the scanner restarts and issues a power-up beep sequence.



IMPORTANT: Ensure the host supports the selected data rate.



1 msec



2 msec



*3 msec



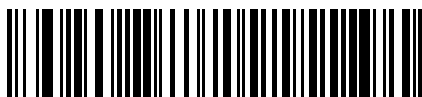
4 msec



5 msec



6 msec



7 msec



8 msec



9 msec



10 msec

USB Quick Keypad Emulation

Enable Quick Keypad Emulation for a quick method of emulation using the numeric keypad where ASCII sequences are only sent for ASCII characters not found on the keyboard.



NOTE: Quick Keypad Emulation only applies to the USB HID Keyboard device when Keypad Emulation is enabled.



*Enable Quick Keypad Emulation



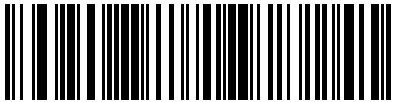
Disable Quick Keypad Emulation

Keypad Emulation with Leading Zero

Select Enable Keypad Emulation with Leading Zero to send character sequences sent over the numeric keypad as ISO characters, which have a leading zero. For example, ASCII A transmits as "ALT MAKE" 0 0 6 5 "ALT BREAK".



NOTE: This parameter only applies if [Emulate Keypad](#) is enabled.



*Enable Keypad Emulation with Leading Zero

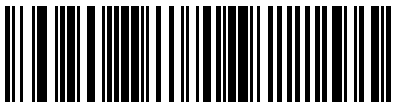


Disable Keypad Emulation with Leading Zero

USB Keyboard FN1 Substitution

This parameter applies to Code 128 and ISBT 128 for USB HID Keyboard devices. Scan Enable USB Keyboard FN1 Substitution to replace any FN1 character in a GS1 128 barcode with a user-selected Key Category and value.

See [FN1 Substitution Values](#) to set the Key Category and Key Value.



Enable USB Keyboard FN1 Substitution



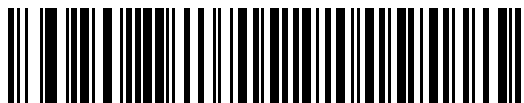
*Disable USB Keyboard FN1 Substitution

Keypad Emulation

Select Enable Keypad Emulation to send all characters as ASCII sequences over the numeric keypad. For example, ASCII A transmits as ALT make 0 6 5 ALT Break.



NOTE: If your keyboard type is not listed in the country code list (see Country Codes), disable [Quick Keypad Emulation](#) and enable Keypad Emulation.



*Enable Keypad Emulation



Disable Keypad Emulation

USB Function Key Mapping

ASCII values under 32 are normally sent as a control-key sequence. Select **Enable Function Key Mapping** to send the keys in bold instead of the standard key mapping. Table entries that do not have a bold equivalent remain the same regardless of whether you enable this parameter.



NOTE: See [ASCII Character Sets](#) for the ASCII character set information.



Enable Function Key Mapping



*Disable Function Key Mapping

USB Simulated Caps Lock

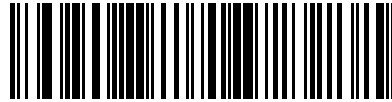
Select Enable Simulated Caps Lock to invert upper and lower case characters on the barcode as if the Caps Lock state is enabled on the keyboard. This inversion occurs regardless of the keyboard's Caps Lock state.



NOTE: Simulated Caps Lock applies to ASCII characters only. Do not enable this if [Caps Lock Override](#) is enabled.



Enable Simulated Caps Lock



*Disable Simulated Caps Lock

USB Convert Case

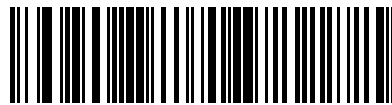
This parameter converts all barcode data to the selected case.



NOTE: Convert Case applies to ASCII characters only.



*No Case Conversion



Convert All to Upper Case



Convert All to Lower Case

USB Static CDC

Parameter # 670

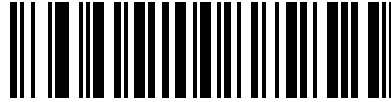
You can connect devices to the same COM port or different COM ports.

When disabled, each device connected consumes another COM port (first device = COM1, second device = COM2, third device = COM3, etc.)

When enabled, each device connects to the same COM port.



*Enable USB Static CDC (1)



Disable USB Static CDC (0)

CDC Beep on BEL

Parameter # 150

If you enable this parameter, the scanner issues a beep when it detects a BEL character in USB CDC communications. BEL indicates an illegal entry or other important event.



*Enable CDC Beep on BEL



Disable CDC Beep on BEL

TGCS (IBM) USB Beep Directive

The host can send a beeper configuration request to the scanner. Scan Ignore Beep Directive to prevent the scanner from processing the host request. All directives are still acknowledged to the USB host as if they were processed.



Honor Beep Directive



*Ignore Beep Directive

TGCS (IBM) USB Barcode Configuration Directive

The host can enable and disable code types. Scan Ignore Barcode Configuration Directive to prevent the scanner from processing the host request. All directives are still acknowledged to the USB host as if they were processed.



Honor Barcode Configuration Directive



*Ignore Barcode Configuration Directive

TGCS (IBM) USB Specification Version

Parameter # 45026

You can specify code types as unknown or with an appropriate IBM identifier.

Select IBM Specification Level (Original) to send the following code types as Unknown:

- Data Matrix
- GS1 Data Matrix
- QR Code
- GS1 QR
- MicroQR Code
- Aztec

Select IBM Specification Level Version 2.2 to send the code types with the appropriate IBM identifiers.



IBM Specification Level (Original)



IBM Specification Level Version 2.2 or higher

USB ASCII Character Sets

See [ASCII Character Sets](#) for the following information:

- [ASCII Character Sets](#)
- [ALT Key Character Set](#)
- [GUI Key Character Set](#)
- [F Key Character Set](#)

Symbologies

You can program the scanner to perform various functions or activate different features.

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

The scanner ships with the settings shown in the Symbology Parameter Defaults table. If the default values suit requirements, programming is not necessary.

Symbologies Parameter Defaults

Table 4 Parameter Defaults

Parameter	Parameter Number	SSI Number	Default
UPC-A	1	01h	Enable
UPC-E	2	02h	Enable
UPC-E1	12	0Ch	Disable
EAN-8/JAN-8	4	04h	Enable
EAN-13/JAN-13	3	03h	Enable
Bookland EAN	83	53h	Disable
Bookland ISBN Format	576	F1h 40h	ISBN-10
ISSN EAN	617	F1h 69h	Disable
User-Programmable Supplementals	579	F1h 43h	0
UPC/EAN/JAN Supplemental Redundancy	80	50h	10
UPC/EAN/JAN Supplemental AIM ID Format	672	F1h A0h	Combined AIM ID, 1 transmission
Transmit UPC-A Check Digit	40	28h	Enable
Transmit UPC-E Check Digit	41	29h	Enable

Table 4 Parameter Defaults (Continued)

Parameter	Parameter Number	SSI Number	Default
Transmit UPC-E1 Check Digit	42	2Ah	Enable
UPC-A Preamble	34	22h	System Character
UPC-E Preamble	35	23h	System Character
UPC-E1 Preamble	36	24h	System Character
Convert UPC-E to UPC-A	37	25h	Disable
Convert UPC-E1 to UPC-A	38	26h	Disable
EAN/JAN Zero Extend	39	27h	Disable
UCC Coupon Extended Code	85	55h	Disable
Coupon Report	730	F1h DAh	New Coupon
UPC Reduced Quiet Zone	1289	F8h 05h 09h	Disable
Decode UPC/EAN/JAN Supplementals	16	10h	Ignore Supplementals
Code 128	8	08h	Enable
Set Lengths for Code 128	209	D1h	Length Within Range
GS1-128 (formerly UCC/EAN-128)	14	0Eh	Enable
ISBT 128	84	54h	Disable
ISBT Concatenation	577	F1h 41h	Autodiscriminate
Check ISBT Table	578	F1h42h	Enable
ISBT Concatenation Redundancy	223	DFh	10
Code 128 FNC4	1254	F8h 04h E6h	Disable
Code 128 Reduced Quiet Zone	1208	F8h 04h B8h	Disable
Code 39	0	00h	Enable
Trioptic Code 39	13	0Dh	Disable
Convert Code 39 to Code 32	86	56h	Disable
Code 32 Prefix	231	E7h	Disable
Set Lengths for Code 39	18	12h	Length Within Range
Code 39 Check Digit Verification	48	30h	Disable

Table 4 Parameter Defaults (Continued)

Parameter	Parameter Number	SSI Number	Default
Transmit Code 39 Check Digit	43	2Bh	Disable
Code 39 Full ASCII Conversion	17	11h	Disable
Code 39 Security Level	750	F1h EEh	Level 1
Code 39 Reduced Quiet Zone	1209	F8h 04h B9h	Disable
Code 93	9	09h	Enable
Set Lengths for Code 93	26	1Ah	Length Within Range
Code 11	10	0Ah	Disable
Code 11 Check Digit Verification	52	34h	Disable
Transmit Code 11 Check Digits	47	2Fh	Disable
Interleaved 2 of 5 (I 2 of 5)	6	06h	Disable
Set Lengths for Interleaved 2 of 5	22	16h	Length Within Range
Interleaved 2 of 5 (I 2 of 5) Check Digit Verification	49	31h	None
Transmit I 2 of 5 Check Digit	44	2Ch	Disable
Convert I 2 Of 5 To Ean13	82	52h	Disable
Interleaved 2 of 5 (I 2 of 5) Security Level	1121	F8h 04h 61h	Level 1
Interleaved 2 of 5 (I 2 of 5) Reduced Quiet Zone	1210	F8h 04h BAh	Disable
Discrete 2 of 5 (D 2 of 5)	5	05h	Disable
Set Lengths for Discrete 2 of 5	20	14h	Length Within Range
Codabar (NW - 7)	7	07h	Enable
Set Lengths for Codabar	24	18h	Length Within Range
CLSI Editing	54	36h	Disable
NOTIS Editing	55	37h	Disable
Codabar Security Level	1776	F8h 06h F0h	Security Level 1

Table 4 Parameter Defaults (Continued)

Parameter	Parameter Number	SSI Number	Default
Codabar Upper or Lower Case Start/Stop Characters	855	F2h 57h	Upper Case
Codabar Mod 16 Check Digit Verification	1784	F8h 06h F8h	Disable
Transmit Codabar Check Digit	704	F1h C0h	Disable
MSI	11	0Bh	Disable
Set Lengths for MSI	30	1Eh	Length Within Range
MSI Check Digits	50	32h	One Check Digit
Transmit MSI Check Digit(s)	46	2Eh	Disable
MSI Check Digit Algorithm	51	33h	MOD 10/MOD 10
MSI Reduced Quiet Zone	1392	F8h 05h 70h	Disable
Chinese 2 of 5	408	F0h 98h	Disable
Matrix 2 of 5	618	F1h 6Ah	Disable
Set Lengths for Matrix 2 of 5	619	F1h 6Bh	Length Within Range
Matrix 2 of 5 Check Digit	622	F1h 6Eh	Disable
Transmit Matrix 2 of 5 Check Digit	623	F1h 6Fh	Disable
Korean 3 of 5	581	F1h 45h	Disable
Inverse 1D	586	F1h 4Ah	Regular
GS1 DataBar Omnidirectional (formerly GS1 DataBar-14)	338	F0h 52h	Enable
GS1 DataBar Limited	339	F0h 53h	Enable
GS1 DataBar Expanded	340	F0h 54h	Enable
Convert GS1 DataBar to UPC/EAN/JAN	397	F0h 8Dh	Disable
GS1 DataBar Security Level	1706	F8h 06h AAh	Level 1
GS1 DataBar Limited Margin Check	728	F1h D8h	Level 3
Redundancy Level	78	4Eh	Level 1
Security Level	77	4Dh	Level 1

Table 4 Parameter Defaults (Continued)

Parameter	Parameter Number	SSI Number	Default
1D Quiet Zone Level	1288	F8h 05h 08h	Level 1
Intercharacter Gap Size	381	F0h 7Dh	Normal
Composite CC-C	341	F0h55h	Disable
Composite CC-A/B	342	F0h 56h	Disable
Composite TLC-39	371	F0h 73h	Disable
Composite Inverse	1113	F8h 04h 59h	Regular Only
UPC Composite Mode	344	F0h58h	Never Linked
Composite Beep Mode	398	F0h8Eh	Beep as each code type is decoded
GS1-128 Emulation Mode for UCC/EAN Composite Codes	427	F0hABh	Disable
PDF417	15	0Fh	Enable
MicroPDF417	227	E3h	Disable
Code 128 Emulation	123	7Bh	Disable
Data Matrix	292	F0h 24h	Enable
GS1 Data Matrix	1336	F8h 05h 38h	Disable
Data Matrix Inverse	588	F1h 4Ch	Inverse Autodetect
Maxicode	294	F0h 26h	Disable
QR Code	293	F0h25h	Enable
GS1 QR	1343	F8h05h3Fh	Disable
MicroQR	573	F1h 3Dh	Enable
Linked QR Mode	1847	F8h07h37h	Linked QR Only
Aztec	574	F1h 3Eh	Enable
Aztec Inverse	589	F1h 4Dh	Inverse Autodetect
Han Xin	1167	F8h 04h 8Fh	Disable
Han Xin Inverse	1168	F8h 04h 90h	Regular
Grid Matrix	1718	F8h 06h B6h	Disable
Grid Matrix Inverse	1719	F8h 06h B7h	Regular
Grid Matrix Mirrored	1736	F8h 06h C8h	Never
DotCode	1906	F8h 07h 72h	Disable
DotCode Prioritize	1937	F8h 07h 91h	Disable
DotCode Inverse	1907	F8h 07h 73h	Inverse Autodetect
DotCode Mirrored	1908	F8h 07h 74h	Auto

Table 4 Parameter Defaults (Continued)

Parameter	Parameter Number	SSI Number	Default
DotCode Erasure Limit	2063	F8h08h0Fh	10
US Postnet	89	59h	Disable
US Planet	90	5Ah	Disable
Transmit US Postal Check Digit	95	5Fh	Enable
UK Postal	91	5Bh	Disable
Transmit UK Postal Check Digit	96	60h	Enable
Japan Postal	290	F0h 22h	Disable
Australia Post	291	F0h23h	Disable
Australia Post Format	718	F1hCEh	Autodiscriminate
Netherlands KIX Code	326	F0h46h	Disable
USPS 4CB/One Code/ Intelligent Mail	592	F1h 50h	Disable
UPU FICS Postal	611	F1h 63h	Disable
Mailmark	1337	F8h 05h 39h	Disable

Symbologies

You can program the scanner to perform various functions or activate different features.

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

The scanner ships with the settings shown in the Symbology Parameter Defaults table. If the default values suit requirements, programming is not necessary.

Enable/Disable All Code Types

Scan one of the following barcodes to enable or disable the scanner's ability to decode all barcode types.

- Disable All Code Types - Disable all code types. This is useful when enabling only a few code types.
- Enable All Code Types - Enable all code types. This is useful if you need to disable only a few code types.



Disable All Code Types



Enable All Code Types

UPC/EAN/JAN

You can choose one of these parameters to enable UPC, EAN, or JAN settings.

UPC-A

Parameter # 1 (SSI # 01h)

This parameter enables or disables the scanner to decode UPC-A barcodes.

- *Enabled - enables UPC-A decoding.
- Disabled - disables UPC-A decoding.



*Enable UPC-A (1)



Disable UPC-A (0)

UPC-E

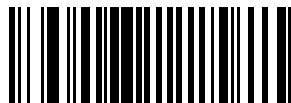
Parameter # 2 (SSI # 02h)

This parameter enables or disables the scanner to decode UPC-E barcodes.

- *Enabled - this sets UPC-E to use.
- Disabled - UPC-E is no longer in use.



*Enable UPC-E (1)



Disable UPC-E (0)

UPC-E1

Parameter # 12 (SSI # 0Ch)

This parameter enables or disables the scanner to decode UPC-E1 barcodes.

- Enabled - This sets UPC-E1 to use.
- Disabled - UPC-E1 is no longer in use.



NOTE: UPC-E1 is not a UCC (Uniform Code Council) approved symbology.



Enable UPC-E1 (1)



*Disable UPC-E1 (0)

EAN-8/JAN-8

Parameter # 4 (SSI # 04h)

This parameter enables or disables the scanner to decode EAN-8/JAN-8 barcodes.

- Enabled - Sets EAN-8/JAN-8 for use.
- Disabled - EAN-8/JAN-8 is no longer in use.



*Enable EAN-8/JAN-8 (1)



Disable EAN-8/JAN-8 (0)

EAN-13/JAN-13

Parameter # 3 (SSI # 03h)

This parameter enables or disables the scanner to decode EAN-13/JAN-13 barcodes.

- Enabled - Sets EAN-13/JAN-13 for use.
- Disabled - EAN-13/JAN-13 is no longer in use.



*Enable EAN-13/JAN-13 (1)



Disable EAN-13/JAN-13 (0)

Bookland EAN

Parameter # 83 (SSI # 53h)

This parameter enables or disables the scanner to decode Bookland EAN barcodes.

- Enabled - This sets Bookland EAN for use.
- Disabled - Bookland EAN is no longer in use.

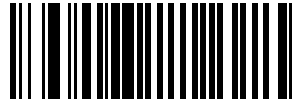


NOTE: If you enable Bookland EAN, select a [Bookland ISBN Format](#). Also set [Decode UPC/EAN/JAN Supplementals](#), select one of the following options:

- Decode UPC/EAN/JAN with Supplementals Only
- Autodiscriminate UPC/EAN/JAN With Supplementals
- Enable 978/979 Supplemental Mode



Enable Bookland EAN (1)



*Disable Bookland EAN (0)

Bookland ISBN Format

Parameter # 576 (SSI # F1h 40h)

If Bookland EAN is enabled, this parameter allows you to choose a format for Bookland data.

