DATALOGIC

HALOGEN™ DE2171-AF

Auto Focus Extra Long Range 2D Bar Code Scan Engine



User's Guide

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Patents

See www.patents.datalogic.com for patent list.

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Chapter 1
Introduction

About this Manual

This User's Guide is provided to give instruction for software integration of HALOGEN™ DE2171-AF (designated as "scan engine", "reader" or "scanner" in this manual).

Manual Conventions

The following conventions are used in this document:

The symbols listed below are used in this manual to notify the reader of key issues or procedures that must be observed when using the reader:



NOTE

Notes contain information necessary for properly diagnosing, repairing and operating the reader.



CAUTION

The CAUTION symbol advises you of actions that could damage equipment or property.

Outline

Chapter 1, (this chapter) presents information about manual conventions and an overview of the engine features and operation.

Chapter 2, Setup presents information about unpacking and setting up the scan- engine and about interface configuration bar codes and details.

Chapter 3, Configuration Using Bar Codes provides instructions and bar code labels for customizing your scanner. There are different sections for interface types, general features, data formatting, and symbology-specific features.

Chapter 4, References provides details concerning programmable features.

Appendix A provides sample bar codes that are typical representations for their symbology types.

Appendix B provides a list of barcodes that simulate the keys of a keypad.

Technical Support

Support Through the Website

Datalogic provides several services as well as technical support through its website. Log on to (www.datalogic.com).

For quick access, from the home page click on the search icon, and type in the name of the product you're looking for. This allows you access to download Data Sheets, Manuals, Software & Utilities, and Drawings.

Hover over the Support & Service menu for access to Services and Technical Support.

Reseller Technical Support

An excellent source for technical assistance and information is an authorized Datalogic reseller. A reseller is acquainted with specific types of businesses, application software, and computer systems and can provide individualized assistance.

About the Scan Engine

The Datalogic HALOGEN DE2171-AF scan engine is a compact, high performance reader used to decode linear and 2D barcodes and to transmit the decoded information to a host by means of a TTL USART or USB COM or USB HID Keyboard interface.



TTL USART interface can be translated to RS232 interface using a proper USART-TTL to RS232 translator circuit (present for example in the Demo Kit). For simplicity, in this manual RS232 and USART will be used with the same meaning.

Unpacking the Scan Engine

The scan engine is shipped in custom packaging. Carefully open the package, and inspect for the following:

- DE2171-AF

If any parts are damaged or you need additional hardware, please contact Technical Support.

Scan Engine Care

The scan engine contains sensitive components which require special handling. Datalogic may not warrant damage due to improper handling.

- Do not disassemble the scan engine. Doing so will void the warranty.
- Use standard ESD precautions & policies when handling the HALOGEN DE2171-AF.

Chapter 2
Setup

Unpacking

Check carefully to ensure the device and any cables or accessories ordered are present and undamaged. If any damage occurred during shipment, contact Technical Support on page 2.

KEEP THE PACKAGING. Should the unit ever require service, it should be returned in its original shipping container.

Setting Up the Scan Engine

Follow the steps provided in the Integration Guide (part number 820111800) to connect the scan engine to a host interface. The demo kit (found in HALOGEN DE2171-AF DEMO) can be used to power the reader up with a standard Datalogic cable both USB or RS232 with power supply wall adapter.

Connect Host Interface (Demo Kit Only)

The scanner kit you ordered to match your interface should provide a compatible cable for your installation. If this is not so, contact Technical Support. The scanner can communicate using the following interfaces:

RS-232 Serial Connection

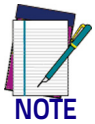
Turn off power to the terminal/PC and connect the scanner to the terminal/PC serial port via the RS-232 cable as shown in Figure 1. If the terminal will not support POT (Power Off the Terminal) to supply scanner power, use the approved power supply (AC Adapter). Plug the AC Adapter barrel connector into the socket on the RS-232 cable connector and the AC Adapter plug into a standard power outlet as shown in Figure 1.

RS-232: The scanner can communicate with a standard RS-232 host.

USB Connection

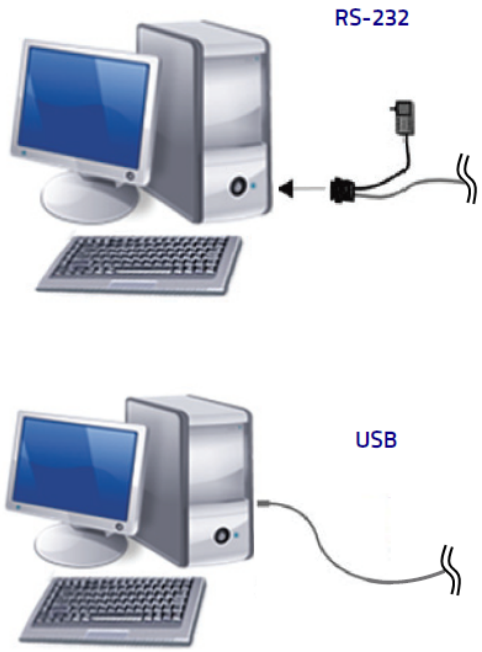
Connect the scanner to a USB port on the terminal/PC using the correct USB cable for the interface type you ordered.

USB : Select to communicate either by USB OEM, USB COM STD, USB Keyboard or USB composite interface types by scanning the appropriate interface type bar codes available in this manual. The default interface is USB composite.



Specific cables are required for connection to different hosts. The connections illustrated in Figure 1 are examples only. Actual connectors may vary from those illustrated, but the steps to connect the scanner remain the same.

Figure 1 - Connection to Host Interface



Connect Host Interface (HALOGEN DE2171-AF Stand Alone)

The HALOGEN DE2171-AF has to be connected to a host by means of its 27 poles FPC/FFC connectors.

Please refer to the HALOGEN DE2171-AF integration guide for details on connection and interface signals.

Interface Selection

Upon completing the physical connection between the scanner and its host, proceed directly to "Configuring the Interface" on page 5 for information and programming for the interface type the scanner is connected to (for example: RS-232, Keyboard USB, etc.) and scan the appropriate bar code in that section to select your system's correct interface type.

The scanner, depending upon the model, will support one of the following sets of host interfaces:

- USB (Keyboard, COM, OEM)
- USB Composite (Keyboard + COM)
- RS-232 STD

Configuring the Interface

Scan the programming bar code from the following section which selects the appropriate interface type to match the system the scanner will be connected to. Next, proceed to the corresponding chapter in this manual (also listed in the table) to configure any desired settings and features associated with that interface. The default interface of HALOGEN DE2171–AF is USB–Composite.

NOTE

Unlike some other programming features and options, interface selections require that you scan only one programming bar code label. DO NOT scan an ENTER/EXIT Programming Mode bar code prior to scanning an interface selection bar code.

Table 1. Available Interfaces

RS-232 standard interface (Interface features starting on page 11)	Select RS232-STD
Select USB-COM	USB Com emulating RS-232 standard interface
USB-OEM (can be used for OPOS/UPOS/JavaPOS) (Interface features starting on page 41)	Select USB-OEM
Select USB Keyboard	USB Keyboard with standard key encoding (Interface features starting on page 15)
USB-Composite (combines USB Keyboard and USB-COM) DEFAULT	Select USB-Composite

Customizing Configuration Settings

Using the Programming Bar Codes

This manual contains feature descriptions and bar codes which allow you to reconfigure your scanner. Some programming bar code labels, like Resetting the Product Configuration to Defaults on page 7, require only the scan of that single label to enact the change. Most of the programming labels in this manual, however, require the scanner to be placed in Programming Mode prior to scanning them. Scan an ENTER/EXIT Programming Mode bar code once to enter Programming Mode. Once the scanner is in Programming Mode, you can scan a number of parameter settings before scanning the ENTER/EXIT bar code a second time, which will then accept your changes, exit Programming Mode and return the scanner to normal operation.



NOTE

There are some exceptions to the typical programming sequence described above. Please read the description and setting instructions carefully when configuring each given programmable feature.

Datalogic DESP protocol SDK

The Decoded Engine Serial Protocol (DESP) is a serial communication protocol developed by Datalogic, independent from both the platform and the physical layer. DESP is also available as a software library, in order to enhance the application development. The provided APIs covers the most common activities, such as acquisition and configuration, so that HALOGEN™ DE2171-AF can be controlled and configured using its communication interface with the host. The SDK can also be used for software update.

DESP Demo App

This demo application is a GUI-based software that implements the DESP library. It is available for Windows platforms and for RS-232 and USB-COM communication protocols. This application covers all the main features of the protocol and it is very useful to let the user familiarize with the DESP protocol and the product.

Datalogic Aladdin™ Utility

Programming can alternatively be performed using the Datalogic Aladdin™ Configuration application which is available for free download from the Datalogic website listed on the back cover of this manual. This multi-platform utility program allows device configuration using a PC. It communicates to the device using a serial or USB cable and can also create configuration bar codes to print.

Datalogic Aladdin™ is a multi-platform utility program providing a quick and user-friendly configuration method via the RS-232/USB-COM interface. The Aladdin utility is available on the Datalogic website. Aladdin allows you to program the scanner by selecting configuration commands through a user-friendly graphical interface running on a PC. These commands are sent to the scanner over the selected communication interface, or they can be printed as bar codes to be scanned.

Aladdin also provides the ability to perform a software upgrade for the connected device (see the Datalogic Aladdin™ Help On-Line for more details).