- *Bookland ISBN-10 - The scanner 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 scanner reports Bookland data (starting with either 978 or 979) as EAN-13 in 13-digit format to meet the 2007 ISBN-13 protocol.

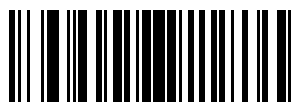


NOTE: For Bookland EAN to function properly, first enable [Bookland EAN](#) and then set [Decode UPC/EAN/JAN Supplementals](#), select one of the following options:

- Decode UPC/EAN/JAN with Supplementals Only.
- Autodiscriminate UPC/EAN/JAN With Supplementals.
- Enable 978/979 Supplemental Mode.



*Bookland ISBN-10 (0)



Bookland ISBN-13 (1)

ISSN EAN

Parameter # 617 (SSI # F1h 69h)

This parameter enables or disables the scanner to decode ISSN EAN barcodes.

- Enabled - Sets ISSN EAN for use.
- *Disabled - ISSN EAN is no longer in use.



Enable ISSN EAN (1)



*Disable ISSN EAN (0)

User-Programmable Supplementals

Parameter # 579 (SSI # F4h F1h 43h)

Parameter # 580 (SSI # F4h F1h 44h)

This parameter allows you to set two 3-digit prefixes if you have selected a Supplemental User-Programmable option.

- User-Programmable Supplemental 1 - Sets the first 3-digit prefix. See Numeric Barcodes.
- User-Programmable Supplemental 2 - Sets a second 3-digit prefix, if necessary. See Numeric Barcodes.



User-Programmable Supplemental 1



User-Programmable Supplemental 2

UPC/EAN/JAN Supplemental Redundancy

Parameter # 80 (SSI # 50h)

If Autodiscriminate UPC/EAN/JAN is configured to Autodiscriminate, this parameter defines the number of times a symbol is decoded without supplementals before transmission.

The range is from 2-30. Five or above is recommended when decoding a mix of UPC/EAN/JAN symbols with and without supplementals. The default is ten.

To set a redundancy value, scan the following barcode, and then scan two barcodes from Numeric Barcodes. Enter a leading zero for single digit numbers. To correct an error or change a selection, scan [Cancel](#).



UPC/EAN/JAN Supplemental Redundancy

UPC/EAN/JAN Supplemental AIM ID Format

Parameter # 672 (SSI # F1h A0h)

If Transmit Code ID Character is set to **AIM Code ID Character**, select an output format when reporting UPC/EAN/JAN barcodes with supplementals.

- Separate - Transmit UPC/EAN/JAN with supplementals with separate AIM IDs but one transmission, for example,

```
]E<0 or 4><data>]E<1 or 2>[supplemental data]
```

- Combined - Transmit UPC/EAN/JAN with supplementals with one AIM ID and one transmission. For example, see below.

```
]E3<data+supplemental data>
```

- Separate Transmissions - Transmit UPC/EAN/JAN with supplementals with separate AIM IDs and separate transmissions, for example,

```
]E<0 or 4><data>
```

]E<1 or 2>[supplemental data]



Separate (0)



*Combined (1)



Separate Transmissions (2)

Transmit UPC-A Check Digit

Parameter # 40 (SSI # 28h)

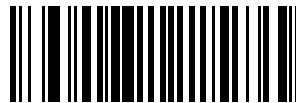
This parameter transmits data with or without the UPC-A check digit.

The check digit is the last character of the symbol used to verify the integrity of the data. It is always verified to guarantee the integrity of the data.

- *Transmit UPC-A Check Digit - Transmits the data with the UPC-A check digit.
- Do Not Transmit UPC-A Check Digit - Transmits the data without the UPC-A check digit.



*Transmit UPC-A Check Digit (1)



Do Not Transmit UPC-A Check Digit (0)

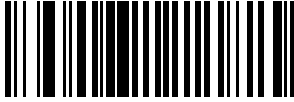
Transmit UPC-E Check Digit

Parameter # 41 (SSI # 29h)

This parameter transmits data with or without the UPC-E check digit.

The check digit is the last character of the symbol used to verify the integrity of the data. It is always verified to guarantee the integrity of the data.

- *Transmit UPC-E Check Digit - transmits the data with the UPC-E check digit.
- Do Not Transmit UPC-E Check Digit - transmits the data without the UPC-E check digit.



*Transmit UPC-E Check Digit (1)



Do Not Transmit UPC-E Check Digit (0)

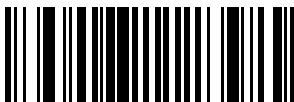
Transmit UPC-E1 Check Digit

Parameter # 42 (SSI #2Ah)

This parameters transmits data with or without the UPC-E1 check digit.

The check digit is the last character of the symbol used to verify the integrity of the data. It is always verified to guarantee the integrity of the data.

- *Transmit UPC-E1 Check Digit - Transmits the data with the UPC-E1 check digit.
- Do Not Transmit UPC-E1 Check Digit - Transmits the data without the UPC-E1 check digit.



*Transmit UPC-E1 Check Digit (1)



Do Not Transmit UPC-E1 Check Digit (0)

UPC-A Preamble

Parameter # 34 (SSI # 22h)

Preamble characters are part of the UPC symbol, and include Country Code and System Character.

Select the appropriate option for transmitting a UPC-A preamble to match the host system:

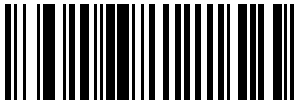
- Transmit System Character only
- Transmit System Character and Country Code ("0" for USA)
- Transmit no preamble.



No Preamble (<DATA>) (0)



*System Character (<SYSTEM CHARACTER>
<DATA>) (1)



System Character & Country Code (< COUNTRY
CODE> <SYSTEM CHARACTER> <DATA>) (2)

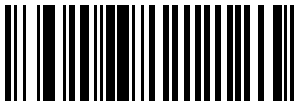
UPC-E Preamble

Parameter # 35 (SSI # 23h)

Preamble characters are part of the UPC symbol, and include Country Code and System Character.

Select the appropriate option for transmitting a UPC-E preamble to match the host system:

- Transmit System Character only
- Transmit System Character and Country Code ("0" for USA)
- Transmit no preamble.



No Preamble (<DATA>) (0)



*System Character (<SYSTEM CHARACTER>
<DATA>) (1)



System Character & Country Code (< COUNTRY
CODE> <SYSTEM CHARACTER> <DATA>) (2)

UPC-E1 Preamble

Parameter # 36 (SSI # 24h)

Preamble characters are part of the UPC symbol, and include Country Code and System Character.

Select the appropriate option for transmitting a UPC-E1 preamble to match the host system:

- Transmit System Character only
- Transmit System Character and Country Code ("0" for USA)

- Transmit no preamble.



No Preamble (<DATA>) (0)



*System Character (<SYSTEM CHARACTER> <DATA>) (1)



System Character & Country Code (< COUNTRY CODE> <SYSTEM CHARACTER> <DATA>) (2)

Convert UPC-E to UPC-A

Parameter # 37 (SSI # 25h)

This parameter converts UPC-E (zero suppressed) decoded data to UPC-A format before transmission.

After conversion, the data follows UPC-A format and is affected by UPC-A programming selections (such as, Preamble, Check Digit).

- *Enabled - Converts UPC-E decoded data to UPC-A format.
- Disabled - Transmits UPC-E decoded data without conversion to UPC-A.



Convert UPC-E to UPC-A (Enable) (1)



*Do Not Convert UPC-E to UPC-A (Disable) (0)

Convert UPC-E1 to UPC-A

Parameter # 38 (SSI # 26h)

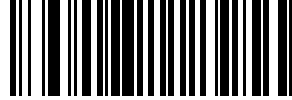
This parameter converts UPC-E1 (zero suppressed) decoded data to UPC-A format before transmission.

After conversion, the data follows UPC-A format and is affected by UPC-A programming selections (for example, Preamble, Check Digit).

- Enabled - converts UPC-E1 decoded data to UPC-A format.
- *Disabled - transmits UPC-E1 decoded data without conversion to UPC-A.



Convert UPC-E1 to UPC-A (Enable) (1)



*Do Not Convert UPC-E1 to UPC-A (Disable) (0)

EAN/JAN Zero Extend

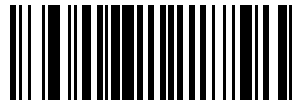
Parameter # 39 (SSI # 27h)

This parameter enables or disables decoded EAN-8 symbols to be compatible in length with EAN-13 symbols.

- Enabled - Adds five leading zeros to decoded EAN-8 symbols to make them compatible in length to EAN-13 symbols
- Disabled - Transmits EAN-8 symbols as-is, without adding zeroes.



Enable EAN/JAN Zero Extend (1)



*Disable EAN/JAN Zero Extend (0)

UCC Coupon Extended Code

Parameter # 85 (SSI # 55h)

This parameter allows decoding UPC-A barcodes starting with digit '5', EAN-13 barcodes starting with digit '99', and UPC-A/GS1-128 coupon codes.

- Enabled - Extends decoding for UPC-A, EAN-13, and GS1-128 coupon codes.
- *Disabled - Does not extend decoding for UPC-A, EAN-13, and GS1-128 coupon codes.



NOTE: UPC-A, EAN-13, and GS1-128 must be enabled to use this feature.



NOTE: See [UPC/EAN/JAN Supplemental Redundancy](#) to control autodiscrimination of the GS1-128 portion (right half) of a coupon code.



Enable UCC Coupon Extended Code (1)



*Disable UCC Coupon Extended Code (0)

Coupon Report

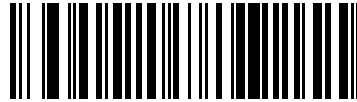
Parameter # 730 (SSI # F1h DAh)

This parameter selects the type of coupon format to support.

- Old Coupon Format - Support UPC-A/GS1-128 and EAN-13/GS1-128.
- New Coupon Format - An interim format to support UPC-A/GS1-DataBar and EAN-13/GS1-DataBar.
- Autodiscriminate Format - Support both Old Coupon Format and New Coupon Format.



Old Coupon Format (0)



*New Coupon Format (1)



Autodiscriminate Coupon Format (2)

UPC Reduced Quiet Zone

Parameter # 1289 (SSI # F8h 05h 09h)

This parameter enables or disables the scanner to decode the UPC barcodes with reduced quiet zones (the margins on either side of the barcode).

- Enabled - Allows the scanner to decode UPC barcodes with reduced quiet zones.
- *Disabled - Prevents the scanner from decoding UPC barcodes with reduced quiet zones.



NOTE: If you select Enable, select a [1D Quiet Zone Level](#).



Enable UPC Reduced Quiet Zone (1)



*Disable UPC Reduced Quiet Zone (0)

Decode UPC/EAN/JAN Supplementals

Parameter # 16 (SSI # 10h)

This parameter decodes supplementals, which are barcodes appended according to specific format conventions (for example, UPC A+2, UPC E+2, EAN 13+2).

- Decode UPC/EAN/JAN with Supplementals Only - The scanner only decodes UPC/EAN/JAN symbols with supplemental characters, and ignores symbols without supplementals.
- Ignore UPC/EAN/JAN Supplementals - When presented with a UPC/EAN/JAN plus supplemental symbol, the scanner decodes UPC/EAN/JAN and ignores the supplemental characters.
- Autodiscriminate UPC/EAN/JAN with Supplementals - The scanner decodes UPC/EAN/JAN symbols with supplemental characters immediately. If the symbol does not have a supplemental, the scanner must decode the barcode the number of times set via [UPC/EAN/JAN Supplemental Redundancy](#) before transmitting its data to confirm that there is no supplemental.
- Enable 378/379 Supplemental Mode
- Enable 978/979 Supplemental Mode



NOTE: If you select 978/979 Supplemental Mode and are scanning Bookland EAN barcodes, see [Bookland EAN](#), and select a format using [Bookland ISBN Format](#).

- Enable 977 Supplemental Mode
- Enable 414/419/434/439 Supplemental Mode
- Enable 491 Supplemental Mode
- Enable Smart Supplemental Mode - This applies to EAN-13 barcodes starting with any prefix listed previously.
- Supplemental User-Programmable Type 1 - This applies to EAN-13 barcodes starting with a 3-digit user-defined prefix. Set this using [User Programmable Supplementals](#).
- Supplemental User-Programmable Type 1 and 2 - This applies to EAN-13 barcodes starting with either of two 3-digit user-defined prefixes. Set the prefixes using [User Programmable Supplementals](#).
- Smart Supplemental Plus User-Programmable 1 - This applies to EAN-13 barcodes starting with any prefix listed previously or the prefix set using [User Programmable Supplementals](#).
- Smart Supplemental Plus User-Programmable 1 and 2 - This applies to EAN-13 barcodes starting with any prefix listed previously or one of the two user-defined prefixes set using [User Programmable Supplementals](#).



NOTE: To minimize the risk of invalid data transmission, select either to decode or ignore supplemental characters.

Symbologies



Decode UPC/EAN/JAN With Supplementals
Only (1)



*Ignore UPC/EAN/JAN Supplementals (0)



Autodiscriminate UPC/EAN/JAN with
Supplementals (2)



Enable 378/379 Supplemental Mode (4)



Enable 978/979 Supplemental Mode (5)



Enable 977 Supplemental Mode (7)



Enable 414/419/434/439 Supplemental Mode (6)



Enable 491 Supplemental Mode (8)



Enable Smart Supplemental Mode (3)



Supplemental User-Programmable Type 1 (9)



Supplemental User-Programmable Type 1 and 2 (10)



Smart Supplemental Plus User-Programmable 1 (11)



Smart Supplemental Plus User-Programmable 1 and 2 (12)

Code 128

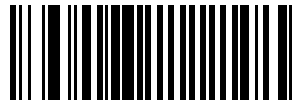
Parameter # 8 (SSI #08h)

This parameter enables or disables the scanner to decode Code 128 barcodes.

- *Enabled - Enables Code 128 decoding.
- Disabled - Disables Code 128 decoding.



*Enable Code 128 (1)



Disable Code 128 (0)

Set Lengths for Code 128

Parameter # 209 (SSI #D1h)

Parameter # 210 (SSI #D2h)

This parameter sets lengths for Code 128 to any length, one or two discrete lengths, or lengths within a specific range.

The length of a code refers to the number of characters (for example, human-readable characters), including check digit(s) the code contains. The default is Length Within Range.



NOTE: When setting lengths, enter a leading zero for single digit numbers.

- One Discrete Length - Decode only Code 128 symbols containing a selected length.
- Two Discrete Lengths - Decode only Code 128 symbols containing either of two lengths.
- Length Within Range - Decode Code 128 symbols with a length between 0 to 80
- Any Length - Decode Code 128 symbols containing any number of characters within the scanner's capability.

Select lengths using barcodes in Numeric Barcodes. To correct an error or change the selection, scan [Cancel](#).

For example:

- To decode only Code 128 symbols with 14 characters, scan Code 128 - One Discrete Length, and then scan 1, 4.
- To decode only Code 128 symbols containing either 2 or 14 characters, scan Code 128 - Two Discrete Lengths, and then scan 0, 2, 1, 4.
- To decode Code 128 symbols containing between 4 and 12 characters, scan Code 128 - Length Within Range, and then scan 0, 4, 1, 2.



Code 128 - One Discrete Length



Code 128 - Two Discrete Lengths



Code 128 - Length Within Range



Code 128 - Any Length

GS1-128 (formerly UCC/EAN-128)

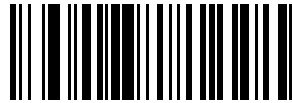
Parameter # 14 (SSI #0Eh)

This parameter enables or disables the scanner to decode GS1-128 barcodes.

- *Enabled - Enables GS1-128 decoding.
- Disabled - Disables GS1-128 decoding.



*Enable GS1-128 (1)



Disable GS1-128 (0)

ISBT 128

Parameter # 84 (SSI #54h)

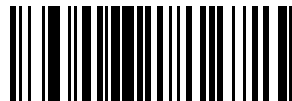
This parameter enables or disables the scanner to decode ISBT 128 barcodes.

- Enabled - enables ISBT 128 decoding.
- *Disabled - disables ISBT 128 decoding.

ISBT 128 is a variant of Code 128 used in the blood bank industry.



Enable ISBT 128 (1)



*Disable ISBT 128 (0)

ISBT Concatenation

Parameter # 577 (SSI #F1h 41h)

This parameter enables or disables the scanner to decode ISBT concatenation.

Select an option for concatenating pairs of ISBT code types:

- Enable ISBT Concatenation - The scanner decodes and concatenates two ISBT codes. The scanner does not decode single ISBT symbols.
- Disable ISBT Concatenation - The scanner does not concatenate pairs of ISBT codes it encounters.
- Autodiscriminate ISBT Concatenation - The scanner decodes and concatenates pairs of ISBT codes immediately. If only a single ISBT symbol is present, the scanner must decode the symbol the number of times set via [ISBT Concatenation Redundancy](#) before transmitting its data to confirm that there is no additional ISBT symbol.



NOTE: For ISBT AutoDetect to operate as expected, both barcodes must be in the field of view simultaneously. This may be difficult to achieve in presentation mode.



NOTE: When enabling ISBT Concatenation or Autodiscriminate ISBT Concatenation, set Code 128 Security Level to Level 2.



Enable ISBT Concatenation (1)



Disable ISBT Concatenation (0)



*Autodiscriminate ISBT Concatenation (2)

Check ISBT Table

Parameter # 578 (SSI #F1h 42h)

This parameter enables or disables the Check ISBT Table which concatenates only pairs of ISBT codes found in the table. Other types of ISBT codes are not concatenated.