Interface Settings

The scanner is typically factory-configured with a set of default features standard to the interface type you ordered.

See Interface Selection on page 4.

Configuration Using Bar Codes provides settings configurable by all interface types. If your installation requires you to further customize your scanner, you can select other options through use of the instructions and programming bar codes available in the appropriate section for your interface.

- RS-232 ONLY Interface, starting on page 11
- USB Keyboard Only Interface, starting on page 15
- USB-OEM Only Interface, starting on page 42

Configuring Other Features

If your installation requires different programming than the standard factory default settings, the following sections of this manual allow configuration of non-interface-specific settings you might require:

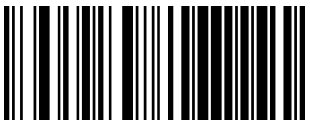
Configuration Using Bar Codes: General Features includes programming for scanning, speaker and LED indicators and other such universal settings.

Reading Parameters: Reading Parameters include programming for scanning, speaker and LED indicators and other universal settings.

2D Symbologies: Includes options concerning the bar code label types (symbologies). These settings allow you to enable/disable symbologies, set label lengths, require check digit, etc.

Software Version Transmission

The software version of the device can be transmitted over the RS-232, Keyboard and USB interfaces by scanning the following label.



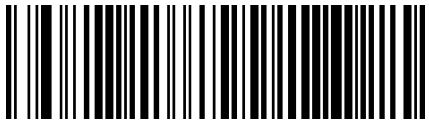
Transmit Software Version

Resetting the Product Configuration to Defaults

If you aren't sure what programming options are in your scanner, or you've changed some options and want to restore the Default Configuration scan the Restore Default Configuration bar code below. This will restore the factory configuration for the currently active interface.

NOTE

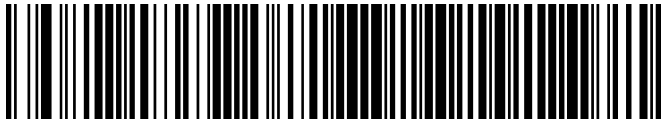
Custom defaults are based on the interface type. Configure the scanner for the correct interface before scanning this label.



Restore Default Configuration

The scan engine supports either DM configuration or C128 configuration barcodes. In this manual only C128 labels are present.

The scan engine default is using C128 labels for configuration. To switch back and forth between the two barcode types, scan the following barcodes:



C128 switches to DM configuration



DM switches to C128 configuration

Chapter 3
Configuration Using Bar Codes

This and following sections provide programming bar codes to configure your scanner by changing the default settings. For details about additional methods of programming, see Customizing Configuration Settings on page 6.



You must first enable your scanner to read bar codes in order to use this section. If you have not done this, go to Setup, starting on page 3 and complete the appropriate procedure.

Configuration Parameters

Once the scanner is set up, you can change the default parameters to meet your application needs. Refer to Resetting the Product Configuration to Defaults on page 7 for initial configuration in order to set the default values and select the interface for your application.

The following configuration parameters are divided into logical groups, making it easy to find the desired function based on its reference group.

Interface Configuration:

- "RS-232 ONLY Interface" on page 11
- "USB Keyboard Only Interface" on page 15
- "USB-OEM Only Interface" on page 42

Parameters common to all interface applications:

- "Global Prefix/Suffix" on page 43
- "Data Format" on page 43 offers advanced configuration options for customization of scanned data output.
- "Reading Parameters" on page 47 control various operating modes and indicators status functioning.

For more detailed descriptions, programming information and examples for setting selected configuration items, see "References" on page 189.

Symbology-specific parameters:

"2D Symbologies" on page 145 defines options for all symbologies and provides the programming bar codes necessary for configuring these features.



NOTE

You must first enable your scanner to read bar codes in order to use this section. If you have not done this, go to Setup, starting on page 3 and complete the appropriate procedure.

To program features:

1. Scan the ENTER/EXIT PROGRAMMING MODE bar code, available at the top of each programming page, when applicable.
2. Scan the bar code to set the desired programming feature. You may need to cover unused bar codes on the page, and possibly the facing page, to ensure that the scanner reads only the bar code you intend to scan.
3. If additional input parameters are needed, go to Appendix 6, and scan the appropriate characters from the keypad.



NOTE

Additional information about many features can be found in the "References" chapter.

If you make a mistake before the last character, scan the CANCEL bar code to abort and not save the entry string. You can then start again at the beginning.

4. Complete the programming sequence by scanning the ENTER/EXIT PROGRAMMING MODE bar code to exit Programming Mode.

For more detailed descriptions, programming information and examples for setting selected configuration items, see Chapter 4 "References".

RS-232 ONLY Interface

Use the programming bar codes in this chapter if modifications to the standard RS-232 interface settings are necessary to meet your system's requirements.

BAUD RATE on page 11	**PARITY** on page 13
DATA BITS on page 12	**HANDSHAKING CONTROL** on page 14
STOP BITS on page 13	

Baud Rate

Baud rate is the number of bits of data transmitted per second. Set the scanner's baud rate to match the baud rate setting of the host device. With an improper baud rate setting, data may not reach the host correctly.

Baud Rate = 1200

Baud Rate = 2400

Baud Rate = 4800

Baud Rate = 9600

Baud Rate — continued

Baud Rate = 19,200

Baud Rate = 38,400

Baud Rate = 57,600

Baud Rate = 115,200

DEFAULT

Data Bits

This parameter allows the reader to interface with devices requiring a 7-bit or 8-bit ASCII protocol for sending and receiving data.

7 Data Bits

8 Data Bits

DEFAULT

Stop Bits

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

DEFAULT

1 Stop Bit

2 Stop Bits

Parity

This feature specifies parity required for sending and receiving data. A parity check bit is the most significant bit of each ASCII coded character. Select the parity type according to host device requirements.

- Select None when no parity bit is required.
- Select Odd parity and the parity bit value is set to 0 or 1, based on data, to ensure that an odd number of 1 bits are contained in the coded character.
- Select Even parity and the parity bit value is set to 0 or 1, based on data, to ensure that an even number of 1 bits are contained in the coded character.

DEFAULT

Parity = None

Parity = Even

Parity = Odd

Handshaking Control

The data interface consists of an RS-232 port designed to operate either with or without the hardware handshaking lines, Request to Send (RTS), and Clear to Send (CTS). Handshaking Control includes the following options:

- None – No HW flow control
- RTS — RTS is asserted during transmissions. CTS is ignored.
- RTS/CTS — RTS is asserted during transmissions. CTS gates transmissions.
- RTS On/CTS — RTS is always asserted. CTS gates transmissions.

DEFAULT

Handshaking Control = None

Handshaking Control = RTS

Handshaking Control = RTS/CTS

Handshaking Control = RTS On/CTS

USB Keyboard Only Interface

Use the programming bar codes in this chapter to select options for USB Keyboard Interface.

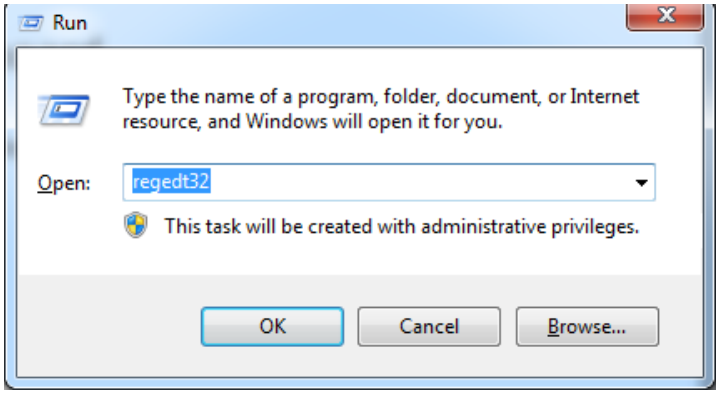
COUNTRY MODE on page 15
KEYBOARD NUMERIC KEYPAD on page 38
KEYBOARD SEND CONTROL CHARACTERS on page 38
USB KEYBOARD SPEED on page 39

Country Mode

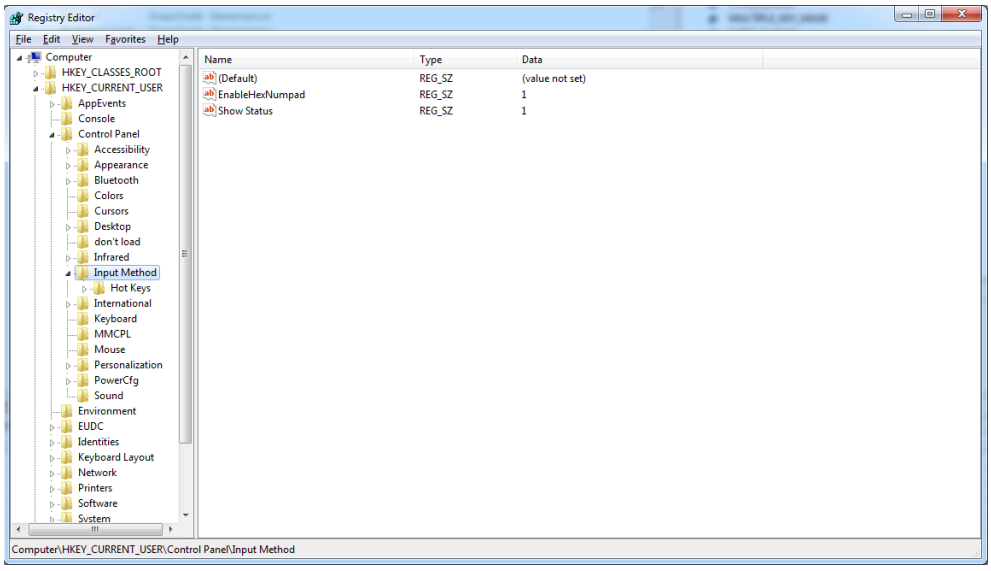
This feature specifies the country/language supported by the keyboard. The Country Mode setting is ignored if the interface uses alternate key encoding.

Setup on PC to use ALT Universal

1. Open Registry Edit



2. Set EnableHexNumpad to 1 as follows:



3. Reset the PC.

Setting Country Mode

DEFAULT

United States

French International (Belgian French)

United Kingdom

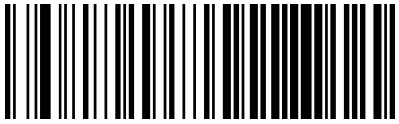
Danish

French (France)

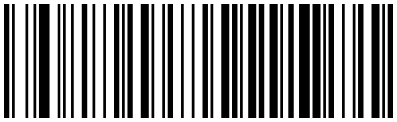
German

Italian

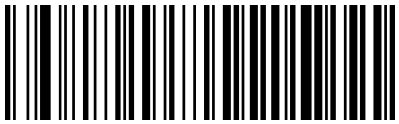
Setting Country Mode — continued



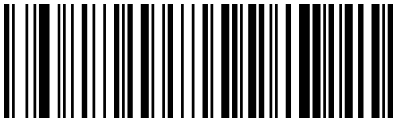
Norwegian



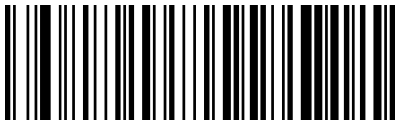
Portuguese Portugal



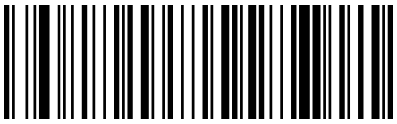
Spanish



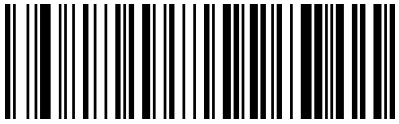
Swedish



Swiss French



Japanese ASCII



Hungarian

Setting Country Mode — continued

Czech

SlovaK

Romanian

Croatian

Polish_214

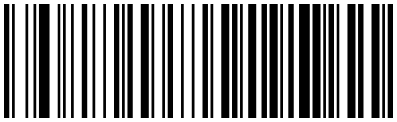
Canadian French Win7

Lithuanian

Setting Country Mode — continued



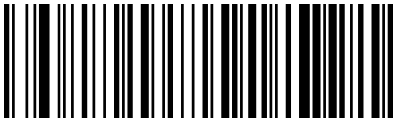
Vietnamese



Russian



Arabic 101



Chinese ASCII



Thai-Kedmanee



Albanian



Arabic 102

Setting Country Mode — continued

Arabic 102 AZERTY

Azeri Cyrillic

Azeri Latin

Belarusian

Bosnian Cyrillic

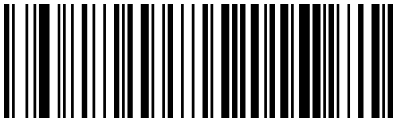
Bosnian Latin

Bulgarian Cyrillic

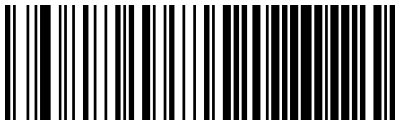
Setting Country Mode — continued



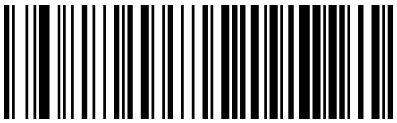
Bulgarian Latin



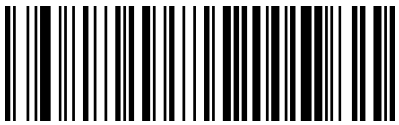
Canadian French (Legacy)



Canadian Multilingual



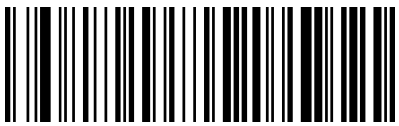
Chinese (Simplified)



Chinese (Traditional)



Czech Programmers



Czech QWERTY

Setting Country Mode — continued

Dutch Netherland

Estonian

Faeroese

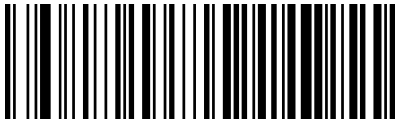
Finnish

French (Canada) 2000/XP

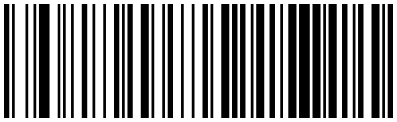
French (Canada) 95/98

Galician

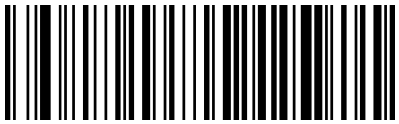
Setting Country Mode — continued



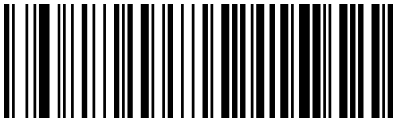
Greek



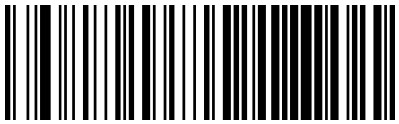
Greek Latin



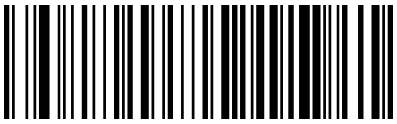
Greek Polytonic



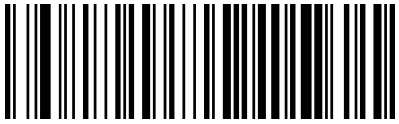
Greek220



Greek220 Latin



Greek319



Greek319 Latin

Setting Country Mode — continued

Hebrew Israel

Hungarian_101KEY

Icelandic

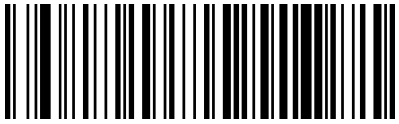
Irish

Italian_142

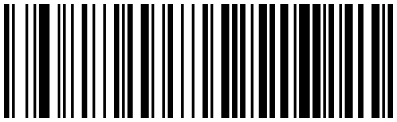
Japanese (Shift-JIS)

Kazakh

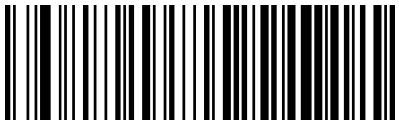
Setting Country Mode — continued



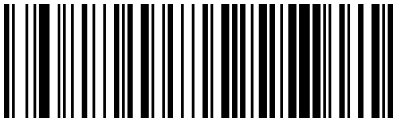
Korean (Hangul)



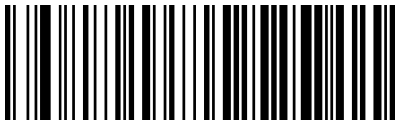
Korean ASCII



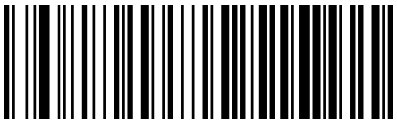
Kyrgyz Cyrillic



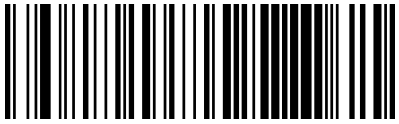
Latin America



Latvian



Latvian QWERTY



Lithuanian_IBM

Setting Country Mode — continued

Macedonian -FYROM

Maltese_47KEY

Mongolian-Cyrillic

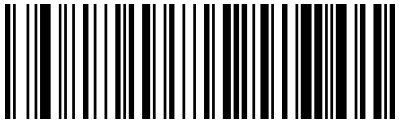
Polish Programmer

Portuguese Brazil

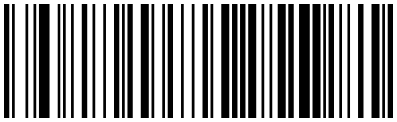
Portuguese Brazilian ABNT

Portuguese Brazilian ABNT2

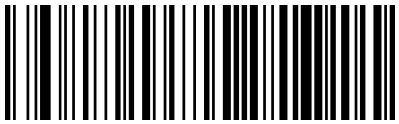
Setting Country Mode — continued



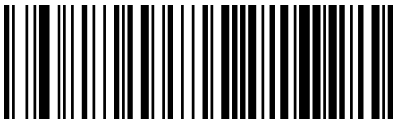
Romanian Legacy



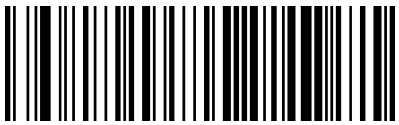
Romanian Programmer



Romanian Standard



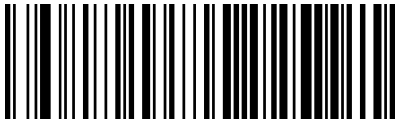
Russian Typewriter



Serbian Cyrillic



Serbian Latin



Slovak QWERTY

Setting Country Mode — continued

Slovenian

Spanish Variation

Swiss German

Tatar

Turkish F

Turkish Q

Ukrainian

Setting Country Mode — continued

US Dvorak

US Dvorak Left Hand

US Dvorak Right Hand

US English (Mac)

US English (North American)

US International

Uzbek Cyrillic

Setting Encoding Type.