- *Enabled - enables the Check ISBT Table to concatenate only those pairs found in this table.
- Disabled - disables the Check ISBT Table to concatenate only those pairs found in this table.

The ISBT specification includes a table that lists several types of ISBT barcodes that are commonly used in pairs.



*Enable Check ISBT Table (1)



Disable Check ISBT Table (0)

ISBT Concatenation Redundancy

Parameter # 223 (SSI #DFh)

This parameter sets the number of times the scanner must decode an ISBT symbol before determining that there is no additional symbol.

This parameter applies if you set ISBT Concatenation to Autodiscriminate.

Scan the following barcode, and then scan barcodes in [Numeric Barcodes](#) to set a value between the range: 2 to 20. Enter a leading zero for single-digit numbers. To correct an error or change a selection, scan [Cancel](#). The default is 10.



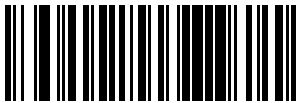
ISBT Concatenation Redundancy

Code 128 <FNC4>

Parameter # 1254 (SSI #F8h 04h E6h)

This parameter processes the Code 128 <FNC4> character, and either ignores (removes) the character or honors (does not remove) the character.

- Honor Code 128 <FNC4> - The <FNC4> character is processed normally, per Code 128 standard.
- *Ignore Code 128 <FNC4> - Strips the <FNC4> character from the decode data. The remaining characters are sent to the host unchanged.



Honor Code 128 <FNC4> (0)



*Ignore Code 128 <FNC4> (1)

Code 128 Reduced Quiet Zone

Parameter # 1208 (SSI #F8h 04h B8h)

This parameter enables or disables decoding Code 128 with reduced quiet zones (the margins on either side of the barcode).

If you select Enable, select a [1D Quiet Zone Level](#).

- Enabled - enables Code 128 with reduced Quiet Zones.
- *Disabled - disables Code 128 with reduced Quiet Zones.



Enable Code 128 Reduced Quiet Zone (1)



*Disable Code 128 Reduced Quiet Zone (0)

Code 39

Parameter # 0 (SSI #00h)

This parameter enables or disables the scanner to decode Code 39 barcodes.

- *Enabled - Enables Code 39 decoding.
- Disabled - Disables Code 39 decoding.



*Enable Code 39 (1)



Disable Code 39 (0)

Trioptic Code 39

Parameter # 13 (SSI #0Dh)

This parameter enables or disables the scanner to decode Trioptic Code 39 barcodes.

Trioptic Code 39 is a variant of Code 39 used in the marking of computer tape cartridges. Trioptic Code 39 symbols always contain six characters.

- Enabled - enables Trioptic Code 39 decoding.
- *Disabled - disables Trioptic Code 39 decoding.



NOTE: You cannot enable Trioptic Code 39 and Code 39 Full ASCII simultaneously.



Enable Trioptic Code 39 (1)



*Disable Trioptic Code 39 (0)

Convert Code 39 to Code 32

Parameter # 86 (SSI #5h)

This parameter enables or disables converting Code 39 to Code 32.

Code 32 is a variant of Code 39 used by the Italian pharmaceutical industry.



NOTE: Code 39 must be enabled for this parameter to function.

- Enabled - enables Convert Code 39 to Code 32.
- **Disabled - disables Convert Code 39 to Code 32.



Enable Convert Code 39 to Code 32 (1)



*Disable Convert Code 39 to Code 32 (0)

Code 32 Prefix

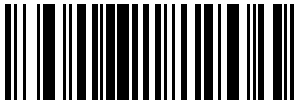
Parameter # 231 (SSI #E7h)

This parameter enables or disables adding the prefix character "A" to all Code 32 barcodes.

- Enabled - enables Code 32 Prefix.
- *Disabled - disables Code 32 Prefix.



NOTE: [Convert Code 39 to 32](#) must be enabled for this parameter to function.



Enable Code 32 Prefix (1)



*Disable Code 32 Prefix (0)

Set Lengths for Code 39

L1 Parameter # 18 (SSI #12h)

L2 Parameter # 19 (SSI #13h)

This parameter sets the lengths for Code 39.

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

The options are:

- Any length
- One or two discrete lengths

- Lengths within a specific range

If Code 39 Full ASCII is enabled, Length Within Range or Any Length are the preferred options. The default behavior is Length Within Range, with a default value of 0 to 80.



NOTE: When setting the lengths, enter a leading zero for single digit numbers.

- One Discrete Length - Decode only Code 39 symbols containing a selected length.
- Two Discrete Lengths - Decode only Code 39 symbols containing either of two lengths.
- Length Within Range - Decode Code 39 symbols with a specific length range.
- Any Length - Decode Code 39 symbols containing any number of characters within the scanner's capability.

Select lengths using barcodes in Numeric Barcodes. To correct an error or change the selection, scan [Cancel](#).

For example:

- To decode only Code 39 symbols with 14 characters, scan Code 39 - One Discrete Length, and then scan 1, 4.
- To decode only Code 39 symbols containing either 2 or 14 characters, scan Code 39 - Two Discrete Lengths, and then scan 0, 2, 1, 4.
- To decode Code 39 symbols containing between 4 and 12 characters, scan Code 39 - Length Within Range, and then scan 0, 4, 1, 2.



Code 39 - One Discrete Length



Code 39 - Two Discrete Lengths



*Code 39 - Length Within Range (Default: Length Within Range)



Code 39 - Any Length

Code 39 Check Digit Verification

Parameter # 48 (SSI #30h)

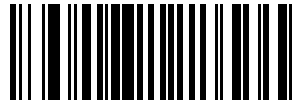
This parameter checks the integrity of all Code 39 symbols to verify that the data complies with specified check digit algorithm.

Only Code 39 symbols which include a modulo 43 check digit are decoded. Enable this parameter if the Code 39 symbols contain a Modulo 43 check digit.

- Enabled - enables Code 39 Check Digit.
- *Disabled - disables Code 39 Check Digit.



Enable Code 39 Check Digit (1)



*Disable Code 39 Check Digit (0)

Transmit Code 39 Check Digit

Parameter # 43 (SSI #2Bh)

This parameter transmits Code 39 data with or without the check digit.

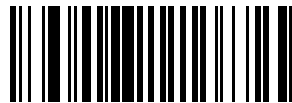
- Enabled - enables Transmit Code 39 Check Digit.
- *Disabled - disables Transmit Code 39 Check Digit.



NOTE: [Code 39 Check Digit Verification](#) must be enabled for this parameter to function.



Transmit Code 39 Check Digit (Enable) (1)



*Do Not Transmit Code 39 Check Digit (Disable)
(0)

Code 39 Full ASCII Conversion

Parameter # 17 (SSI #11h)

This parameter enables or disables the scanner to decode Code 39 Full ASCII.

Code 39 Full ASCII is a variant of Code 39 which pairs characters to encode the full ASCII character set.

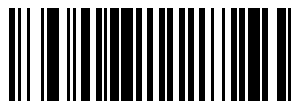
- Enabled - enables Code 39 Full ASCII.
- *Disabled - disables Code 39 Full ASCII.



NOTE: Code 39 Full ASCII to Full ASCII Correlation is host-dependent, and is therefore described in the ASCII character set table for the appropriate interface. See [ASCII Character Sets](#).



Enable Code 39 Full ASCII (1)



*Disable Code 39 Full ASCII (0)

Code 39 Security Level

Parameter # 750 (SSI #F1h EEh)

This parameter sets the security level for Code 39.

Select increasing levels of security for decreasing levels of barcode quality. There is an inverse relationship between security, and device aggressiveness, so choose only that level of security necessary for any given application.

- Code 39 Security Level 0 - Allows the device to operate in its most aggressive state, while providing sufficient security in decoding most "in-spec" barcodes.
- *Code 39 Security Level 1 - This setting eliminates most mis-decodes
- Code 39 Security Level 2 - Select this option if Security Level 1 fails to eliminate mis-decodes.
- Code 39 Security Level 3 - If you selected Security Level 2 and mis-decodes still occur, select this security level.



NOTE: Selecting Security Level 3 is an extreme measure against mis-decoding severely out of spec barcodes. Selecting this level of security significantly impairs the decoding ability of the device. If you need this level of security, try to improve the quality of the barcodes.



Code 39 Security Level 0 (0)



*Code 39 Security Level 1 (1)



Code 39 Security Level 2 (2)



Code 39 Security Level 3 (3)

Code 39 Reduced Quiet Zone

Parameter # 1209 (SSI #F8h 04h B9h)

This parameter enables or disables decoding Code 39 with reduced quiet zones. Quiet zones are the margins on either side of the barcode.

If you select Enable, select a [1D Quiet Zone Level](#).

- Enabled - enables Code 39 with reduced Quiet Zones.
- *Disabled - disables Code 39 with reduced Quiet Zones.



Enable Code 39 Reduced Quiet Zone (1)



*Disable Code 39 Reduced Quiet Zone (0)

Code 93

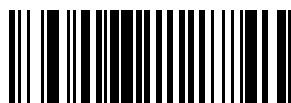
Parameter # 9 (SSI #09h)

This parameter enables or disables the scanner to decode Code 93 barcodes.

- *Enabled - enables Code 93 decoding.
- Disabled - disables Code 93 decoding.



*Enable Code 93 (1)



Disable Code 93 (0)

Set Lengths for Code 93

Parameter # 26 (SSI #1Ah)

Parameter # 27 (SSI #1Bh)

This parameter sets the lengths for Code 93 to any length, one or two discrete lengths, or lengths within a specific range.

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

The options are:

- Any length
- One or two discrete lengths
- Lengths within a specific range

The default behavior is Length Within Range, with a default value of 0 to 80 digits.



NOTE: When setting the lengths, enter a leading zero for single-digit numbers.

Scan one of the following barcodes to select a length option:

- One Discrete Length - Decode only Code 93 symbols containing a selected length.
- Two Discrete Lengths - Decode only Code 93 symbols containing either of two lengths.
- Length Within Range - Decode Code 93 symbols with a specific length range.
- Any Length - Decode Code 93 symbols containing any number of characters within the scanner's capability.

Select lengths using barcodes in Numeric Barcodes. To correct an error or change the selection, scan [Cancel](#).

For example:

- To decode only Code 93 symbols with 14 characters, scan Code 93 - One Discrete Length, and then scan 1, 4.
- To decode only Code 93 symbols containing either 2 or 14 characters, scan Code 93 - Two Discrete Lengths, and then scan 0, 2, 1, 4.
- To decode Code 93 symbols containing between 4 and 12 characters, scan Code 93 - Length Within Range, and then scan 0, 4, 1, 2.



Code 93 - One Discrete Length



Code 93 - Two Discrete Lengths



*Code 93 - Length Within Range (Default: 1-55)



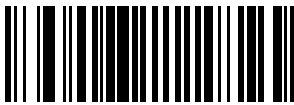
Code 93 - Any Length

Code 11

Parameter # 10 (SSI #0Ah)

This parameter enables or disables the scanner to decode Code 11 barcodes.

- Enabled - enables Code 11 decoding.
- *Disabled - disables Code 11 decoding.



Enable Code 11 (1)



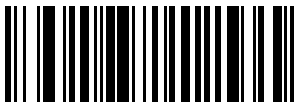
*Disable Code 11 (0)

Code 11 Check Digit Verification

Parameter # 52 (SSI #34h)

This parameter checks the integrity of all Code 11 symbols to verify that the data complies with specified check digit algorithm.

- *Disabled - disables Code 11 Check Digit.
- One Check Digit - enables Code 11 to check one digit.
- Two Check Digits - enables Code 11 to check 2 digits.



*Disable (0)



One Check Digit (1)



Two Check Digits (2)

Transmit Code 11 Check Digits

Parameter # 47 (SSI #2Fh)

This parameter transmits Code 11 data with or without the check digit.

- Enabled - enables Transmit Code 11 Check Digit.
- *Disabled - disables Transmit Code 11 Check Digit.



NOTE: [Code 11 Check Digit Verification](#) must be enabled for this parameter to function.



Transmit Code 11 Check Digit(s) (Enable) (1)



*Do Not Transmit Code 11 Check Digit(s) (Disable) (0)

Interleaved 2 of 5 (I 2 of 5)

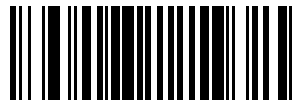
Parameter # 6 (SSI #06h)

This parameter enables or disables the scanner to decode I 2 of 5 barcodes.

- Enabled - enables I 2 of 5 decoding.
- *Disabled - disables I 2 of 5 decoding.



Enable Interleaved 2 of 5 (1)



*Disable Interleaved 2 of 5 (0)

Set Lengths for Interleaved 2 of 5 (I 2 of 5)

L1 Parameter # 22 (SSI #16h)

L2 Parameter # 23 (SSI #17h)

This parameter sets the length for I 2 of 5.

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

The default behavior is Length Within Range, with a default value of 0 to 80.



NOTE: When setting the lengths, enter a leading zero for single digit numbers.

- One Discrete Length - Decode only 1 2 of 5 symbols containing a selected length.
- Two Discrete Lengths - Decode only 1 2 of 5 symbols containing either of two lengths.
- Length Within Range - Decode 1 2 of 5 symbols with a specific length range.
- Any Length - Decode 1 2 of 5 symbols containing any number of characters within the scanner's capability.



NOTE: Due to the construction of the 1 2 of 5 symbology, it is possible for a scan line covering only a portion of the code to transmit as a complete scan, yielding less data than is encoded in the barcode. To prevent this, select specific lengths (1 2 of 5 - One Discrete Length, Two Discrete Lengths) for 1 2 of 5 applications, or increase the [Security Level](#).

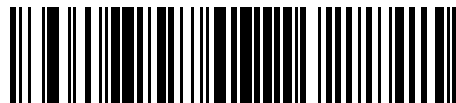
Select barcode length in Numeric Barcodes. To correct an error or change the selection, scan [Cancel](#).

For example:

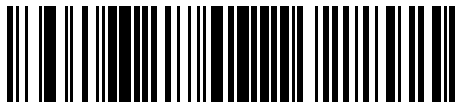
- To decode only 1 2 of 5 symbols with 14 characters, scan 1 2 of 5 - One Discrete Length, and then scan 1, 4.
- To decode only 1 2 of 5 symbols containing either 2 or 14 characters, scan 1 2 of 5 - Two Discrete Lengths, and then scan 0, 2, 1, 4.
- To decode 1 2 of 5 symbols containing between 4 and 12 characters, scan 1 2 of 5 - Length Within Range, and then scan 0, 4, 1, 2.



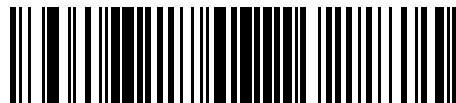
1 2 of 5 - One Discrete Length



1 2 of 5 - Two Discrete Lengths



1 2 of 5 - Length Within Range



1 2 of 5 - Any Length

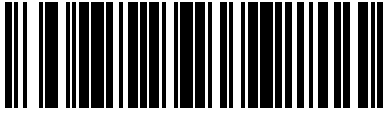
Interleaved 2 of 5 (1 2 of 5) Check Digit Verification

Parameter # 49 (SSI #31h)

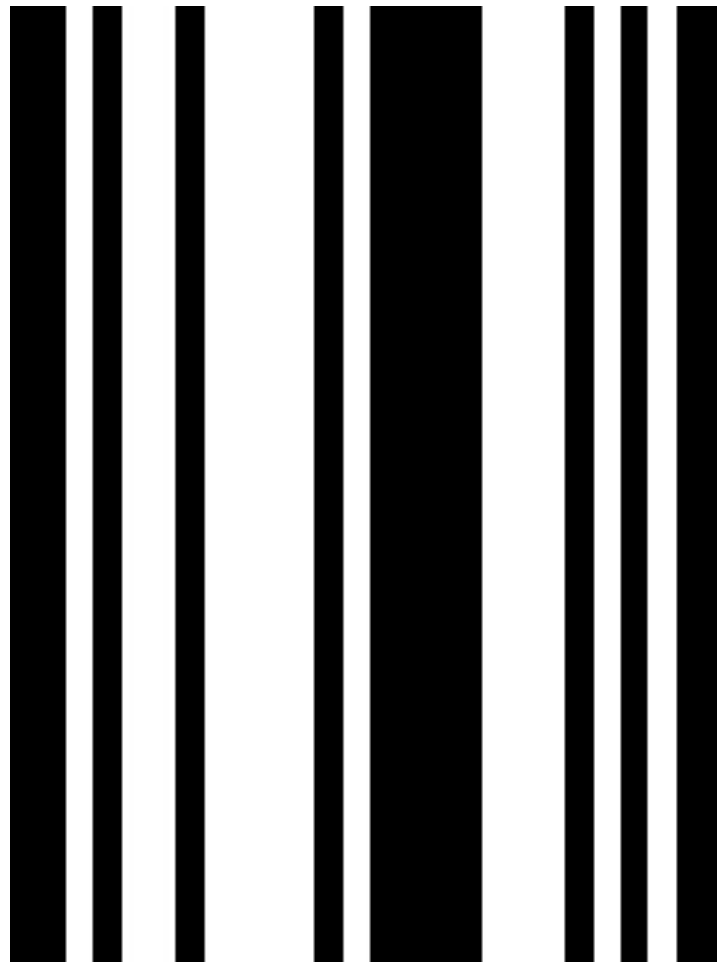
Symbologies

This parameter enables or disables checking the integrity of all I 2 of 5 symbols to verify the data complies with either the specified Uniform Symbology Specification (USS) or the Optical Product Code Council (OPCC) check digit algorithm.