DEFAULT

Don't use encoding

UTF_8

Windows 874

Windows 932

Windows 936

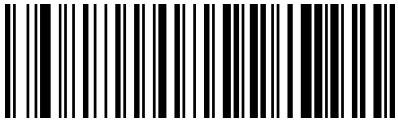
Windows 949

Windows 950

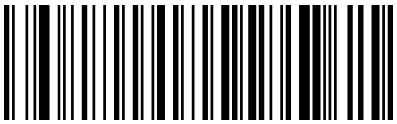
Setting Encoding Type. — continued



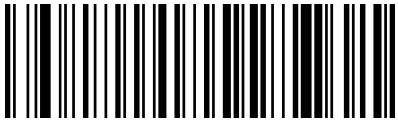
Windows 1250



Windows 1251



Windows 1252



Windows 1253



Windows 1254



Windows 1255



Windows 1256

Setting Encoding Type. — continued

Windows 1257

Windows 1258

Windows 20866

ISO 8859-1

ISO 8859-2

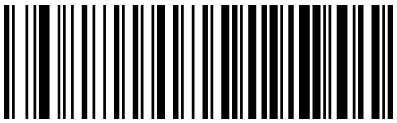
ISO 8859-3

ISO 8859-4

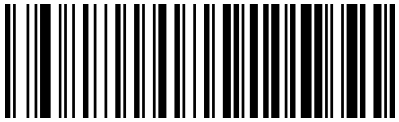
Setting Encoding Type. — continued



ISO 8859-5



ISO 8859-6



ISO 8859-7



ISO 8859-8



ISO 8859-9



ISO 8859-10



ISO 8859-11

SettiSetting Encoding Type. — continued

ISO 8859-13

ISO 8859-14

ISO 8859-15

ISO 8859-16

MS-DOS 437

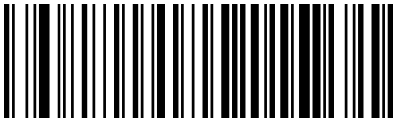
MS-DOS 737

MS-DOS 775

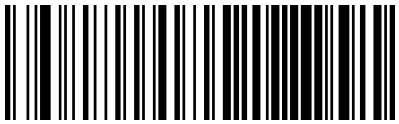
Setting Encoding Type. — continued



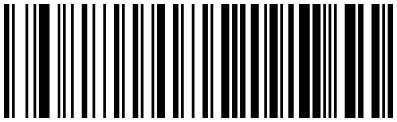
MS-DOS 850



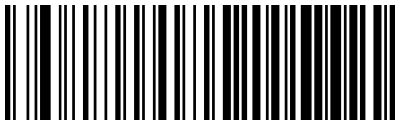
MS-DOS 852



MS-DOS 855



MS-DOS 857



MS-DOS 860



MS-DOS 861



MS-DOS 862

Setting Encoding Type. — continued

MS-DOS 863

MS-DOS 865

MS-DOS 866

MS-DOS 869

Mac CP10000

Setting ALT Input Type

This option specifies Usb Keyboard input type to Alt Mode. (Be aware that the scanner may switch automatically between ALT mode & Normal Keyboard Scan-code, to correctly display some characters that are not present in the current Keyboard Country).

Disable ALT Mode

DEFAULT

Enable ALT Mode

Setting ALT Output Type

This option specifies the encode type of ALT Mode when the scanner sends Output Keyboard Data in Alt Mode. (Be aware that the scanner may switch auto-matically between ALT mode & Normal Keyboard Scancode, to correctly display some characters that are not present in the current Keyboard Country).

ALT Codepage: (use on non Unicode application: Notepad)

ALT Unicode: (use on Unicode application: Word)

DEFAULT

ALT Universal: (Use for all)

Keyboard Numeric Keypad

This feature specifies if numeric characters will be sent using the standard keys or the numeric keypad.

DEFAULT

Keyboard Numeric Keypad = Standard Keys

Keyboard Numeric Keypad = Numeric Keypad

Keyboard Send Control Characters

This feature is used by USB Keyboard interface. It specifies how the scanner transmits ASCII control characters to the host.

Options are as follows:

Send Ctrl+Key . ASCII characters from 00H to 0x1FH inclusive are transmitted in the format Ctrl+Key. Special keys are available in the range from 81H to A1.

Send Ctrl+Shift+Key . The behavior is the same as above, but control keys are sent in the format Ctrl+Shift+Keys.

Send Special Function Key . Send characters between 00H and 1FH according to the special function key mapping table. This is used to send keys that are not in the normal ASCII set. A unique set is provided for each available scancode set.

DEFAULT

Keyboard Send Control Characters = Send Ctrl+Key

Keyboard Send Control Characters = Send Ctrl+Shift+Key

Keyboard Send Control Characters = Send Special Function Key

USB Keyboard Speed

This option specifies the USB poll rate for a USB Keyboard.

DEFAULT



USB Keyboard Speed = 1 ms



USB Keyboard Speed = 2 ms



USB Keyboard Speed = 3 ms



USB Keyboard Speed = 4 ms



USB Keyboard Speed = 5 ms



USB Keyboard Speed = 6 ms



USB Keyboard Speed = 7 ms



USB Keyboard Speed = 8 ms

USB Keyboard Speed = 9 ms

USB Keyboard Speed = 10 ms

USB Keyboard Speed = 11 ms

USB Keyboard Speed = 12 ms

USB Keyboard Speed = 13 ms

USB Keyboard Speed = 14 ms

USB Keyboard Speed = 15 ms

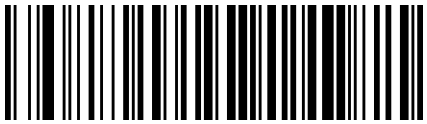
USB Keyboard Speed = 16 ms



USB Keyboard Speed = 17 ms



USB Keyboard Speed = 18 ms



USB Keyboard Speed = 19 ms



USB Keyboard Speed = 20 ms

USB-OEM Only Interface

Introduction

Feature settings for USB interfaces differ depending upon which host type the scanner will be connected with. Use the feature settings in this chapter to specifically configure for the USB-OEM interface. Other USB interfaces are included in the appropriate chapter for their host type.

USB-OEM Device Usage

The USB-OEM protocol allows for the scanner to be identified as one of two different types of bar code scanners. Depending on what other scanners you may already have connected to a USB-OEM POS, you may need to change this setting to enable all devices to communicate.

Options are:

- Tabletop Scanner
- Handheld Scanner



NOTE

It may be necessary to switch device usage when connecting two scanners of the same type to a POS system.

DEFAULT

USB-OEM Device Usage = Tabletop Scanner

USB-OEM Device Usage = Handheld Scanner

Data Format

GLOBAL PREFIX/SUFFIX on page 43
GLOBAL AIM ID on page 44
GS1-128 AIM ID on page 44

The features in this chapter can be used to build specific user-defined data into a message string. See "References" on page 189 for more detailed instructions on setting these features.

Global Prefix/Suffix

Up to 20 ASCII characters may be added as a prefix (in a position before the bar code data) and/or as a suffix (in a position following the bar code data).
Set the value “00” (two ‘0’ characters) to have no Global Prefix/Suffix.
The default is <CR> suffix. See "Global Prefix/suffix" on "References" on page 189 for more detailed programming instructions..

To configure this feature, scan the ENTER/EXIT bar code above, then the bar code at right followed by digits from the Alphanumeric characters in Appendix B representing your desired character(s). End by scanning the ENTER/EXIT bar code again and then exit programming mode by scanning it one more time.



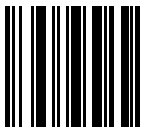
Set Global Prefix



Set Global Suffix

To configure this feature, scan the ENTER/EXIT bar code above, then the bar code at left followed by digits from the Alphanumeric characters in Appendix B representing your desired character(s). End by scanning the ENTER/EXIT bar code again and then exit programming mode by scanning it one more time.

Make a mistake? Scan the CANCEL bar code to abort and not save the entry string. You can then start again at the beginning.



CANCEL

A commonly used suffix is <CR>. For setting <CR> character as global Suffix, enter Programming Mode, then read the following bar code and then exit Programming Mode



Global Suffix: 0D (=hex code for <CR>)

Global AIM ID



NOTE

This feature enables/disables addition of AIM IDs for all symbology types.

AIM label identifiers (as opposed to custom characters you select yourself as with label identifiers) can be included with scanned bar code data. See "Global AIM ID" on References on page 189 for more detailed programming instructions.

DEFAULT

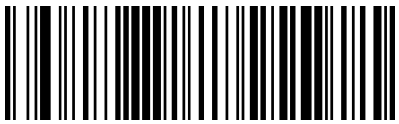
Global AIM ID = Disable

Global AIM ID = Enable

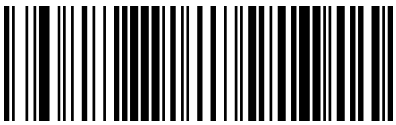
GS1-128 AIM ID

If Global AIM ID is disabled, the AIM ID for GS1-128 can be enabled/disabled independently. The AIM ID for GS1-128 is a]C1,]C2 or]C3.

AIM IDs for other symbologies can be enabled/disabled independently as well. Contact Customer Support for assistance.



GS1-128 AIM ID = Disable



GS1-128 AIM ID = Enable

DEFAULT

NOTES

Reading Parameters

DOUBLE READ TIMEOUT on page 48
LED AND SPEAKER INDICATORS on page 50
GOOD READ SPEAKER VOLUME on page 50
ENABLE/DISABLE GREEN SPOT (GOOD READ) LED INDICATOR on page 50
SCANNING FEATURES on page 51
SCAN MODE on page 51
FLASH ON TIME on page 52
FLASH OFF TIME on page 52
SCANNING ACTIVE TIME on page 53
PICK MODE on page 54

Double Read Timeout

To prevent a double read of the same label, the Double Read Timeout sets the minimum time allowed between reads of labels of the same symbology and data. If the unit reads a label and sees the same label again within the Double Read Timeout, the second read of the label will be ignored. Double Read Timeout does not apply to scan modes that require a trigger pull for each label that is read.

Double Read Timeout = 0.1 Second

Double Read Timeout = 0.2 Second

Double Read Timeout = 0.3 Second

Double Read Timeout = 0.4 Second

Double Read Timeout (continued)

Double Read Timeout = 0.5 Second

Double Read Timeout = 0.6 Second

Double Read Timeout = 0.7 Second

Double Read Timeout = 0.8 Second

Double Read Timeout = 0.9 Second

Double Read Timeout = 1 Second

DEFAULT

LED and Speaker Indicators

Good Read Speaker Volume

Selects the speaker volume (loudness) upon a good read beep. There are three selectable volume levels.

Good Read Speaker Volume = Speaker Off

Good Read Speaker Volume = Low

Good Read Speaker Volume = Medium

Good Read Speaker Volume = High

DEFAULT

Enable/Disable Green Spot (Good Read) LED Indicator

Enable/Disable the green spot (good read) LED indicator.

Green Spot = Disable

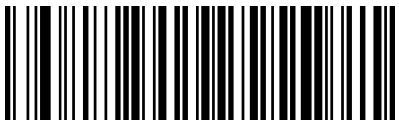
Green Spot = Enable

DEFAULT

Scanning Features

Scan Mode

See "Scan Mode" on References on page 189 for more detailed programming instructions.

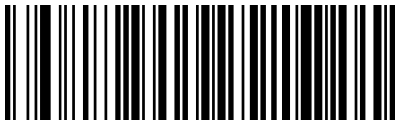


Scan Mode = Trigger Single

DEFAULT



Scan Mode = Trigger Hold Multiple



Scan Mode = Trigger Pulse Multiple



Scan Mode = Flashing



Scan Mode = Always On

Flash On Time

This feature specifies the ON time for the indicator LED while in Flash Mode. The selectable range is 100 to 9,900 milliseconds (0.1 to 9.9 seconds), in 100 millisecond increments. Always use two digits (e.g.: scan the barcode '0' and the barcode '2' for setting 0.2 seconds). See "Flash On Time" on References on page 189 for more detailed programming instructions.

Select Flash ON Time Setting

To configure this feature, scan the ENTER/EXIT bar code above, then the bar code at left followed by digits from the Alphanumeric characters in Appendix B, representing your desired character(s). End by scanning the ENTER/EXIT bar code again.

Make a mistake? Scan the CANCEL bar code to abort and not save the entry string. You can then start again at the beginning.

CANCEL

DEFAULT **10 = Flash is ON for 1 Second**

Flash Off Time

This feature specifies the OFF time for the indicator LED while in Flash Mode. The selectable range is 100 to 9,900 milliseconds (0.1 to 9.9 seconds), in 100 millisecond increments. Always use two digits (e.g.: scan the barcode '0' and the barcode '2' for setting 0.2 seconds). See "Flash Off Time" on References on page 189 for more detailed programming instructions.

Select Flash OFF Time Setting

To configure this feature, scan the ENTER/EXIT bar code above, then the bar code at left followed by digits from the Alphanumeric characters in Appendix B, representing your desired character(s). End by scanning the ENTER/EXIT bar code again.

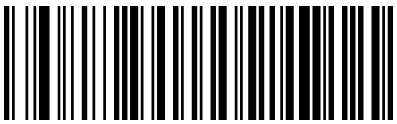
Make a mistake? Scan the CANCEL bar code to abort and not save the entry string. You can then start again at the beginning.

CANCEL

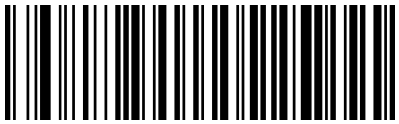
DEFAULT **05 = Flash is OFF for 500ms**

Scanning Active Time

This setting specifies the amount of time that the reader stays in scan ON state once the state is entered. Here are the labels for quick configuration on 3, 5 or 8 seconds. More options are available using DESP or Aladdin configuration protocols.

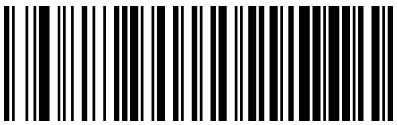


Scanning Active Time = 3 seconds



Scanning Active Time = 5 seconds

DEFAULT



Scanning Active Time = 8 seconds

Pick Mode

Specifies the ability of the reader to decode labels only when they are close to the center of the aiming pattern. This allows the reader to accurately target labels when they are placed close together, such as on a pick sheet.

The Pick Mode can be enabled only in Trigger Single Scan Mode.



NOTE

This feature is not compatible with Multiple Labels Reading in a Volume.

DEFAULT

Pick Mode = Disable

Pick Mode = Enable

Aiming Pointer

Enables/disables the aiming pointer for all symbologies.

Aiming Pointer = Disable

Aiming Pointer = Enable

DEFAULT

Green Spot Duration

Specifies the duration of the good read pointer beam after a good read.

Green Spot Duration = Disable (Green Spot is Off)

Green Spot Duration = Short (300 msec)

DEFAULT

Green Spot Duration = Medium (500 msec)

Green Spot Duration = Long (800 msec)

Reflective Code Mode

This mode is useful for scanning bar codes printed on reflective surfaces.

DEFAULT

Reflective Code Mode = Disable

Reflective Code Mode = Enable

Decode Negative Image

Enable/Disable the ability to decode a negative image for all symbologies. When this feature is enabled, you will be unable to read normally-printed labels or programming labels in this manual. Scan the "Disable" bar code below to return the scanner to its default for this feature. To set decoding for only 2D codes, go to 2D Normal/Inverse Symbol Control on page 148. For additional options, see the Aladdin configuration application.



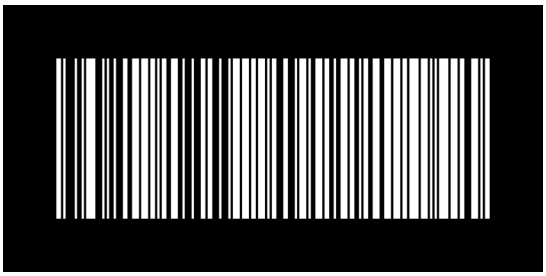
NOTE

Unlike some programming features and options, Decode Negative Image selections require that you scan only one programming bar code label. DO NOT scan an ENTER/EXIT bar code prior to scanning a Decode Negative Image bar code.



CAUTION

When this feature is enabled, you will be unable to read other programming labels in this manual.



Decode Negative Image = Disable

DEFAULT

Decode Negative Image = Enable

Disable All Symbologies

Use this feature to disable all symbologies.

1. Scan the ENTER/EXIT PROGRAMMING MODE barcode below.
2. Scan the Disable All Symbologies barcode.
3. Complete the programming sequence by scanning the ENTER/EXIT PROGRAMMING barcode.

ENTER/EXIT PROGRAMMING MODE

Disable All Symbologies

NOTE

This does not disable the reading of programming labels.

1D Symbologies

The decoder supports the following symbologies (barcode types). Symbology-dependent options for each symbology are included in this chapter.

CODE EAN/UPC on page 60
• **COUPON CONTROL** on page 60
• **UPC-A** on page 60
• **UPC-E** on page 62
• **EAN 13 (JAN 13)** on page 66
• **ISSN** on page 67
• **EAN 8 (JAN 8)** on page 68
• **UPC/EAN GLOBAL SETTINGS** on page 69
CODE 39 on page 74
• **CODE 32 (ITAL PHARMACEUTICAL CODE)** on page 82
• **CODE 39 CIP (FRENCH PHARMACEUTICAL)** on page 84
CODE 128 on page 85
• **GS1-128** on page 90
CODE ISBT 128 on page 91
INTERLEAVED 2 OF 5 (I 2 OF 5) on page 93
• **FOLLETT 2 OF 5** on page 98
• **INTERLEAVED 2 OF 5 CIP HR** on page 98
STANDARD 2 OF 5 on page 99
INDUSTRIAL 2 OF 5 on page 103
• **CODE IATA** on page 107

DATALOGIC 2 OF 5 on page 108
CODABAR on page 112
• **ABC CODABAR** on page 118
CODE 11 on page 121
GS1 DATABAR™ OMNIDIRECTIONAL on page 125
• **GS1 DATABAR™ OMNIDIRECTIONAL** on page 125
• **GS1 DATABAR™ EXPANDED** on page 126
• **GS1 DATABAR™ LIMITED** on page 130
CODE 93 on page 131
MSI on page 135
PLESSEY on page 140

Default settings are indicated at each feature/option with a green arrow. That section also provides space to record any custom settings needed or implemented for your system.