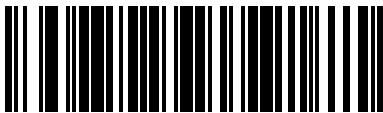
- *Disable - disables checking the integrity of all I 2 of 5 symbols to verify the data complies.
- USS Check Digit - enables checking the integrity of USS.
- OPCC Check Digit - enables checking the integrity of OPCC.



*Disable (0)



USS Check Digit (1)



OPCC Check Digit (2)

Transmit I 2 of 5 Check Digit

Parameter # 44 (SSI #2Ch)

This parameter enables or disables transmission of I 2 of 5 data with or without the check digit.

- Enabled - enables transmission of check digit.
- *Disabled - disables transmission of check digit.



Transmit I 2 of 5 Check Digit (Enable) (1)



*Do Not Transmit I 2 of 5 Check Digit (Disable) (0)

Convert Interleaved 2 of 5 (I 2 of 5) to EAN-13

Parameter # 82 (SSI #52h)

This parameter enables or disables converting 14-character I 2 of 5 codes to EAN-13, and then transmitting to the host as EAN-13.

- Enabled - converts 14-character I 2 of 5 codes to EAN-13.
- *Disabled - does not convert 14-character I 2 of 5 codes to EAN-13.



NOTE: The I 2 of 5 code must be enabled, and the code must have a leading zero and a valid EAN-13 check digit.



Convert I 2 of 5 to EAN-13 (Enable) (1)



*Do Not Convert I 2 of 5 to EAN-13 (Disable) (0)

Interleaved 2 of 5 (I 2 of 5) Security Level

Parameter # 1121 (SSI #F8h 04h 61h)

This parameter sets the security level for I 2 of 5.

I 2 of 5 barcodes are vulnerable to misdecodes, particularly when I 2 of 5 Lengths is set to Any Length. The scanner offers four levels of decode security for I 2 of 5 barcodes. There is an inverse relationship

between security and scanner aggressiveness. Increasing the level of security can reduce scanning aggressiveness, so select only the level of security necessary.

- I 2 of 5 Security Level 0: The scanner operates in its most aggressive state, while providing sufficient security in decoding most in-spec barcodes.
- I 2 of 5 Security Level 1: A barcode must be successfully read twice, and satisfy certain safety requirements before being decoded. This default setting eliminates most misdecodes.
- I 2 of 5 Security Level 2: This option applies greater barcode security requirements if Security Level 1 fails to eliminate misdecodes.
- I 2 of 5 Security Level 3: If you selected Security Level 2, and misdecodes still occur, select this security level. The highest safety requirements are applied. A barcode must be successfully read three times before being decoded.



NOTE: Selecting this option is an extreme measure against mis-decoding severely out-of-spec barcodes, and significantly impairs the decoding ability of the scanner. If this level of security is required, try to improve the quality of the barcodes.



I 2 of 5 Security Level 0 (0)



*I 2 of 5 Security Level 1 (1)



I 2 of 5 Security Level 2 (2)



I 2 of 5 Security Level 3 (3)

Interleaved 2 of 5 (I 2 of 5) Reduced Quiet Zone

Parameter # 1210 (SSI #F8h 04h B9h)

This parameter enables or disables decoding I 2 of 5 with reduced quiet zones (the margins on either side of the barcode).

If you select Enable, select a [1D Quiet Zone Level](#).

- Enabled - enables I 2 of 5 with reduced Quiet Zones.
- *Disabled - disables I 2 of 5 with reduced Quiet Zones.



Enable I 2 of 5 Reduced Quiet Zone (1)



*Disable I 2 of 5 Reduced Quiet Zone (0)

Discrete 2 of 5 (D 2 of 5)

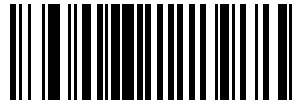
Parameter # 5 (SSI #05h)

This parameter enables or disables the scanner to decode D 2 of 5 barcodes.

- Enabled - enables D 2 of 5 decoding.
- *Disabled - disables D 2 of 5 decoding.



Enable Discrete 2 of 5 (1)



*Disable Discrete 2 of 5 (0)

Set Lengths for Discrete 2 of 5 (D 2 of 5)

L1 Parameter # 20 (SSI #14h)

L2 Parameter # 21 (SSI #15h)

This parameter sets the lengths for D 2 of 5.

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

The options are:

- Any length
- One or Two discrete lengths
- Lengths within a specific range

The default behavior is Length Within Range, with a default range of .



NOTE: When setting the lengths, enter a leading zero for single digit numbers.

Scan one of the following barcodes to select a length option:

- One Discrete Length - Decode only D 2 of 5 symbols containing a selected length.

- Two Discrete Lengths - Decode only D 2 of 5 symbols containing either of two lengths.
- *Length Within Range - Decode D 2 of 5 symbols with a specific length range.
- Any Length - Decode D 2 of 5 symbols containing any number of characters within the scanner's capability.



NOTE: Due to the construction of the D 2 of 5 symbology, it is possible for a scan line covering only a portion of the code to transmit as a complete scan, yielding less data than is encoded in the barcode. To prevent this, select specific lengths (D 2 of 5 - One Discrete Length, Two Discrete Lengths) for D 2 of 5 applications.

Select lengths using barcodes in Numeric Barcodes. To correct an error or change the selection, scan [Cancel](#).

For example:

- To decode only D 2 of 5 symbols with 14 characters, scan D 2 of 5 - One Discrete Length, and then scan 1, 4.
- To decode only D 2 of 5 symbols containing either 2 or 14 characters, scan D 2 of 5 - Two Discrete Lengths, and then scan 0, 2, 1, 4.
- To decode D 2 of 5 symbols containing between 4 and 12 characters, scan D 2 of 5 - Length Within Range, and then scan 0, 4, 1, 2.



D 2 of 5 - One Discrete Length



D 2 of 5 - Two Discrete Lengths



D 2 of 5 - Length Within Range



D 2 of 5 - Any Length

Codabar (NW - 7)

Parameter # 7 (SSI #07h)

This parameter enables or disables the scanner to decode Codabar barcodes.

- *Enabled - enables Codabar decoding.
- Disabled - disables Codabar decoding.



*Enable Codabar (1)



Disable Codabar (0)

Set Lengths for Codabar

L1 Parameter # 24 (SSI #18h)

L2 Parameter # 25 (SSI #19h)

This parameter sets lengths for Codabar.

The length of a code refers to the number of characters (for example, human-readable characters), including check digit(s) the code contains. Set lengths for Codabar to any length, one or two discrete lengths, or lengths within a specific range. The default behavior is Length Within Range, and the range is 0 to 60



NOTE: When setting lengths, enter a leading zero for single-digit numbers.

- One Discrete Length - Decode only Codabar symbols containing a selected length.
- Two Discrete Lengths - Decode only Codabar symbols containing either of two lengths.
- Length Within Range - Decode Codabar symbols with a specific length range.
- Any Length - Decode Codabar symbols containing any number of characters within the scanner's capability.

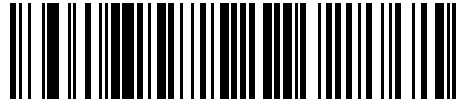
Select lengths using barcodes in Numeric Barcodes. To correct an error or change the selection, scan [Cancel](#).

For example:

- To decode only Codabar symbols with 14 characters, scan Codabar - One Discrete Length, and then scan 1, 4.
- To decode only Codabar symbols containing either 2 or 14 characters, scan Codabar - Two Discrete Lengths, and then scan 0, 2, 1, 4.
- To decode Codabar symbols containing between 4 and 12 characters, scan Codabar - Length Within Range, and then scan 0, 4, 1, 2.



Codabar - One Discrete Length



Codabar - Two Discrete Lengths



*Codabar - Length Within Range (Default: Length Within Range)



Codabar - Any Length

CLSI Editing

Parameter # 54 (SSI #36h)

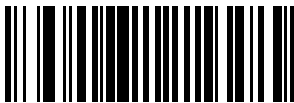
This parameter enables or disables the scanner to decode CLSI editing barcodes.

Select Enable CLSI Editing to strip the start and stop characters and insert a space after the first, fifth, and tenth characters of a 14-character Codabar symbol if the host system requires this data format.

- Enabled - enables CLSI editing.
- *Disabled - disables CLSI editing.



NOTE: Symbol length does not include start and stop characters.



Enable CLSI Editing (1)



*Disable CLSI Editing (0)

NOTIS Editing

Parameter # 55 (SSI #37h)

This parameter enables or disables the scanner to decode NOTIS editing barcodes, which strips the start and stop characters from a decoded Codabar symbol if the host system requires this data format.

- Enabled - enables NOTIS editing.
- *Disabled - disables NOTIS editing.



Enable NOTIS Editing (1)



*Disable NOTIS Editing (0)

Codabar Security Level

Parameter # 1776 (SSI #F8h 06h F0h)

This parameter sets the security level for Codabar 39.

The scanner offers four levels of decode security for Codabar barcodes. There is an inverse relationship between security and scanner aggressiveness. Increasing the security level can reduce scanning aggressiveness, so select only the level of security necessary.

- Codabar Security Level 0: This setting allows the scanner to operate in its most aggressive state, while providing sufficient security in decoding most in-spec barcodes.
- Codabar Security Level 1: This default setting eliminates most misdecodes.
- Codabar Security Level 2: Select this option with greater barcode security requirements if Security Level 1 fails to eliminate misdecodes.
- Codabar Security Level 3: Select this security level if Security Level 2 fails to eliminate mis-codes.



NOTE: Selecting this option is an extreme measure against mis-decoding severely out-of-spec barcodes, and significantly reduces the decoding ability of the scanner. If this level of security is required, consider improving the quality of the barcodes.



NOTE: Selecting this option is an extreme measure against mis-decoding severely out-of-spec barcodes, and significantly impairs the decoding ability of the scanner. If this level of security is required, try to improve the quality of the barcodes.



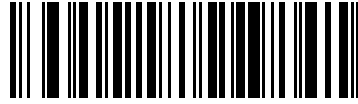
Codabar Security Level 0 (0)



*Codabar Security Level 1 (1)



Codabar Security Level 2 (2)



Codabar Security Level 3 (3)

Codabar Upper or Lower Case Start/Stop Characters

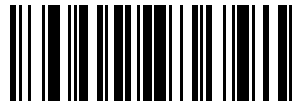
Parameter # 855 (SSI #F2h 57h)

This parameter selects whether to transmit upper case or lower case Codabar start/stop characters.

- Lower Case (1) - enables lowercase start/stop characters.
- *Upper Case (0) - enables upper case start/stop characters.



Lower Case (1)



*Upper Case (0)

Codabar Mod 16 Check Digit Verification

Parameter # 1784 (SSI #F8h 06h F8h)

This parameter verifies the Codabar Mod 16 check digit to ensure the data complies with the specified check digit algorithm.

- Enabled - enables check digit.
- *Disabled - disables check digit.



Enable Codabar Mod 16 Check digit (1)



*Disable Codabar Mod 16 Check digit (0)

Transmit Codabar Check Digit

Parameter # 704 (SSI #F1h C0h)

This parameter selects whether or not to transmit the Codabar check digit(s).

- Enabled - enables check digit transmission.

- *Disabled - disables check digit transmission.



Enable Codabar Check Digit Transmission (1)



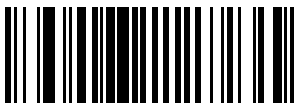
*Disable Codabar Check Digit Transmission (0)

MSI

Parameter # 11 (SSI #0Bh)

This parameter enables or disables the scanner to decode MSI barcodes.

- Enabled - enables MSI decoding.
- *Disabled - disables MSI decoding.



Enable MSI (1)



*Disable MSI (0)

Set Lengths for MSI

L1 Parameter # 30 (SSI #1Eh)

L2 Parameter # 31 (SSI #1Fh)

This parameter sets the lengths for MSI.

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

The options are:

- Any length
- One or two discrete lengths
- Lengths within a specific range

The default behavior is Length Within Range, with a default value of 0 to 55.



NOTE: When setting the lengths, enter a leading zero for single-digit numbers.

Scan one of the following barcodes to select a length option:

- One Discrete Length - Decode only MSI symbols containing a selected length.
- Two Discrete Lengths - Decode only MSI symbols containing either of two lengths.
- Length Within Range - Decode MSI symbols with a specific length range.
- Any Length - Decode MSI symbols containing any number of characters within the scanner's capability.



NOTE: Due to the construction of the MSI symbology, it is possible for a scan line covering only a portion of the code to transmit as a complete scan, yielding less data than is encoded in the barcode. To prevent this, select specific lengths (MSI - One Discrete Length, Two Discrete Lengths) for MSI applications.

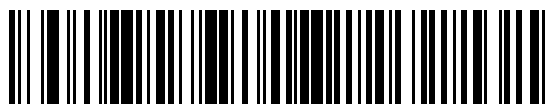
Select lengths using barcodes in Numeric Barcodes. To correct an error or change the selection, scan [Cancel](#).

For example:

- To decode only MSI symbols with 14 characters, scan MSI - One Discrete Length, and then scan 1, 4.
- To decode only MSI symbols containing either 2 or 14 characters, scan MSI - Two Discrete Lengths, and then scan 0, 2, 1, 4.
- To decode MSI symbols containing between 4 and 12 characters, scan MSI - Length Within Range, and then scan 0, 4, 1, 2.



MSI - One Discrete Length



MSI - Two Discrete Lengths



*MSI - Length Within Range (Default: Length Within Range)



MSI - Any Length

MSI Check Digits

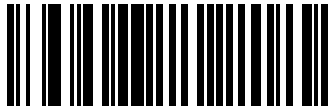
Parameter # 50 (SSI #32h)

This parameter checks the MSI check digit to verify that the data complies with the specified check digit algorithm.

With MSI symbols, one check digit is mandatory and always verified by the reader. The second check digit is optional. If the MSI codes include two check digits, select the Two MSI Check Digits option to enable verification of the second check digit.

- 0 - Does not check the MSI check digit; decodes MSI with no check digit.
- 1 - This is for MSI barcodes with one check digit. This is the default.
- 2 - This is for MSI barcodes with two check digits.

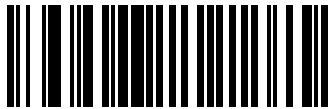
[MSI Check Digit Algorithm](#) to select second digit algorithms.



No MSI Check Digit (0)



*One MSI Check Digits (1)



Two MSI Check Digit (2)

Transmit MSI Check Digit(s)

Parameter # 46 (SSI #2Eh)

This parameter transmits MSI data with or without the check digit.

- Enabled - transmits MSI data with check digit.
- *Disabled - does not transmit MSI data check digit.



Transmit MSI Check Digit(s) (Enable) (1)



*Do Not Transmit MSI Check Digit(s) (Disable) (0)

MSI Check Digit Algorithm

Parameter # 51 (SSI #33h)

This parameter selects the algorithm used to encode the check digit.

Two algorithms are available for verifying the second MSI check digit. Select one of the following options to select the algorithm used to encode the check digit.



MOD 11/MOD 10 (0)



*MOD 10/MOD 10 (1)

MSI Reduced Quiet Zone

Parameter # 1392 (SSI #F8h 05h 70h)

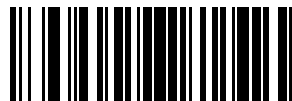
This parameter enables or disables decoding MSI with reduced quiet zones (the margins on either side of the barcode).

If you select Enable, select a [1D Quiet Zone Level](#).

- *Disabled - disables MSI with reduced Quiet Zones.
- Enabled - enables MSI with reduced Quiet Zones.



*Disable MSI Reduced Quiet Zone (0)



Enable MSI Reduced Quiet Zone (1)

Chinese 2 of 5

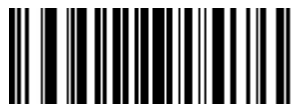
Parameter # 408 (SSI #98h)

This parameter enables or disables the scanner to decode Chinese 2 of 5.

- Enabled - enables Chinese 2 of 5.
- *Disabled - disables Chinese 2 of 5.



Enable Chinese 2 of 5 (1)



*Disable Chinese 2 of 5 (0)

Matrix 2 of 5

Parameter # 618 (SSI #F1h 6Ah)

This parameter enables or disables the scanner to decode Matrix 2 of 5 barcodes.

- Enabled - enables Matrix 2 of 5.
- *Disabled - disables Matrix 2 of 5.



Enable Matrix 2 of 5 (1)



*Disable Matrix 2 of 5 (0)

Set Lengths for Matrix 2 of 5

L1 Parameter # 619 (SSI #F1h 6Bh)

L2 Parameter # 620 (SSI #F1h 6Ch)

This parameter sets the lengths for Matrix 2 of 5.

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

The options are:

- Any length
- One or Two discrete lengths
- Lengths within a specific range

The default behavior is Length Within Range with a default value of 0 to 80.



NOTE: When setting the lengths, enter a leading zero for single-digit numbers.

Scan one of the following barcodes to select a length option:

- One Discrete Length - Decode only Matrix 2 of 5 symbols containing a selected length.
- Two Discrete Lengths - Decode only Matrix 2 of 5 symbols containing either of two lengths.
- Length Within Range - Decode Matrix 2 of 5 symbols with a specific length range.

- Any Length - Decode Matrix 2 of 5 symbols containing any number of characters within the scanner's capability.

Select lengths using barcodes in [Numeric Barcodes](#). To correct an error or change the selection, scan [Cancel](#).

For example:

- To decode only Matrix 2 of 5 symbols with 14 characters, scan Matrix 2 of 5 - One Discrete Length, and then scan 1, 4.
- To decode only Matrix 2 of 5 symbols containing either 2 or 14 characters, scan Matrix 2 of 5 - Two Discrete Lengths, and then scan 0, 2, 1, 4.
- To decode Matrix 2 of 5 symbols containing between 4 and 12 characters, scan Matrix 2 of 5 - Length Within Range, and then scan 0, 4, 1, 2.