To set most features:

1. Scan the ENTER/EXIT PROGRAMMING barcode at the top of applicable programming pages.
2. Scan the correct barcode to set the desired programming feature or parameter. You may need to cover unused barcodes on the page, and possibly the facing page, to ensure that the reader reads only the barcode you intend to scan.
3. If additional input parameters are needed, go to Appendix B, , and scan the appropriate characters from the keypad.



NOTE

Additional information about many features can be found in the "References" chapter. If you make a mistake before the last character, scan the CANCEL barcode to abort and not save the entry string. You can then start again at the beginning.

4. Complete the programming sequence by scanning the ENTER/EXIT PROGRAMMING barcode to exit Programming Mode.

CODE EAN/UPC

Coupon Control

This feature is used to control the reader's method of processing coupon labels.

Coupon Control = Allow all coupon barcodes to be decoded

Coupon Control = Enable only UPCA coupon decoding

DEFAULT

Coupon Control = Enable only GS1 DataBar™ coupon decoding

UPC-A

The following options apply to the UPC–A symbology.

UPC-A Enable/Disable

When disabled, the reader will not read UPC–A barcodes.

UPC-A = Disable

UPC-A = Enable

DEFAULT

UPC-A Check Character Transmission

Enable this option to transmit the check character along with UPC–A barcode data.

UPC-A Check Character Transmission = Don't Send

UPC-A Check Character Transmission = Send

DEFAULT

Expand UPC-A to EAN-13

Expands UPC–A data to the EAN–13 data format. Selecting this feature also changes the symbology ID to match those required for EAN–13.

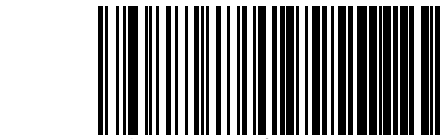
DEFAULT

UPC-A to EAN-13 = Don't Expand

UPC-A to EAN-13 = Expand

UPC-A Number System Character Transmission

This feature enables/disables transmission of the UPC-A number system character.


UPC-A Number System Character = Do not transmit


UPC-A Number System Character = Transmit

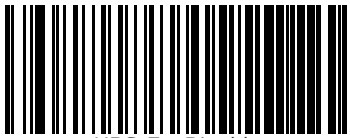
DEFAULT

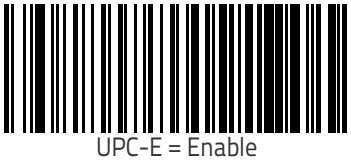
UPC-E

The following options apply to the UPC-E symbology.

UPC-E Enable/Disable

When disabled, the reader will not read UPC-E barcodes.


UPC-E = Disable


UPC-E = Enable

DEFAULT

UPC-E Check Character Transmission

Enable this option to transmit the check character along with UPC–E barcode data.

UPC-E Check Character Transmission = Don't Send

UPC-E Check Character Transmission = Send

DEFAULT

Expand UPC-E to EAN-13

Expands UPC–E data to the EAN–13 data format. Selecting this feature also changes the symbology ID to match those required for EAN–13.

DEFAULT

UPC-E to EAN-13 = Don't Expand

UPC-E to EAN-13 = Expand

Expand UPC-E to UPC-A

Expands UPC–E data to the UPC–A data format.

DEFAULT

UPC-E to UPC-A = Don't Expand

UPC-E to UPC-A = Expand

UPC-E Number System Character Transmission

This feature enables/disables transmission of the UPC–E system number character.

UPC-E Number System Character = Do not transmit

UPC-E Number System Character = Transmit

DEFAULT

GTIN FORMATTING

This feature enables/disables the ability to convert UPC–E, UPC–A, EAN 8, and EAN 13 labels into the GTIN 14–character format.



NOTE

If add-on information is present on the base label prior to the conversion taking place, the add-on information will be appended to the converted GTIN label.

DEFAULT

GTIN Formatting = Disable

GTIN Formatting = Enable

EAN 13 (JAN 13)

The following options apply to the EAN 13 (Jan 13) symbology.

EAN 13 Enable/Disable

When disabled, the reader will not read EAN 13/JAN 13 barcodes.

EAN 13 = Disable

EAN 13 = Enable

DEFAULT

EAN 13 Check Character Transmission

Enable this option to transmit the check character along with EAN 13 barcode data.

EAN 13 Check Character Transmission = Don't Send

EAN 13 Check Character Transmission = Send

DEFAULT

EAN-13 ISBN Conversion

This option enables/disables conversion of EAN 13/JAN 13 Bookland labels starting with 978 to ISBN labels.

DEFAULT

EAN-13 ISBN Conversion = Disable

EAN-13 ISBN Conversion = Convert to ISBN

ISSN

The following options apply to the ISSN symbology.

ISSN Enable/Disable

Enables/disables conversion of EAN/JAN13 Bookland labels starting with 977 to ISSN labels.

DEFAULT

ISSN = Disable

ISSN = Enable

EAN 8 (JAN 8)

The following options apply to the EAN 8 (Jan 8) symbology.

EAN 8 Enable/Disable

When disabled, the reader will not read EAN 8/JAN 8 barcodes.

EAN 8 = Disable

EAN 8 = Enable

DEFAULT

EAN 8 Check Character Transmission

Enable this option to transmit the check character along with EAN 8 barcode data.

EAN 8 Check Character Transmission = Don't Send

EAN 8 Check Character Transmission = Send

DEFAULT

Expand EAN 8 to EAN 13

Enable this option to expand EAN 8/JAN 8 labels to EAN 13/JAN 13.

DEFAULT

Expand EAN 8 to EAN 13 = Disable

Expand EAN 8 to EAN 13 = Enable

UPC/EAN GLOBAL SETTINGS

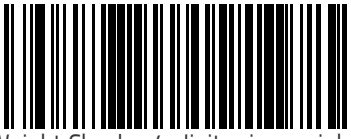
This section provides configuration settings for UPC–A, UPC–E, EAN 13 and EAN 8 symbologies, and affects all of these unless otherwise marked for each feature description.

UPC/EAN Price Weight Check

This feature enables/disables calculation and verification of price/weight check digits.

DEFAULT


Price Weight Check = Disabled


Price Weight Check = 4-digit price-weight check


Price Weight Check = 5-digit price-weight check


Price Weight Check = European 4-digit price-weight check


Price Weight Check = European 5-digit price-weight check

ADD-ONS

Contact Customer Support for advanced programming of optional and conditional add-ons.

Optional Add-ons

The reader can be enabled to optionally read the following add-ons (supplementals):


NOTE

If a UPC/EAN base label and an add-on are both decoded, the reader will transmit the base label and add-on. If a UPC/EAN base label is decoded without an add-on, the base label will be transmitted without an add-on.
Conditional add-on settings (if enabled) are considered by the reader before optional add-on settings.

DEFAULT

Optional Add-Ons = Disable P2

Optional Add-Ons = Enable P2

DEFAULT

Optional Add-Ons = Disable P5

Optional Add-Ons = Enable P5

Optional Add-On Timer

This option sets the time the reader will look for an add-on when an add-on fragment has been seen and optional add-ons are enabled.)

Optional Add-on Timer = 10ms

DEFAULT

Optional Add-on Timer = 20ms

Optional Add-on Timer = 30ms

Optional Add-on Timer = 40ms

Optional Add-on Timer = 50ms

Optional Add-On Timer (continued)

Optional Add-on Timer = 60ms

Optional Add-on Timer = 70ms

Optional Add-on Timer = 100ms

Optional Add-on Timer = 120ms

Optional Add-on Timer = 140ms

Optional Add-on Timer = 160ms

Optional Add-On Timer (continued)

Optional Add-on Timer = 180ms

Optional Add-on Timer = 200ms

Optional Add-on Timer = 220ms

Optional Add-on Timer = 240ms

Optional Add-on Timer = 260ms

Optional Add-on Timer = 280ms

Optional Add-on Timer = 300ms

CODE 39

The following options apply to the Code 39 symbology.

Code 39 Enable/Disable

Code 39 = Disable

Code 39 = Enable

DEFAULT

Code 39 Check Character Calculation

Enable this option to enables/disables calculation and verification of an optional Code 39 check character. When disabled, any check character in the label is treated as a data character

DEFAULT

Code 39 Check Character Calculation = Don't Calculate

Code 39 Check Character Calculation = Calculate Std Check

Code 39 Check Character Calculation = Calculate Mod 7 Check

Code 39 Check Character Calculation (continued)

Code 39 Check Character Calculation = Enable Italian Post Check

Code 39 Check Character Calculation = Enable Daimler Chrysler Check

Code 39 Check Character Transmission

Enable this option to transmit the check character along with Code 39 barcode data.

Code 39 Check Character Transmission = Don't Send

Code 39 Check Character Transmission = Send

DEFAULT

Code 39 Start/Stop Character Transmission

Enable this option to enable/disable transmission of Code 39 start and stop characters.

DEFAULT

Code 39 Start/Stop Character Transmission = Don't Transmit

Code 39 Start/Stop Character Transmission = Transmit

Code 39 Full ASCII

Enables/disables the translation of Code 39 characters to Code 39 full-ASCII characters.

DEFAULT

Code 39 Full ASCII = Disable

Code 39 Full ASCII = Enable

Code 39 Quiet zones

This feature specifies the number of quiet zones for Code 39 labels. Quiet zones are blank areas at the ends of a bar code, typically 10 times the width of the narrowest bar or space in the label.

Read the Enter/Exit Programming Mode bar code at the top of this page and then one of the following bar codes.

DEFAULT



Quiet zones = Auto



Quiet Zones = Small Quiet Zones on two side

Code 39 Length Control

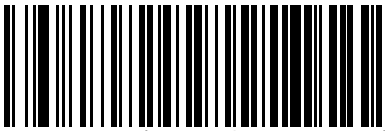
This feature specifies either variable length decoding, fixed length decoding or no check length decoding for the Code 39 symbology.

Variable Length. For variable length decoding, a minimum and maximum length may be set.

Fixed Length. For fixed length decoding, two different lengths may be set.



Code 39 Length Control = Variable Length



Code 39 Length Control = Fixed Length

DEFAULT



Code 39 Length Control = No check

Code 39 Set Length 1

This feature specifies one of the barcode lengths for Code 39. Length 1 is the minimum label length if in Variable Length on page 77, or the first fixed length if in Fixed Length on page 77. Length includes the barcode's data characters only. The length can be set from 0 to 50 characters. See "Set Length" on References on page 189 for more detailed programming instructions.

Table 2 provides examples for setting Length 1.

Table 2. Code 39 Length 1 Setting Examples

STEP	ACTION	EXAMPLES			
1	**Desired Setting**	00 Characters	07 Characters	15 Characters	50 Characters
2	**Scan ENTER/EXIT PROGRAMMING MODE**				
3	**Scan SELECT CODE 39 LENGTH 1 SETTING**				
4	**Scan Two Characters From Appendix B,**	'0' and '0'	'0' and '7'	'1' and '5'	'5' AND '0'
5	**Scan ENTER/EXIT PROGRAMMING MODE**				

Select Code 39 Set Length 1 Setting

Make a mistake? Scan the CANCEL barcode to abort and not save the entry string. You can then start again at the beginning.

CANCEL

DEFAULT **01 = Length 1 is 1 Characters**

Code 39 Set Length 2

This feature specifies one of the barcode lengths for Code 39. Length 2 is the maximum label length if in Variable Length on page 77, or the second fixed length if in Fixed Length on page 77. Length includes the barcode's check, data, and full-ASCII shift characters. The length does not include start/stop characters. See "Set Length" on "References" on page 189 for more detailed programming instructions.

Table 3 provides examples for setting Length 2.

Table 3. Code 39 Length 2 Setting Examples

STEP	ACTION	EXAMPLES			
1	Desired Setting	00 (Ignore This Length)	07 Characters	15 Characters	50 Characters
2	Scan ENTER/EXIT PROGRAMMING MODE				
3	Scan SELECT CODE 39 LENGTH 2 SETTING				
4	Scan Two Characters From Appendix B,	'0' and '0'	'0' and '7'	'1' and '5'	'5' AND '0'
5	Scan ENTER/EXIT PROGRAMMING MODE				

Select Code 39Length 2 Setting

Make a mistake? Scan the CANCEL barcode to abort and not save the entry string. You can then start again at the beginning.

CANCEL

DEFAULT **50 = Length 2 is 50 Characters**

Code 39 Interdigit Ratio

This feature specifies the ratio between an intercharacter space and module for Code 39 labels.

DEFAULT

Code 39 Interdigit Ratio = Disable

Code 39 Interdigit Ratio = 1

Code 39 Interdigit Ratio = 2

Code 39 Interdigit Ratio = 3

Code 39 Interdigit Ratio = 4

Code 39 Interdigit Ratio = 5

Code 39 Interdigit Ratio (continued)

Code 39 Interdigit Ratio = 6

Code 39 Interdigit Ratio = 7

Code 39 Interdigit Ratio = 8

Code 39 Interdigit Ratio = 9

Code 39 Interdigit Ratio = 10

CODE 32 (ITAL PHARMACEUTICAL CODE)

The following options apply to the Code 32 (Italian Pharmaceutical Code) symbology.

Code 32 Enable/Disable

When disabled, the reader will not read Code 32 barcodes.

DEFAULT

Code 32 = Disable

Code 32 = Enable

Code 32 Feature Setting Exceptions

NOTE

The following features are set for Code 32 by using these Code 39 settings:

Code 39 Length Control on page 77
Code 39 Interdigit Ratio on page 80

Code 32 Check Char Transmission

Enable this option to transmit the check character along with Code 32 barcode data.

DEFAULT

Code 32 Check Character Transmission = Don't Send

Code 32 Check Character Transmission = Send

Code 32 Start/Stop Character Transmission

This option enables/disables transmission of Code 32 start and stop characters.

DEFAULT

Code 32 Start/Stop Character Transmission = Don't Transmit

Code 32 Start/Stop Character Transmission = Transmit

CODE 39 CIP (FRENCH PHARMACEUTICAL)

The following options apply to the Code 39 CIP symbology.

Code 39 CIP Enable/Disable

Enables/Disables ability of the reader to decode Code 39 CIP labels.

DEFAULT

Code 39 CIP = Disable

Code 39 CIP = Enable

CODE 128

The following options apply to the Code 128 symbology.

Code 128 Enable/Disable

When disabled, the reader will not read Code 128 barcodes.

Code 128 = Disable

Code 128 = Enable

DEFAULT

Code 128 Check Character Transmission

Enable this option to transmit the check character along with Code 128 barcode data.

DEFAULT

Code 128 Check Character Transmission = Don't Send

Code 128 Check Character Transmission = Send

Code 128 Function Character Transmission

Enables/disables transmission of Code128 function characters 1, 2, 3, and 4.

DEFAULT

Code 128 Function Character Transmission = Don't Send

Code 128 Function Character Transmission = Send

Code 128 Quiet Zones

This feature specifies the number of quiet zones for Code 128 labels. Quiet zones are blank areas at the ends of a barcode and are typically 10 times the width of the narrowest bar or space in the label.

Code 128 Quiet Zones = No Quiet Zones

Code 128 Quiet Zones = Auto

DEFAULT

Code 128 Length Control

This feature specifies either variable length decoding, fixed length decoding or no check length decoding for the Code 128 symbology.

Variable Length. For variable length decoding, a minimum and maximum length may be set.

Fixed Length. For fixed length decoding, two different lengths may be set.

Code 128 Length Control = Variable Length

Code 128 Length Control = Fixed Length

DEFAULT

Code 128 Length Control = No Check

Code 128 Set Length 1

This feature specifies one of the barcode lengths for Code 128. Length 1 is the minimum label length if in Variable Length on page 87, or the first fixed length if in Fixed Length on page 87. The Length includes the barcode's data characters only. The length can be set from 1 to 80 characters. See "Set Length" on References on page 189 for more detailed programming instructions.

Table 4 provides some examples for setting Length 1.

Table 4. Code 128 Length 1 Setting Examples

STEP	ACTION	EXAMPLES			
1	Desired Setting	01 Character	07 Characters	15 Characters	80 Characters
2	Scan ENTER/EXIT PROGRAMMING MODE				
3	Scan SELECT CODE 128 LENGTH 1 SETTING				
4	Scan Two Characters From Appendix B,	'0' and '1'	'0' and '7'	'1' and '5'	'8' and '0'
5	Scan ENTER/EXIT PROGRAMMING MODE				

Select Code 128 Set Length 1 Setting

Make a mistake? Scan the CANCEL barcode to abort and not save the entry string. You can then start again at the beginning.

CANCEL

DEFAULT **01 = Length 1 is 1 Character**

Code 128 Set Length 2

This feature specifies one of the barcode lengths for Code 128. Length 2 is the maximum label length if in Variable Length on page 87, or the second fixed

length if in Fixed Length on page 87. Length includes the barcode's data characters only.

The length can be set from 1 to 80 characters. A setting of 0 specifies to ignore this length (only one fixed length). See "Set Length" on References on page 189 for more detailed programming instructions.

Table 5 provides examples for setting Length 2.

Table 5. Code 128 Length 2 Setting Examples

STEP	ACTION	EXAMPLES			
1	Desired Setting	00 (Ignore This Length)	07 Characters	15 Characters	80 Characters
2	Scan ENTER/EXIT PROGRAMMING MODE				
3	Scan SELECT CODE 128 LENGTH 2 SETTING				
4	Scan Two Characters From Appendix B,	'0' and '0'	'0' and '7'	`1' and `5'	`8' and `0'
5	Scan ENTER/EXIT PROGRAMMING MODE				

.

Select Code 128 Length 2 Setting

Make a mistake? Scan the CANCEL barcode to abort and not save the entry string. You can then start again at the beginning.

CANCEL

DEFAULT **80 = Length 2 is 80 Characters**

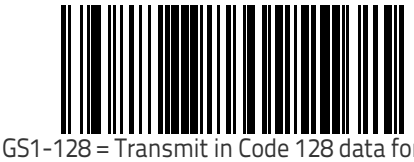
GS1-128

The following options apply to the GS1-128 symbology. (Also known as USS-128, GS1-128, GTIN-128, UCC-128, EAN-128.)