Matrix 2 of 5 - One Discrete Length



Matrix 2 of 5 - Two Discrete Lengths



*Matrix 2 of 5 - Length Within Range
(Default:Length Within Range)



Matrix 2 of 5 - Any Length

Matrix 2 of 5 Check Digit

Parameter # 622 (SSI #F1h 6Eh)

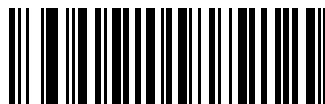
This parameter determines whether to include the Matrix 2 of 5 check digit with the barcode data.

The check digit is the last character of the symbol used to verify the integrity of the data.

- Enabled - enables Matrix 2 of 5 Check Digit.
- *Disabled - disables Matrix 2 of 5 Check Digit.



Enable Matrix 2 of 5 Check Digit (1)



*Disable Matrix 2 of 5 Check Digit (0)

Transmit Matrix 2 of 5 Check Digit

Parameter # 623 (SSI #F1h 6Fh)

This parameter transmits Matrix 2 of 5 data with or without the check digit.

- Transmit - enables Transmit Matrix 2 of 5 Check Digit.
- *Do Not Transmit - does not Transmit Matrix 2 of 5 Check Digit.



Transmit Matrix 2 of 5 Check Digit (1)



*Do Not Transmit Matrix 2 of 5 Check Digit (0)

Korean 3 of 5

Parameter # 581 (SSI #F1h 45h)

This parameter enables or disables to decode Korean 3 of 5 barcodes.

- Enabled - enables decoding Korean 3 of 5 barcodes.
- *Disabled - disables decoding Korean 3 of 5 barcodes.



NOTE: The length for Korean 3 of 5 is fixed at 6.



Enable Korean 3 of 5 (1)



*Disable Korean 3 of 5 (0)

Inverse 1D

Parameter # 586 (SSI #F1h 4Ah)

This parameter configures the 1D inverse decoder setting.

- Regular Only - The scanner decodes regular 1D barcodes only.
- Inverse Only - The scanner decodes inverse 1D barcodes only.
- Inverse Autodetect - The scanner decodes both regular and inverse 1D barcodes.



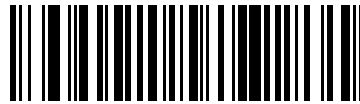
NOTE: This parameter does not apply to GS1 DataBarcode types.



NOTE: The Inverse 1D setting may impact Composite or Inverse Composite decoding.



*Regular Only (0)



Inverse Only (1)



Inverse Autodetect (2)

GS1 DataBar

The variants of GS1 DataBar are DataBar Omnidirectional, DataBar Limited, and DataBar Expanded. The limited and expanded versions have stacked variants. Choose to enable or disable each variant of the GS1 DataBar.

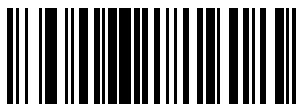
GS1 DataBar Omnidirectional (formerly GS1 DataBar-14)

The variants of GS1 DataBar are DataBar Omnidirectional, DataBar Limited, and DataBar Expanded. The limited and expanded versions have stacked variants. Scan the appropriate barcodes to enable or disable each variant of GS1 DataBar.

Parameter # 338 (SSI #F0h 52h)

This parameter enables or disables the scanner to decode GS1 DataBar Omnidirectional barcodes.

- *Enabled - enables GS1 DataBar Omnidirectional decoding.
- Disabled - disables GS1 DataBar Omnidirectional decoding.



*Enable GS1 DataBar Omnidirectional (1)



Disable GS1 DataBar Omnidirectional (0)

GS1 DataBar Limited

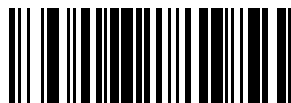
Parameter # 339 (SSI #F0h 53h)

This parameter enables or disables the scanner to decode GS1 DataBar Limited barcodes.

- *Enabled - enables GS1 DataBar Limited decoding.
- Disabled - disables GS1 DataBar Limited decoding.



*Enable GS1 DataBar Limited (1)



Disable GS1 DataBar Limited (0)

GS1 DataBar Expanded

Parameter # 340 (SSI #F0h 54h)

This parameter enables or disables the scanner to decode GS1 DataBar Expanded barcodes.

- *Enabled - enables GS1 DataBar Expanded decoding.
- Disabled - disables GS1 DataBar Expanded decoding.



*Enable GS1 DataBar Expanded (1)



Disable GS1 DataBar Expanded (0)

Convert GS1 DataBar to UPC/EAN/JAN

Parameter # 397 (SSI #F0h, 8Dh)

This parameter enables or disables the scanner to decode Convert GS1 DataBar to UPC/EAN/JAN.

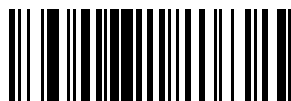
- Enabled - Converts GS1 DataBar to UPC/EAN/JAN.
- *Disabled - Does not convert GS1 DataBar to UPC/EAN/JAN.

This parameter only applies to GS1 DataBar Omnidirectional and GS1 DataBar Limited symbols not decoded as part of a Composite symbol. Enable Convert GS1 DataBar to UPC/EAN/JAN strips the leading '010' from DataBar Omnidirectional and DataBar Limited symbols encoding a single zero as the first digit, and then reports as EAN-13.

For barcodes beginning with two to five zeros, this strips the leading '0100' and reports the barcode as UPC-A. The [UPC-A Preamble](#) option that transmits the system character and country code applies to converted barcodes. Note that neither the system character nor the check digit can be stripped.



Enable Convert GS1 DataBar to UPC/EAN/JAN
(1)



*Disable Convert GS1 DataBar to UPC/EAN/JAN
(0)

GS1 DataBar Security Level

Parameter # 1706 (SSI #F8h 06h AAh)

This parameter sets the security level for GS1 DataBar.

The scanner offers four levels of decode security for GS1 DataBar (GS1 DataBar Omnidirectional, GS1 DataBar Limited, GS1 DataBar Expanded) barcodes.

- Security Level 0 - The scanner operates in its most aggressive state, while providing sufficient security decoding most in-spec barcodes.
- *Security Level 1 - This setting eliminates most misdecodes while maintaining reasonable aggressiveness.
- Security Level 2 - Select this option with greater barcode security requirements if Security Level 1 fails to eliminate misdecodes.
- Security Level 3 - If you selected Security Level 2 and misdecodes still occur, select this security level to apply the highest safety requirements.



GS1 DataBar Security Level 0 (0)



*GS1 DataBar Security Level 1 (1)



GS1 DataBar Security Level 2 (2)



GS1 DataBar Security Level 3 (3)

GS1 DataBar Limited Margin Check

Parameter # 728 (SSI #F1h D8h)

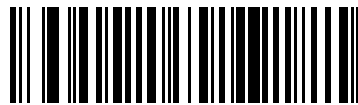
This parameter sets the margin level for GS1 DataBar.

The scanner offers four levels of decode security for GS1 DataBar Limited barcodes. There is an inverse relationship between the level of margin check and scanner aggressiveness. Increasing the level of margin check can reduce scanning aggressiveness, so select only the level of margin check necessary.

- Margin Check Level 1 – No clear margin required. This complies with the original GS1 standard, yet can result in erroneous decoding of a DataBar Limited barcode when scanning some UPC symbols that start with digits 9 and 7.
- Margin Check Level 2 – Automatic risk detection. This level of margin check can result in erroneous decoding of DataBar Limited barcodes when scanning some UPC symbols. If a misdecode is detected, the scanner operates in Level 3 or Level 1.
- *Margin Check Level 3 – Margin check level reflects the newly proposed GS1 standard that requires a five times trailing clear margin.
- Margin Check Level 4 – Margin check level extends beyond the standard required by GS1. This level of margin check requires a five times leading and trailing clear margin.



GS1 DataBar Limited Margin Check Level 1 (1)



GS1 DataBar Limited Margin Check Level 2 (2)



*GS1 DataBar Limited Margin Check Level 3 (3)



GS1 DataBar Limited Margin Check Level 4 (4)

Symbology-Specific Security Features

These security features are unique to the Symbology section.

Redundancy Level

Parameter # 78 (SSI #4Eh)

This parameter sets the redundancy level appropriate to the barcode quality.

Select higher redundancy levels for decreasing levels of barcode quality. As redundancy levels increase, the scanner's aggressiveness decreases.

- *Redundancy Level 1 - The scanner must read the following code types twice before decoding:
 - Codabar (8 characters or less)
 - MSI (4 characters or less)
 - D 2 of 5 (8 characters or less)
 - I 2 of 5 (8 characters or less)
- Redundancy Level 2 - The scanner must read all code types twice before decoding.
- Redundancy Level 3 - The scanner reads all code types twice before decoding. The following are read three times before decoding:
 - Codabar (8 characters or less)
 - MSI (4 characters or less)
 - D 2 of 5 (8 characters or less)
 - I 2 of 5 (8 characters or less)
- Redundancy Level 4 - The scanner must read all code types three times before decoding.



*Redundancy Level 1 (1)



Redundancy Level 2 (2)



Redundancy Level 3 (3)



Redundancy Level 4 (4)

Security Level

Parameter # 77 (SSI #4Dh)

This parameter sets the security level.

The scanner offers four levels of decode security, which include the Code 128 family, UPC/EAN/JAN, and Code 93. Select increasing levels of security for decreasing levels of scanning quality. There is an inverse relationship between security and scanner aggressiveness, so choose the security level necessary for the application.

- Security Level 0 - The scanner operates in its most aggressive state, while providing sufficient security decoding most in-spec barcodes.
- Security Level 1 - This default setting eliminates most mis-decodes.
- Security Level 2 - Select this option if Security Level 1 fails to eliminate mis-decodes.
- Security Level 3 - Select this security level if Security Level 2 fails to eliminate mis-decodes.



NOTE: Selecting this option is an extreme measure against mis-decoding severely out-of-spec barcodes, and significantly reduces the decoding ability of the scanner. If this level of security is required, consider improving the quality of the barcodes.



Security Level 0 (0)



*Security Level 1 (1)



Security Level 2 (2)



Security Level 3 (3)

1D Quiet Zone Level

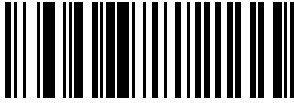
Parameter # 1288 (SSI #F8h 05h 08h)

This parameter sets the level of aggressiveness when setting a reduced quiet zone (the margin on either side of a barcode), and applies to symbologies enabled by a Reduced Quiet Zone parameter.

Because higher levels increase the decoding time and risk of mis-decodes, Zebra strongly recommends enabling only the symbologies which require higher quiet zone levels, and leaving Reduced Quiet Zone disabled for all other symbologies. Options are:

- 1D Quiet Zone Level 0 - The scanner performs normally in terms of quiet zone.

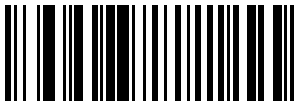
- *1D Quiet Zone Level 1 - The scanner performs more aggressively in terms of quiet zone.
- 1D Quiet Zone Level 2 - The scanner only requires a quiet zone at the end of barcode for decoding.
- 1D Quiet Zone Level 3 - The scanner decodes anything in terms of quiet zone or end of barcode.



1D Quiet Zone Level 0 (0)



*1D Quiet Zone Level 1 (1)



1D Quiet Zone Level 2 (2)



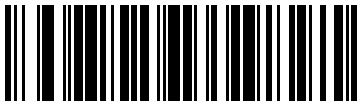
1D Quiet Zone Level 3 (3)

Intercharacter Gap Size

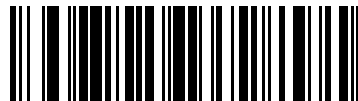
Parameter # 381 (SSI #F0h 7Dh)

This parameter enables a device to tolerate large intercharacter gap sizes.

The Code 39 and Codabar symbologies typically contain small intercharacter gaps. Due to various barcode printing technologies, these gaps can sometimes exceed the maximum allowed size, preventing the scanner from decoding the symbol. If there is a decoding issues, scan the Large Intercharacter Gaps parameter to enable the scanner to tolerate these out-of-specification barcodes.



*Normal Intercharacter Gaps (6)



Large Intercharacter Gaps (10)

Random Weight Check Digits

The following sections allow you to select an appropriate random weight check option.

Composite

Composites link symbols or barcodes together and they are read by a scanner as one object.

Composite CC-C

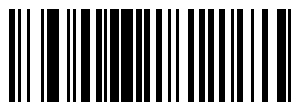
Parameter # 341 (SSI #F0h 55h)

This parameter enables or disables the scanner to decode Composite barcodes of type CC-C.

- Enabled - enables CC-C.
- Disabled - disables CC-C.



Enable CC-C (1)



*Disable CC-C (0)

Composite CC-A/B

Parameter # 342 (SSI #F0h 56h)

This parameter enables or disables the scanner to decode CC-A/B.

- Enabled - enables CC-A/B.
- *Disabled - disables CC-A/B.



Enable CC-A/B (1)



*Disable CC-A/B (0)

Composite TLC-39

Parameter # 371 (SSI #F0h 73h)

This parameter enables or disables the scanner to decode TLC-39 barcodes.

- Enabled - enables TLC-39.
- *Disabled - disables TLC-39.



Enable TLC39 (1)



*Disable TLC39 (0)

Composite Inverse

Parameter # 1113 (SSI #F8h 04h 59h)

This parameter sets Composite for either regular decode or inverse decode.

- *Regular Only - The scanner decodes regular Composite barcodes only. Before selecting this, set [Inverse 1D](#) to Regular Only or Inverse Autodetect.
- Inverse Only - The scanner decodes inverse Composite barcodes only. This mode only supports Composite Inverse that includes DataBar combined with CCAB, and does not support other 1D/2D combinations. Before selecting this, first enable [Composite CC-A/B](#), and set [Inverse 1D](#) to Inverse Only or Inverse Autodetect.



*Regular Only (0)



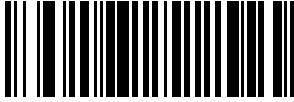
Inverse Only (1)

UPC Composite Mode

Parameter # 344 (SSI #F0h 58h)

This parameter links UPC symbols with a 2D symbol during transmission, treating them as a single symbol.

- *UPC Never Linked - Transmit UPC barcodes regardless of whether a 2D symbol is detected.
- UPC Always Linked - Transmit UPC barcodes along with the 2D portion. If 2D is not present, the scanner does not transmit the barcode.
- Autodiscriminate UPC Composites - The scanner checks for a 2D portion, then transmits both the UPC and 2D portion if present.



*UPC Never Linked (0)



UPC Always Linked (1)



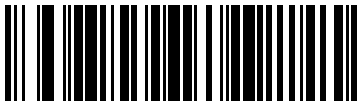
Autodiscriminate UPC Composites (2)

Composite Beep Mode

Parameter # 398 (SSI #F0h 8Eh)

This parameter selects the number of decode beeps emitted when a composite symbol is decoded.

- Single Beep - Sounds one beep after decoding both codes.
- *Beep for each code type - Sounds one beep as the scanner decoded each code type.
- Double Beep - Sounds two beeps after decoding both codes.



Single Beep After Both are Decoded (0)



*Beep as Each Code Type is Decoded (1)



Double Beep After Both are Decoded (2)

GS1-128 Emulation Mode for UCC/EAN Composite Codes

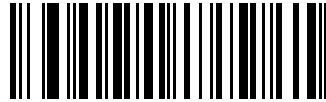
Parameter # 427 (SSI #F0h ABh)

This parameter enables or disables GS1-128 Emulation Mode for UCC/EAN Composite Codes.

- Enabled - enables GS1-128 Emulation Mode for UCC/EAN Composite Codes.
- *Disabled - disables GS1-128 Emulation Mode for UCC/EAN Composite Codes.



Enable GS1-128 Emulation Mode for UCC/EAN
Composite Codes (1)



*Disable GS1-128 Emulation Mode for UCC/EAN
Composite Codes (0)

2D Symbologies

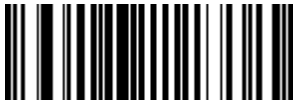
The following parameters are specific to 2D Symbologies.

PDF417

Parameter # 15 (SSI 0Fh)

This parameter enables or disables the scanner to decode PDF417 barcodes.

- *Enabled - enables PDF417 decoding.
- Disabled - disables PDF417 decoding.



*Enable PDF417 (1)



Disable PDF417 (0)

MicroPDF417

Parameter # 227 (SSI #E3h)

This parameter enables or disables the scanner to decode MicroPDF417 decoding.

- Enabled - enables MicroPDF417 decoding.
- *Disabled - disables MicroPDF417 decoding.



Enable MicroPDF417 (1)



*Disable MicroPDF417 (0)

Code 128 Emulation

Parameter # 123 (SSI #7Bh)

This parameter transmits data from certain MicroPDF417 symbols as Code 128.

You must enable [AIM Code Characters](#) for this parameter to work.

Enable Code 128 Emulation to transmit these MicroPDF417 symbols with one of the following prefixes:

]C1 if the first codeword is 903-905

]C2 if the first codeword is 908 or 909

]C0 if the first codeword is 910 or 911

Disable Code 128 Emulation to transmit these MicroPDF417 symbols with one of the following prefixes:

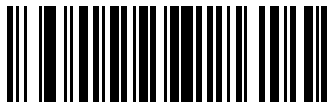
]L3 if the first codeword is 903-905

]L4 if the first codeword is 908 or 909

]L5 if the first codeword is 910 or 911



NOTE: Linked MicroPDF codewords 906, 907, 912, 914, and 915 are not supported. Use GS1 Composites instead.



Enable Code 128 Emulation (1)



*Disable Code 128 Emulation (0)

Data Matrix

Parameter # 292 (SSI #F0h 24h)

This parameter enables or disables the scanner to decode Data Matrix barcodes.

- *Enabled - enables Data Matrix decoding.
- Disabled - disables Data Matrix decoding.



*Enable Data Matrix (1)



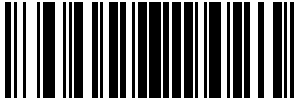
Disable Data Matrix (0)

GS1 Data Matrix

Parameter # 1336 (SSI #F8h 05h 38h)

This parameter enables or disables the scanner to decode GS1 Data Matrix.

- Enabled - enables GS1 Data Matrix.
- *Disabled - disables GS1 Data Matrix.



Enable GS1 Data Matrix (1)



*Disable GS1 Data Matrix (0)

Data Matrix Inverse

Parameter # 588 (SSI #F1h 4Ch)

This parameter configures the scanner's ability to decode inverse Data Matrix barcodes.

- Regular Only - The scanner decodes regular Data Matrix barcodes only.
- Inverse Only - The scanner decodes inverse Data Matrix barcodes only.
- *Inverse Autodetect - The scanner decodes both regular and inverse Data Matrix barcodes.



Regular Only (0)



Inverse Only (1)



*Inverse Autodetect (2)

Maxicode

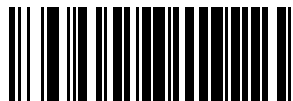
Parameter # 294 (SSI #F0h 26h)

This parameter enables or disables the scanner to decode Maxicode.

- Enabled - enables Maxicode.
- *Disabled - disables Maxicode.



Enable Maxicode (1)



*Disable Maxicode (0)

QR Code

Parameter # 293 (SSI #F0h 25h)

This parameter enables or disables the scanner to decode QR Code barcodes.

- *Enabled - enables QR Code decoding.
- Disabled - disables QR Code decoding.



NOTE: Enabling this parameter also enables QR Mirrored and Linked QR.



*Enable QR Code (1)



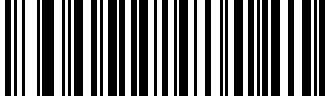
Disable QR Code (0)

GS1 QR

Parameter # 1343 (SSI #F8h 05h 3Fh)

This parameter enables or disables the scanner to decode GS1 QR barcodes.

- Enabled - enables GS1 QR decoding.
- *Disabled - disables GS1 QR decoding.



Enable GS1 QR (1)



*Disable GS1 QR (0)

MicroQR

Parameter # 573 (SSI #F1h 3Dh)

This parameter enables or disables the scanner to decode MicroQR barcodes.

- *Enabled - enables MicroQR decoding.
- Disabled - disables MicroQR decoding.



*Enable MicroQR (1)



Disable MicroQR (0)

Linked QR Mode

Parameter # 1847 (SSI #737h)

Linked QR mode can be used to split data across several QR codes.



NOTE: Linked QR mode is not available

- *Linked QR Only - The scanner does not decode individual QR symbols from a set of linked QR codes.
- Individual QR With Headers - The scanner decodes individual QR symbols from a set of linked QR codes and retains the header information and data.

- Individual QR No Headers - The scanner decodes individual QR symbols from a set of linked QR codes and transmits the data without header information.



*Linked QR Only (0)



Individual QR With Headers (1)



Individual QR No Headers (2)

Aztec

Parameter # 574 (SSI #F1h 3Eh)

This parameter enables or disables the scanner to decode Aztec barcodes.

- *Enabled - enables Aztec decoding.
- *Disabled - disables Aztec decoding.



NOTE: Enabling this parameter also enables Linked Aztec.



*Enable Aztec (1)



*Disable Aztec (0)

Aztec Inverse

Parameter # 589 (SSI #F1h 4Dh)

This parameter configures the Aztec inverse decoder setting.

- Regular Only - The scanner decodes regular Aztec barcodes only.
- Inverse Only - The scanner decodes inverse Aztec barcodes only.
- *Inverse Autodetect - The scanner decodes both regular and inverse Aztec barcodes.



Regular Only (0)



Inverse Only (1)



*Inverse Autodetect (2)

Han Xin

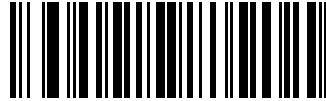
Parameter # 1167 (SSI #F8h 04h 8Fh)

This parameter enables or disables the scanner to decode Han Xin.

- Enabled - enables Han Xin.
- *Disabled - disables Han Xin.



Enable Han Xin (1)



*Disable Han Xin (0)

Han Xin Inverse

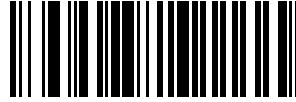
Parameter # 1168 (SSI #F8h 04h 90h)

This parameter selects a Han Xin inverse decoder setting.

- *Regular Only - The scanner decodes Han Xin barcodes with normal reflectance only.
- Inverse Only - The scanner decodes Han Xin barcodes with inverse reflectance only.
- Inverse Autodetect - The scanner decodes both regular and inverse Han Xin barcodes.



*Regular Only (0)



Inverse Only (1)



Inverse Autodetect (2)

Grid Matrix

Parameter # 1718 (SSI #F8 06h B6h)

This parameter enables or disables the scanner to decode Grid Matrix barcodes.

- Enabled - enables Grid Matrix.
- *Disabled - disables Grid Matrix.



Enable Grid Matrix (1)



*Disable Grid Matrix (0)

Grid Matrix Inverse

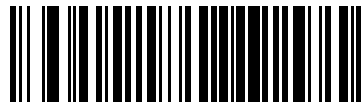
Parameter # 1719 (SSI #F8h 06h B7h)

This parameter selects a Grid Matrix inverse decoder setting.

- *Regular Only - the imager decodes Grid Matrix barcodes with normal reflectance only.
- Inverse Only - the imager decodes Grid Matrix barcodes with inverse reflectance only.
- Inverse Autodetect - the imager decodes both regular and inverse Grid Matrix barcodes.



*Regular (0)



Inverse Only (1)



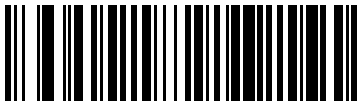
Inverse Autodetect (2)

Grid Matrix Mirrored

Parameter # 1736 (SSI #F8h 06h C8h)

This parameter selects a mirror image Grid Matrix setting.

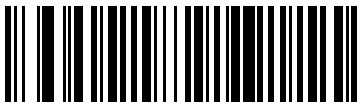
- *Never Mirror - the imager decodes non-mirrored Grid Matrix barcodes only.
- Always Mirrored - the imager decodes mirrored Grid Matrix barcodes only.
- Autodetect - the imager decodes both mirrored and non-mirrored Grid Matrix barcodes.



*Never Mirrored Only (0)



Always Mirrored Only (1)



Mirrored Autodetect (2)

DotCode

Parameter # 1906 (SSI #F8 07 72h)

You can enable or disable DotCode.

- Enabled - enables DotCode.
- *Disabled - disables DotCode.



*Disable DotCode (0)



Enable Dotcode (1)

DotCode Prioritize

Parameter # 1937 (SSI #F8 07 91h)

This parameter enables or disables giving priority to DotCode decoding versus other symbologies.

- *Disabled - disables DotCode as a priority.
- Enabled - enables DotCode as a priority.



*Disable DotCode Prioritize (0)



Enable DotCode Prioritize (1)

DotCode Inverse

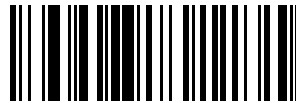
Parameter # 1907 (SSI #F8 07 73h)

This parameter selects the DotCode Inverse decoder setting.

- Regular Only - the device decodes DotCode Inverse codes with normal reflectance only.
- Inverse Only - the device decodes DotCode Inverse codes with inverse reflectance only.
- Inverse Autodetect - the device decodes DotCode Inverse codes with both normal and inverse reflectance.



Regular (0)



Inverse Only (1)



*Inverse Autodetect (2)

DotCode Mirrored

Parameter # 1908 (SSI #F8 07 74h)

This parameter sets a DotCode Mirror decoder setting.

- Never - decodes non-mirrored DotCode codes only.

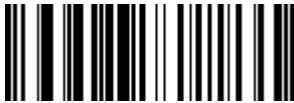
- Always - decodes mirrored DotCode codes only.
- *Autodetect - decodes both mirrored and non-mirrored DotCode codes.



Never (0)



Always (1)



*Autodetect (2)

DotCode Erasure Limit

Parameter # 2063 (SSI # F8 08 0F)

This parameter sets the maximum number of erasures in DotCode codewords before passing the codewords for error correction.

The value range is from 4 to 20. The default value is 10. A higher value means that DotCode barcodes are easier to decode, but increases the chance of a decode error.

To set a DotCode Erasure Limit value, scan the following barcode, and then scan two barcodes from [Numeric Barcodes](#) that correspond to the desired value. Enter a leading zero for single digit numbers. For example, to set an erasure value of 4, scan this barcode, and then scan the 0 and 4 barcodes. To correct an error or change the selection, scan Cancel.



DotCode Erasure Limit

Macro PDF Features

Macro PDF is a special feature for combining multiple PDF symbols into one file. The scanner can decode symbols encoded with this feature, and can store more than 64 Kb of decoded data from up to 50 MacroPDF symbols.

When printing, keep each Macro PDF sequence separate, as each sequence has unique identifiers. Do not mix barcodes from several Macro PDF sequences, even if they encode the same data. When scanning a Macro PDF sequence, scan the entire sequence without interruption. When scanning a mixed sequence, two long low beeps (low/low) indicate an inconsistent file ID or inconsistent symbology error.

Macro PDF User Indications

In this mode the scanner provides the following feedback.



NOTE: The beep only sounds if the *BEEPER_ON signal is connected.



NOTE: The T columns indicate whether the symbol transmitted to the host (N = No transmission).

User Scans	Passthrough All Symbols		Transmit Any Symbol in Set		Buffer All Symbols	
	Beep	T	Beep	T	Beep	T
Last Macro PDF in set	Decode beep	Y	Decode beep	Y	Decode beep	Y
Any Macro PDF in set except last	Decode beep	Y	Decode beep	Y	2 short low	N
Macro PDF is not in current set	Decode beep	Y	2 long low	N	2 long low	N
Invalid Macro PDF formatting	Decode beep	Y	2 long low	N	2 long low	N
Macro PDF from set was already scanned	Decode beep	Y	4 long low	N	4 long low	N
Out of Macro PDF memory	N/A	N/A	3 long low	N	3 long low	N
A non-Macro PDF scanned during a set	N/A	N/A	4 long low	N	4 long low	N
Flush Macro PDF	Low high	N	5 long low	N	5 long low	Y
Abort Macro PDF	High low high low	N	High low high low	N	High low high low	N

Flush Macro PDF Buffer

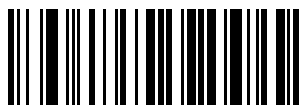
This parameter flushes the buffer of all decoded Macro PDF data stored to that point, transmits it to the host device, and aborts from Macro PDF mode.



Flush Macro PDF Buffer

Abort Macro PDF Entry

This parameter clears all currently-stored Macro PDF data in the buffer without transmission and aborts from Macro PDF mode.



Abort Macro PDF Entry

Country Code Pages

This section provides barcodes for selecting code pages for the country keyboard type selected in Country Codes.

If the default code page in [Country Code Pages](#) is appropriate for your selected country keyboard type, you do not need to scan a country code page barcode.



NOTE: ADF rules can also specify a code page based on the symbology and other ADF criteria. Refer to the Advanced Data Formatting Programmer Guide.

Country Code Page Defaults

The table in this section lists the code page default for each country keyboard.

Table 5 Country Code Page Defaults

Country Keyboard	Code Page Default
US English (North American)	Windows 1252
US English (Mac)	Mac CP10000
Albanian	Windows 1250
Arabic 101	Windows 1256
Arabic 102	Windows 1256
Arabic 102 AZERTY	Windows 1256
Azeri Latin	Windows 1254
Azeri Cyrillic	Windows 1251
Belarusian	Windows 1251
Bosnian Latin	Windows 1250
Bosnian Cyrillic	Windows 1251
Bulgarian Latin	Windows 1250
Bulgarian Cyrillic	Windows 1251
Canadian French Win7	Windows 1252
Canadian French (Legacy)	Windows 1252
Canadian Multilingual	Windows 1252

Table 5 Country Code Page Defaults (Continued)

Country Keyboard	Code Page Default
Croatian	Windows 1250
Chinese ASCII	Windows 1252
Chinese (Simplified)	Windows 936, GBK
Chinese (Traditional)	Windows 950, Big5
Czech	Windows 1250
Czech Programmers	Windows 1250
Czech QWERTY	Windows 1250
Danish	Windows 1252
Dutch Netherland	Windows 1252
Estonian	Windows 1257
Faeroese	Windows 1252
Finnish	Windows 1252
French (France)	Windows 1252
French International (Belgian French)	Windows 1252
Galician	Windows 1252
German	Windows 1252
Greek Latin	Windows 1252
Greek220 Latin	Windows 1253
Greek319 Latin	Windows 1252
Greek	Windows 1253
Greek220	Windows 1253
Greek319	Windows 1253
Greek Polytonic	Windows 1253
Hebrew Israel	Windows 1255
Hungarian	Windows 1250
Hungarian_101KEY	Windows 1250
Icelandic	Windows 1252
Irish	Windows 1252
Italian	Windows 1252
Italian_142	Windows 1252
Japanese ASCII	Windows 1252
Japanese (Shift-JIS)	Windows 932, Shift-JIS
Kazakh	Windows 1251

Table 5 Country Code Page Defaults (Continued)

Country Keyboard	Code Page Default
Korean ASCII	Windows 1252
Korean (Hangul)	Windows 949, Hangul
Kyrgyz Cyrillic	Windows 1251
Latin America	Windows 1252
Latvian	Windows 1257
Latvian QWERTY	Windows 1257
Lithuanian	Windows 1257
Lithuanian_IBM	Windows 1257
Macedonian -FYROM	Windows 1251
Maltese_47KEY	Windows 1252
Mongolian-Cyrillic	Windows 1251
Norwegian	Windows 1252
Polish_214	Windows 1250
Polish Programmer	Windows 1250
Portuguese Portugal	Windows 1252
Russian	Windows 1251
Russian Typewriter	Windows 1251
Serbian Latin	Windows 1250
Serbian Cyrillic	Windows 1251
Slovak	Windows 1250
Slovak QWERTY	Windows 1250
Slovenian	Windows 1250
Spanish	Windows 1252
Spanish Variation	Windows 1252
Swedish	Windows 1252
Swiss French	Windows 1252
Swiss German	Windows 1252
Tatar	Windows 1251
Thai-Kedmanee	Windows 874
Turkish F	Windows 1254
Turkish Q	Windows 1254
Ukrainian	Windows 1251
United Kingdom	Windows 1252

Table 5 Country Code Page Defaults (Continued)

Country Keyboard	Code Page Default
United States	Windows 1252
US Dvorak	Windows 1252
US Dvorak Left Hand	Windows 1252
US Dvorak Right Hand	Windows 1252
US International	Windows 1252
Uzbek Cyrillic	Windows 1251
Vietnamese	Windows 1258

Country Code Page Barcodes

Parameter # 961

Scan the barcode corresponding to the country keyboard code page.



Windows 1250 Latin 2, Central European



Windows 1251 Cyrillic, Slavic



Windows 1252 Latin 1, Western European



Windows 1253 Greek

Country Code Page Barcodes (continued)



Windows 1254 Latin 5, Turkish



Windows 1255 Hebrew



Windows 1256 Arabic



Windows 1257 Baltic

Country Code Page Barcodes (continued)



Windows 1258 Vietnamese



Windows 874 Thai



Windows 20866 Cyrillic KOI8-R



Windows 932 Japanese Shift-JIS

Country Code Page Barcodes (continued)



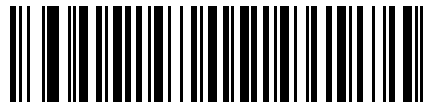
Windows 936 Simplified Chinese GBK



Windows 54936 Simplified Chinese GB18030



Windows 949 Korean Hangul



Windows 950 Traditional Chinese Big5

Country Code Page Barcodes (continued)



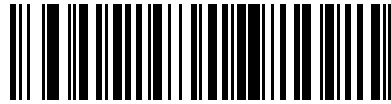
MS-DOS 437 Latin US



MS-DOS 737 Greek



MS-DOS 775 Baltic



MS-DOS 850 Latin 1

Country Code Page Barcodes (continued)



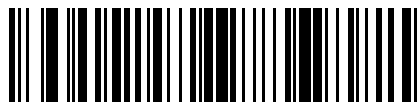
MS-DOS 852 Latin 2



MS-DOS 855 Cyrillic



MS-DOS 857 Turkish

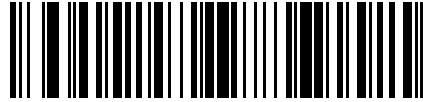


MS-DOS 860 Portuguese

Country Code Page Barcodes (continued)



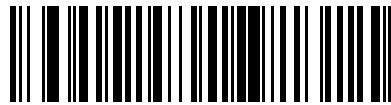
MS-DOS 861 Icelandic



MS-DOS 862 Hebrew



MS-DOS 863 French Canada



MS-DOS 865 Nordic

Country Code Page Barcodes (continued)



MS-DOS 866 Cyrillic



MS-DOS 869 Greek 2



ISO 8859-1 Latin 1, Western European



ISO 8859-2 Latin 2, Central European

Country Code Page Barcodes (continued)



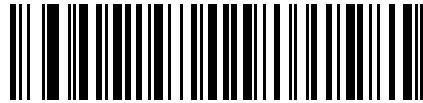
ISO 8859-3 Latin 3, South European



ISO 8859-4 Latin 4, North European



ISO 8859-5 Cyrillic

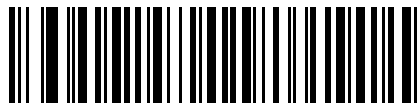


ISO 8859-6 Arabic

Country Code Page Barcodes (continued)



ISO 8859-7 Greek



ISO 8859-8 Hebrew



ISO 8859-9 Latin 5, Turkish



ISO 8859-10 Latin 6, Nordic

Country Code Page Barcodes (continued)



ISO 8859-11 Thai



ISO 8859-13 Latin 7, Baltic



ISO 8859-14 Latin 8, Celtic



ISO 8859-15 Latin 9

Country Code Page Barcodes (continued)



ISO 8859-16 Latin 10, South-Eastern European



UTF-8



UTF-16LE UTF-16 Little Endian



UTF-16BE UTF-16 Big Endian



Mac CP10000 Roman

Country Codes

This section provides instructions for programming the keyboard to interface with a USB host.

The host powers the scanner. For host setup information, go to [USB Interface](#).

To select a code page for the country keyboard type, see [Country Code Pages](#).

Scan the barcode corresponding to the keyboard type. This setting applies only to the USB Keyboard (HID) device. If the keyboard type is not listed, see [Keypad Emulation](#).



NOTE: When changing USB country keyboard types the scanner automatically resets and issues the standard startup beep sequences.

For best results when using international keyboards, enable [Quick Keypad Emulation](#).



IMPORTANT: Some country keyboard barcode types are specific to certain Windows operating systems (i.e., XP and Windows 7 or higher). Barcodes requiring a specific Windows OS are noted in the barcode captions.

Use the French International barcode for Belgian French keyboards.

Country Code Barcodes



*US English (North American)



US English (Mac)



Albanian



Arabic (101)

Country Code Barcodes (continued)



Arabic (102)



Arabic (102) AZERTY



Azeri (Latin)

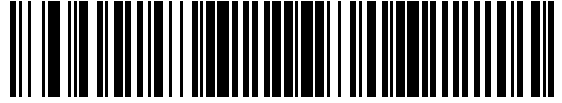


Azeri (Cyrillic)

Country Code Barcodes (continued)



Belarusian



Bosnian (Latin)



Bosnian (Cyrillic)



Bulgarian (Latin)

Country Code Barcodes (continued)



Bulgarian Cyrillic (Typewriter) (Bulgarian -
Windows XP Typewriter - Windows 7 or higher)



Canadian French Win7



Canadian French (Legacy)



Canadian Multilingual Standard

Country Code Barcodes (continued)



Chinese (ASCII)



Chinese (Simplified)*



Chinese (Traditional)*

*For CJK keyboard types, see [CJK Decode Control](#).



Croatian

Country Code Barcodes (continued)



Czech



Czech (Programmer)



Czech (QWERTY)

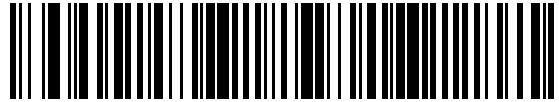


Danish

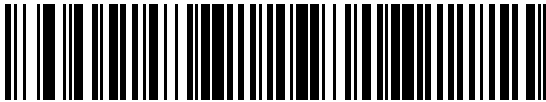
Country Code Barcodes (continued)



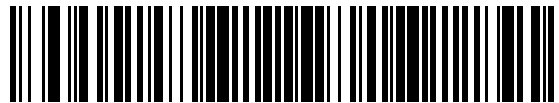
Dutch (Netherlands)



Estonian



Faeroese



Finnish

Country Code Barcodes (continued)



French (France)



French International (Belgian French)



French (Canada) 95/98



French (Canada) 2000/XP*

*Note that there is also a country code barcode for Canadian Multilingual Standard. Be sure to select the appropriate barcode for your host system.

Country Code Barcodes (continued)



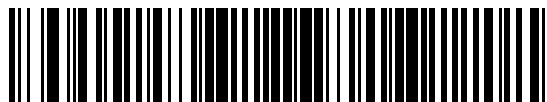
Galician



German

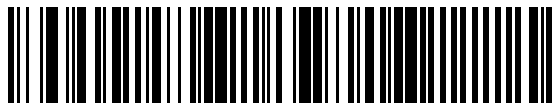


Greek Latin

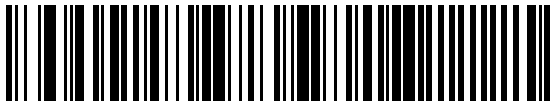


Greek (220) Latin

Country Code Barcodes (continued)



Greek (319) Latin



Greek



Greek (220)



Greek (319)

Country Code Barcodes (continued)



Greek Polytonic



Hebrew Israel



Hungarian



Hungarian_101KEY

Country Code Barcodes (continued)



Icelandic



Irish

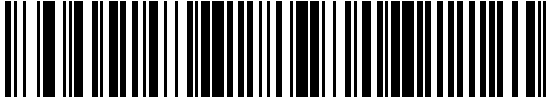


Italian

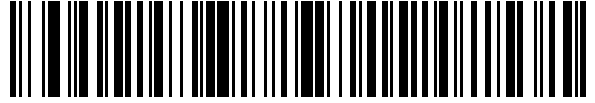


Italian (142)

Country Code Barcodes (continued)



Japanese (ASCII)



Japanese (SHIFT-JIS)*

*For CJK keyboard types, see [CJK Decode Control](#).



Kazakh



Korean (ASCII)

Country Code Barcodes (continued)



Korean (Hangul)*

*For CJK keyboard types, see [CJK Decode Control](#).



Kyrgyz



Latin American



Latvian

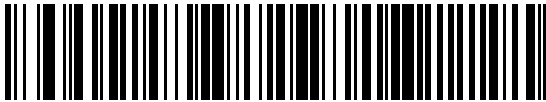
Country Code Barcodes (continued)



Latvian (QWERTY)



Lithuanian



Lithuanian (IBM)



Macedonian (FYROM)

Country Code Barcodes (continued)



Maltese_47KEY



Mongolian



Norwegian



Polish (214)

Country Code Barcodes (continued)



Polish (Programmer)



Portuguese (Brazil) (Windows XP)



Portuguese (Brazilian ABNT)



Portuguese (Brazilian ABNT2)

Country Code Barcodes (continued)



Portuguese (Portugal)



Romanian (Windows XP)



Romanian (Legacy) (Windows 7 or higher)



Romanian (Standard) (Windows 7 or higher)

Country Code Barcodes (continued)



Romanian (Programmer) (Windows 7 or higher)



Russian



Russian (Typewriter)



Serbian (Latin)

Country Code Barcodes (continued)



Serbian (Cyrillic)



Slovak

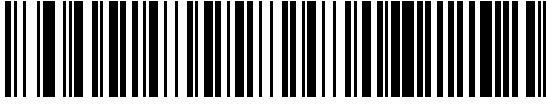


Slovak (QWERTY)



Slovenian

Country Code Barcodes (continued)



Spanish



Spanish (Variation)



Swedish



Swiss French

Country Code Barcodes (continued)



Swiss German



Tatar



Thai (Kedmanee)



Turkish F

Country Code Barcodes (continued)



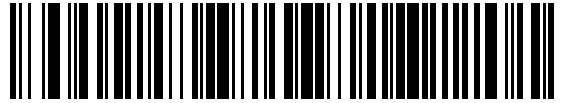
Turkish Q



UK English



Ukrainian



US Dvorak

Country Code Barcodes (continued)



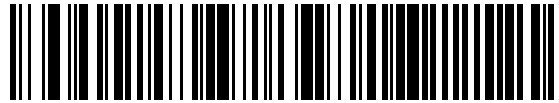
US Dvorak Left



US Dvorak Right



US International



Uzbek



Vietnamese

CJK Decode Control

This section describes control parameters for CJK (Chinese, Japanese, Korean) barcode decode through USB HID Keyboard Emulation mode.



NOTE: Because ADF does not support CJK character processing, there is no format manipulation for CJK output.

CJK Control Parameters

Unicode Output Control

Parameter # 973 (SSI # F2h CDh)

For a Unicode encoded CJK barcode, select one of the following options for Unicode output. Universal Output applies to Unicode and MBCS-expected applications, while Unicode Application Only is limited to Unicode-expected applications.

- **Universal Output to Unicode and MBCS Application:** This default method applies to Unicode and MBCS expected applications, such as MS Word and Notepad on a Windows host.



NOTE: To support Unicode universal output, set up the registry table for the Windows host. See [Unicode/CJD Decode Setup with Windows Host](#).

- **Output to Unicode Application Only** - This method applies only to Unicode expected applications, such as MS Word and WordPad, but not Notepad.



*Universal Output (0)



Unicode Application Only (1)

CJK Output Method to Windows Host

Parameter # 972

For a national standard encoded CJK barcode, select one of the following options for CJK output to a Windows host:

- **Universal CJK Output** - This is the default universal CJK output method for US English IME or Chinese/Japanese/Korean ASCII IME on a Windows host. This method converts CJK characters to Unicode and emulates the characters when transmitting to the host. Use the [Unicode Output Control](#) parameter to control Unicode output.



NOTE: To support universal CJK output, set up the registry table for the Windows host. See [Unicode/CJK Decode Setup Windows Host](#).

- **Other options for CJK output** - With the following methods, the scanner sends the CJK character hexadecimal internal code (Nei Ma) value to the host, or converts the CJK character to Unicode and sends the hexadecimal Unicode value to the host. When using these methods, the Windows host must select the corresponding IME to accept the CJK character. See [Unicode/CJK Decode Setup Windows Host](#).
- **Japanese Unicode Output**
- **Simplified Chinese GBK Code Output**
- **Simplified Chinese Unicode Output**
- **Korean Unicode Code Output**
- **Traditional Chinese Big5 Code Output** (Windows XP)
- **Traditional Chinese Big5 Code Output** (Windows 7)
- **Traditional Chinese Unicode Code Output** (Windows XP)
- **Traditional Chinese Unicode Code Output** (Windows 7)



NOTE: The Unicode emulate output method depends on the host system (Windows XP or Windows 7).



*Universal CJK Output (0)



Japanese Unicode Output (34)

CJK Output Method to Windows Host (continued)



Chinese (Simplified) GBK Output (1)



Chinese (Simplified) Unicode Output (2)



Korean Unicode Output (50)

(for Korean Unicode Output, select Simplified Chinese Unicode IME on the Windows host)



Chinese (Traditional) Big5 Output (Windows XP)
(1)

CJK Output Method to Windows Host (continued)



Chinese (Traditional) Big5 Output (Windows 7)
(19)



Chinese (Traditional) Unicode Output (Windows
XP) (18)



Chinese (Traditional) Unicode Output (Windows
7) (20)

Non-CJK UTF Barcode Output

Parameter # 960

Some country keyboard type layouts contain characters that do not exist in the default code page (see below). Although the default code page can not encode these characters in a barcode, they can be encoded in the UTF-8 barcode.

Scan the following barcode to output the Unicode values by emulation mode.



NOTE: Use this special country keyboard type to decode the non-CJK UTF-8 barcode. After decoding, re-configure the scanner to use the original country keyboard type.

Use US English IME on Windows. See [Unicode Output Control](#).



Non-CJK UTF-8 Emulation Output

Missing Characters for Country Keyboard Type: Tatar, Uzbek, Mongolian, Kyrgyz, Kazakh and Azeri

Default code page: CP1251

Missing characters:

F

X

h

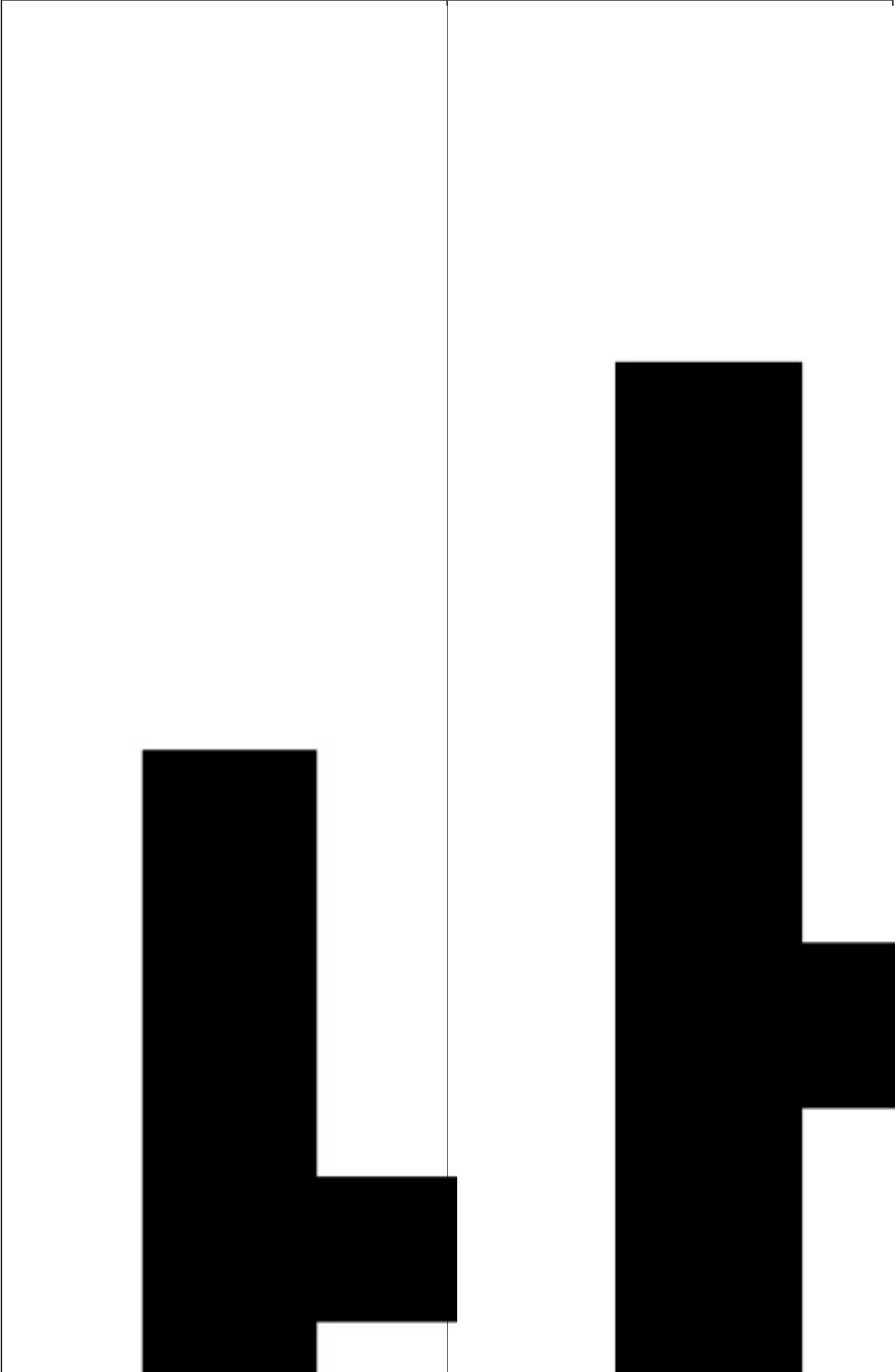


CJK Decode Control

ə	ə
---	---

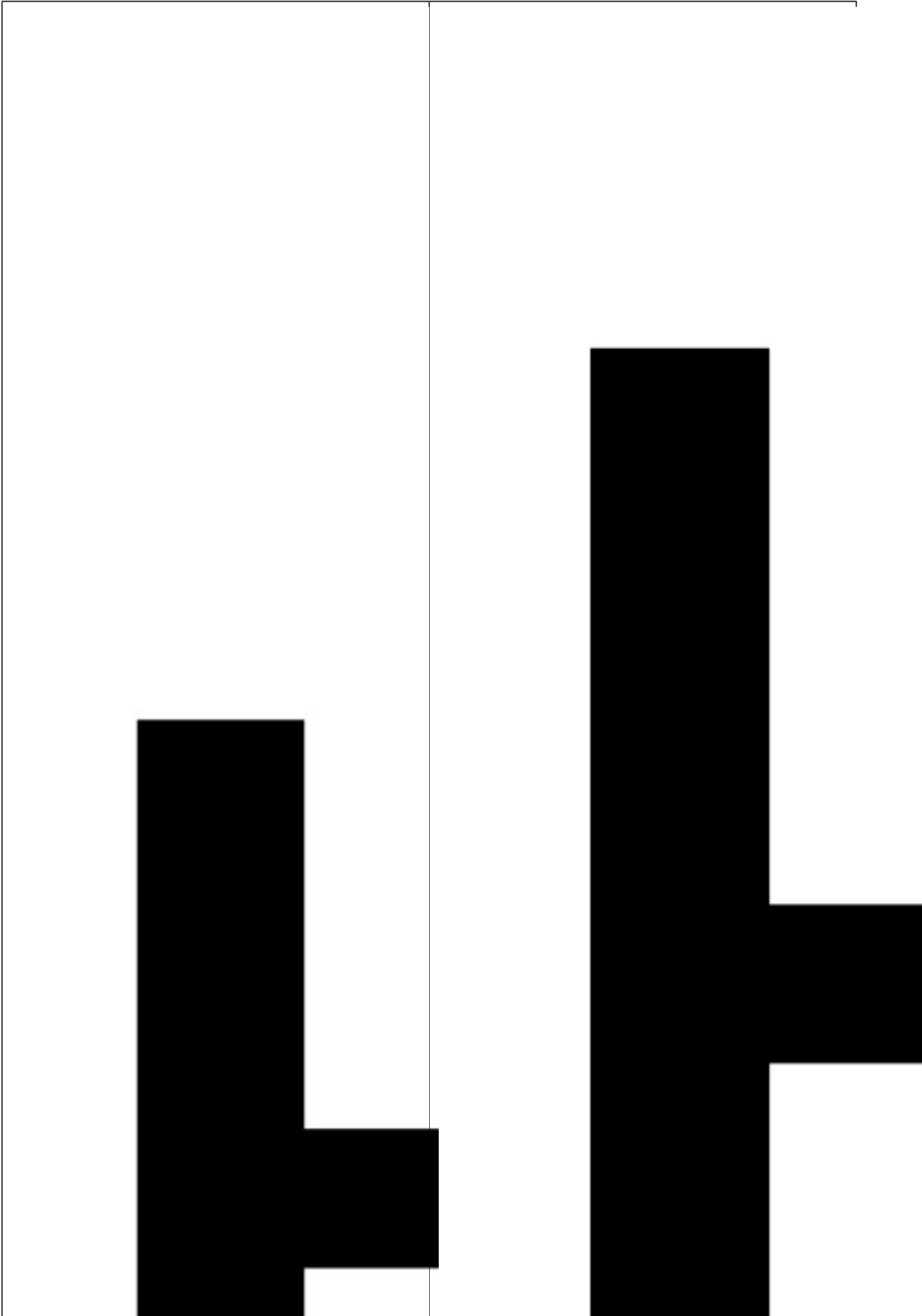
Y





CJK Decode Control

𐤀	
---	--

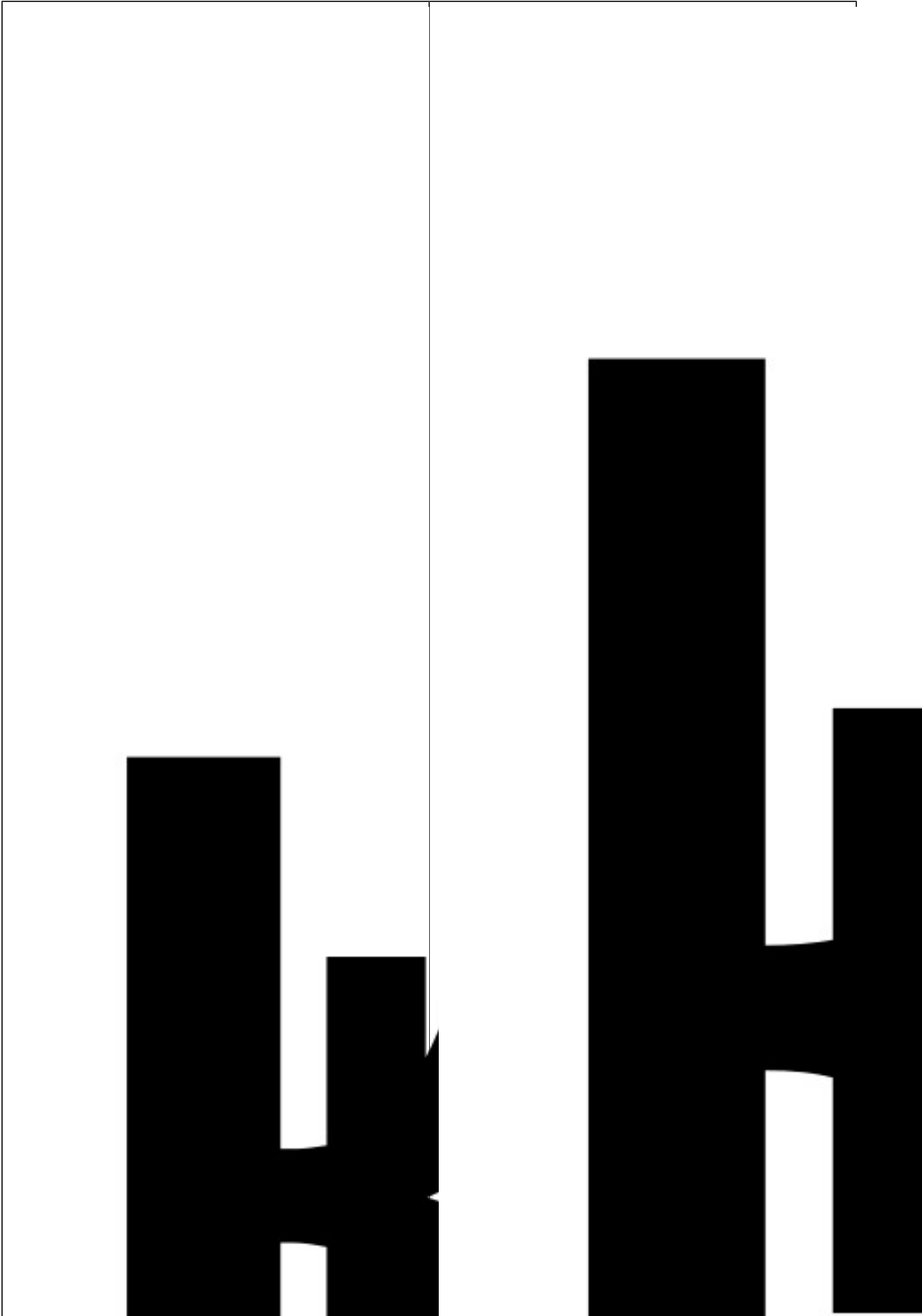


CJK Decode Control

¥	¥
---	---

ㄱ





Missing Characters for Country Keyboard Type: Romanian (Standard)

Default code page: CP1250

Missing characters:

Ș	ș
ț	Ț

Missing Characters for Country Keyboard Type: Portuguese-Brazilian (ABNT), Portuguese-Brazilian (ABNT2)

Default code page: CP1252

Missing character: €

Missing Characters for Country Keyboard Type: Azeri-Latin

Default code page: CP1254

Missing characters: ə, Ə

Unicode/CJK Decode Setup with Windows Host

This section describes how to set up CJK decode with a Windows host.

Setting Up the Windows Registry Table for Unicode Universal Output

Set up a Windows host registry table in order to support a universal output method for your data.

1. Select **Start > Run > regedt32** to start the registry editor.
2. Under **HKEY_Current_User\Control Panel\Input Method**, set **EnableHexNumpad** to 1 as follows:

```
[HKEY_CURRENT_USER\Control Panel\Input Method]
```

```
"EnableHexNumpad"="1"
```

If this key does not exist, add it as type **REG_SZ** (string value).

3. Reboot the computer to implement the registry change.

Adding CJK IME on Windows

Modify your host device to display a Chinese, Japanese, or Korean keyboard.

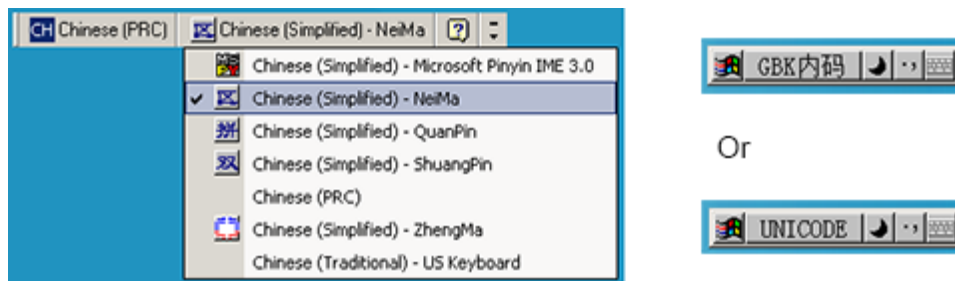
1. Click **Start > Control Panel**.
2. If the Control Panel opens in category view, select **Switch to Classic View** in the top left corner.
3. Select **Regional and Language Options**.
4. Click the **Language** tab.

5. Under **Supplemental Language Support**, select the **Install Files for East Asian Languages** check box if not already selected, and click **Apply**. This may require a Windows installation CD to install the required files. This step ensures that the East Asian Languages (CJK) are available.
6. Under **Text Services and Input Language**, click **Details**.
7. Under **Installed Services**, click **Add**.
8. In the **Add Input Language** dialog box, choose the CJK input language and keyboard layout or Input Method Editor (IME) to add.
9. Click **OK** twice. The language indicator appears in the system tray (at bottom right corner of the desktop by default). To switch between input languages (keyboard languages) select the language indicator in the system tray.
10. Select the language indicator in the system tray to select the desired country keyboard type.
11. Verify that the characters displayed on each country's keyboard appear.

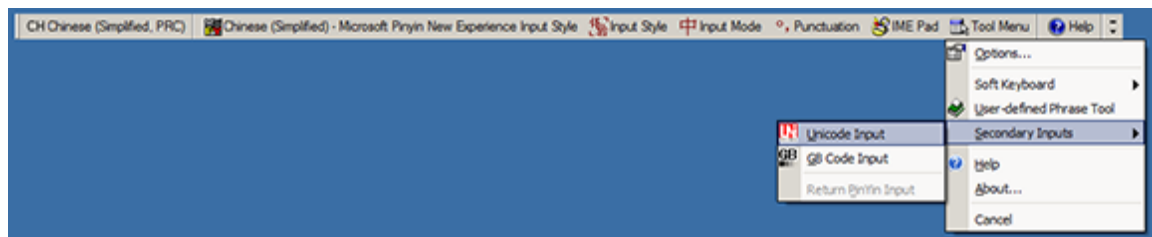
Selecting the Simplified Chinese Input Method on the Host

You can display a Simplified Chinese keyboard as the input method from the MX72 to display on your Windows 7 / Windows XP host device.

- Select Unicode/GBK input on Windows XP: **Chinese (Simplified) - NeiMa**, then click the input bar to select **Unicode** or **GBK NeiMa** input.



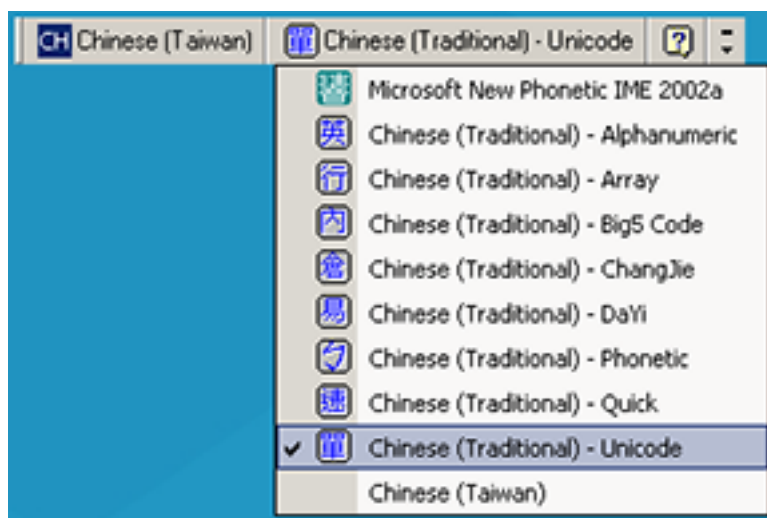
- Select Unicode/GBK input on Windows 7: **Chinese (Simplified) - Microsoft Pinyin New Experience Input Style**, then select **Tool Menu > Secondary Inputs > Unicode Input** or **GB Code Input**.



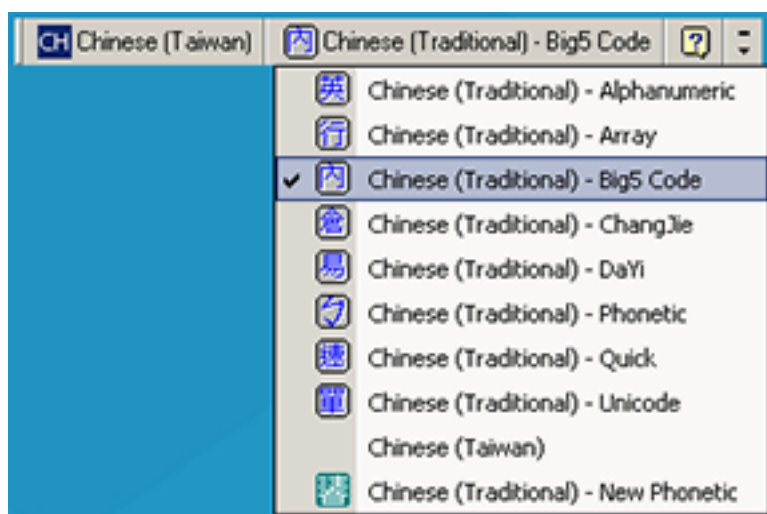
Selecting the Traditional Chinese Input Method on the Host

To select the Traditional Chinese input method:

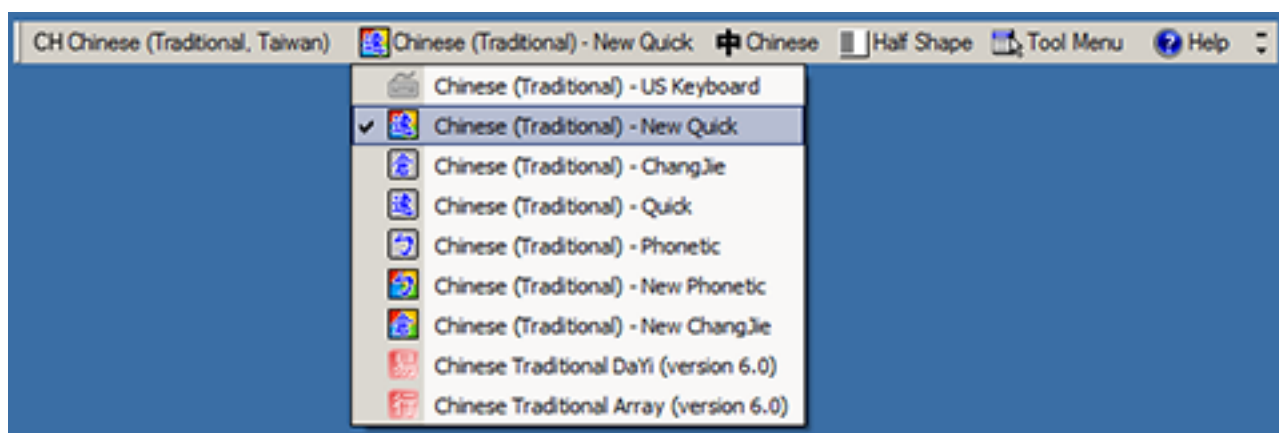
- Select Unicode input on Windows XP: **Chinese (Traditional) - Unicode**



- Select Big5 input on Windows XP: **Chinese (Traditional) - Big5 Code**



- Select Unicode/Big5 input on Windows 7: **Chinese (Traditional) - New Quick**. This option support both Unicode and Big5 input.



Maintenance and Troubleshooting

This section contains guidance for cleaning the imager and troubleshooting problems.

Maintenance

Suggested maintenance and cleaning tips for your device.

Known Harmful Ingredients

This section lists substances that should be prevented from coming into contact with the device.

- Acetone
- Ammonia solutions
- Aqueous or alcoholic alkaline solutions
- Aromatic and chlorinated hydrocarbons
- Benzene
- Carboric acid
- Compounds of amines or ammonia
- Ethanolamine
- Ethers
- Ketones
- TB-lysoform
- Toluene
- Trichloroethylene

Approved Cleaners for the Scanner

Isopropyl alcohol 70% (including pre-moistened wipes) is the only approved cleaner for the device.

Cleaning the Scanner

Routinely cleaning the exit window is required. A dirty window may affect scanning accuracy. Do not allow any abrasive material to touch the window.

1. Dampen a soft cloth with one of the approved cleaning agents or use pre-moistened wipes.
2. Gently wipe all surfaces, including the front, back, sides, top, and bottom. Never apply liquid directly to the scanner. Be careful not to let liquid pool around any area on the device.
3. Do not spray water or other cleaning liquids directly into the exit window.
4. Wipe the scanner exit window with a lens tissue or other material suitable for cleaning optical material such as eyeglasses.
5. Immediately dry the scanner window after cleaning with a soft, non-abrasive cloth to prevent streaking.
6. Allow the unit to air dry before use.
7. Scanner connectors:
 - a) Dip the cotton portion of a cotton-tipped applicator in isopropyl alcohol.
 - b) Rub the cotton portion of the cotton-tipped applicator back and forth across the connector on the Zebra scanner at least three times, making sure to leave no cotton residue.
 - c) Use the cotton-tipped applicator dipped in alcohol to remove grease and dirt near the connector area.
 - d) Use a dry cotton-tipped applicator and rub the cotton portion back and forth across the connectors at least three times. Do not leave any cotton residue on the connectors.

Troubleshooting

This table contains common scanner issues, their causes, and solutions. Use it to troubleshoot the scanner.

Table 6 Troubleshooting

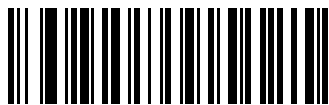
Problem	Possible Causes	Possible Solutions
The aiming dot does not appear during a capture attempt.	No power to the scanner.	Check the system power. Confirm you have connected the correct host interface cable.
Imager cannot read the barcode.	Imager is not programmed for the correct barcode type.	Program the imager to read the desired barcode type.
Aiming pattern does not appear.	Hot environment.	Remove the imager from the hot environment and allow it to return to an operable temperature.
LED activates, followed by a beep sequence.	Beeper is configured.	See beeper indication descriptions.

Send Versions

Use the following barcodes to send the specified information.

Send Software Version

Scan the following barcode to send the version of software installed in the scanner.



Software Version

Send Serial Number

Scan the following barcode to send the scanner serial number to the host.



Serial Number

Send Manufacturing Information

Scan the following barcode to send the scanner manufacturing information to the host.



Manufacturing Information