GS1-128 Enable

This option enables/disables the ability of the reader to translate GS1-128 labels to the GS1-128 data format. Options are:

- Transmit GS1-128 labels in Code 128 data format.
- Transmit GS1-128 labels in GS1-128 data format.
- Do not transmit GS1-128 labels.



GS1-128 = Transmit in Code 128 data format



GS1-128 = Transmit in GS1-128 data format





GS1-128 = Do not transmit GS1-128 labels

CODE ISBT 128

The following options apply to the ISBT 128 symbology.

ISBT 128 Concatenation

Use this option to enable/disable ISBT128 concatenation of 2 labels.

DEFAULT

ISBN 128 Concatenation = Disable

ISBN 128 Concatenation = Enable

ISBT 128 Concatenation Mode

Specifies the concatenation mode between Static and Dynamic.

NOTE

This option is only valid when ISBT 128 Concatenation.

DEFAULT

ISBT 128 Concatenation Mode = Static

ISBT 128 Concatenation Mode = Dynamic

ISBT 128 Dynamic Concatenation Timeout

Specifies the timeout used by the ISBT 128 Dynamic Concatenation Mode.

ISBT 128 Dynamic Concatenation Timeout = 50 msec

ISBT 128 Dynamic Concatenation Timeout = 100 msec

DEFAULT

ISBT 128 Dynamic Concatenation Timeout = 200 msec

ISBT 128 Dynamic Concatenation Timeout = 500 msec

ISBT 128 Dynamic Concatenation Timeout = 750 msec

ISBT 128 Dynamic Concatenation Timeout = 1 second

ISBT 128 Advanced Concatenation Options

NOTE

To set up pairs of label types for concatenation, use the Datalogic Aladdin configuration application or contact Datalogic Technical Support.

INTERLEAVED 2 OF 5 (I 2 OF 5)

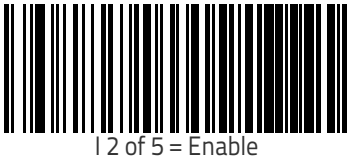
The following options apply to the I 2 of 5 symbology.

I 2 of 5 Enable/Disable

When disabled, the reader will not read I 2 of 5 barcodes.

DEFAULT

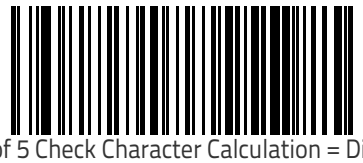

I 2 of 5 = Disable


I 2 of 5 = Enable

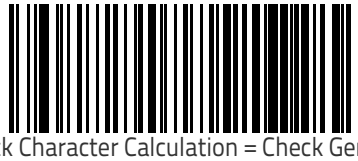
I 2 of 5 Check Character Calculation

This option enables/disables calculation and verification of an optional I 2 of 5 check character.

DEFAULT


I 2 of 5 Check Character Calculation = Disable


I 2 of 5 Check Character Calculation = Check Standard (Modulo 10)


I 2 of 5 Check Character Calculation = Check German Parcel

I 2 of 5 Check Character Calculation (continued)

I 2 of 5 Check Character Calculation = Check DHL

I 2 of 5 Check Character Calculation = Check Daimler Chrysler

I 2 of 5 Check Character Calculation = Check Bosch

I 2 of 5 Check Character Calculation = Italian Post

I 2 of 5 Check Character Transmission

Enable this option to transmit the check character along with I 2 of 5 barcode data.

I 2 of 5 Check Character Transmission = Don't Send

I 2 of 5 Check Character Transmission = Send

DEFAULT

I 2 of 5 Length Control

This feature specifies either variable length decoding, fixed length decoding or no check length decoding for the I 2 of 5 symbology.

Variable Length: For variable length decoding, a minimum and maximum length may be set.

Fixed Length: For fixed length decoding, two different lengths may be set.

I 2 of 5 Length Control = Variable Length

I 2 of 5 Length Control = Fixed Length

DEFAULT

I 2 of 5 Length Control = No Check

I 2 of 5 Set Length 1

This feature specifies one of the barcode lengths for I 2 of 5 Length Control on page 95. Length 1 is the minimum label length if in Variable Length on page 95 Mode, or the first fixed length if in Fixed Length on page 95 Mode. The length includes the barcode's check and data characters. The length can be set from 2 to 50 characters in increments of two. See "Set Length" on References on page 189 for more detailed programming instructions.

Table 6 provides some examples for setting Length 1.

Table 6. I 2 of 5 Length 1 Setting Examples

STEP	ACTION	EXAMPLES			
1	Desired Setting	2 Characters	6 Characters	14 Characters	50 Characters
2	Pad with leading zeroes to yield two digits	02	06	14	50
3	Scan ENTER/EXIT PROGRAMMING MODE				
4	Scan SELECT I 2 of 5 LENGTH 1 SETTING				
5	Scan Two Characters From Appendix B,	'0' and '2'	'0' and '6'	'1' and '4'	'5' AND '0'
6	Scan ENTER/EXIT PROGRAMMING MODE				

Select I 2 of 5 Length 1 Setting

Make a mistake? Scan the CANCEL barcode to abort and not save the entry string. You can then start again at the beginning.

CANCEL

DEFAULT **06 = Length 1 is 6 Characters**

I 2 of 5 Set Length 2

This feature specifies one of the barcode lengths for I 2 of 5 Length Control on page 95. Length 2 is the maximum label length if in Variable Length on page 95 Mode, or the second fixed length if in Fixed Length on page 95 Mode. The length includes the barcode's check and data characters.

The length can be set from 2 to 50 characters in increments of 2. A setting of 0 specifies to ignore this length (only one fixed length). See "Set Length" on References on page 189 for more detailed programming instructions.

Table 7 provides examples for setting Length 2.

Table 7. I 2 of 5 Length 2 Setting Examples

STEP	ACTION	EXAMPLES			
1	Desired Setting	Ignore This Length	4 Characters	14 Characters	50 Characters
2	Pad with leading zeroes to yield two digits	00	04	14	50
3	Scan ENTER/EXIT PROGRAMMING MODE				
4	Scan SELECT I 2 OF 5 LENGTH 2 SETTING				
5	Scan Two Characters From Appendix B,	'0' and '0'	'0' and '4'	'1' and '4'	'5' AND '0'
6	Scan ENTER/EXIT PROGRAMMING MODE				

Select I 2 of 5 Length 2 Setting

Make a mistake? Scan the CANCEL barcode to abort and not save the entry string. You can then start again at the beginning.

CANCEL

DEFAULT **50 = Length 2 is 50 Characters**

FOLLETT 2 OF 5

The following options apply to the Follett 2 of 5 symbology.

Follett 2 of 5 Enable/Disable

Enables/Disables ability of imager to decode Follett 2 of 5 labels.

DEFAULT

Follett 2 of 5 = Disable

Follett 2 of 5 = Enable

INTERLEAVED 2 OF 5 CIP HR

The following options apply to the Interleaved 2 of 5 CIP HR symbology.

Interleaved 2 of 5 CIP HR Enable/Disable

Enables/Disables ability of reader to decode Interleaved 2 of 5 CIP HR labels.

DEFAULT

Interleaved 2 of 5 CIP HR = Disable

Interleaved 2 of 5 CIP HR = Enable

STANDARD 2 OF 5

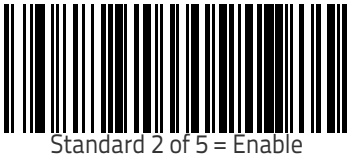
The following options apply to the Standard 2 of 5 symbology.

Standard 2 of 5 Enable/Disable

When disabled, the reader will not read Standard 2 of 5 barcodes.

DEFAULT


Standard 2 of 5 = Disable


Standard 2 of 5 = Enable

Standard 2 of 5 Check Character Calculation

This option enables/disables calculation and verification of an optional Standard 2 of 5 check character.

DEFAULT


Standard 2 of 5 Check Character Calculation = Disable


Standard 2 of 5 Check Character Calculation = Enable

Standard 2 of 5 Check Character Transmission

This feature enables/disables transmission of an optional Standard 2 of 5 check character.

Standard 2 of 5 Check Character Transmission = Don't Send

Standard 2 of 5 Check Character Transmission = Send

DEFAULT

Standard 2 of 5 Length Control

This feature specifies either variable length decoding, fixed length decoding or no check length decoding for the Standard 2 of 5 symbology.

Variable Length: For variable length decoding, a minimum and maximum length may be set.

Fixed Length: For fixed length decoding, two different lengths may be set.

Standard 2 of 5 Length Control = Variable Length

Standard 2 of 5 Length Control = Fixed Length

DEFAULT

Standard 2 of 5 Length Control = No Check

Standard 2 of 5 Set Length 1

This feature specifies one of the barcode lengths for Standard 2 of 5. Length 1 is the minimum label length if in Variable Length on page 100, or the first fixed length if in Fixed Length on page 100. Length includes the barcode's check and data characters. The length can be set from 1 to 50 characters. See "Set Length" on References on page 189 for more detailed programming instructions.

Table 8 provides some examples for setting Length 1.

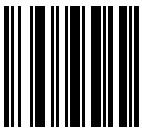
Table 8. Standard 2 of 5 Length 1 Setting Examples

STEP	ACTION	EXAMPLES			
1	**Desired Setting**	01 Character	07 Characters	15 Characters	50 Characters
2	**Scan ENTER/EXIT PROGRAMMING MODE**				
3	**Scan SELECT STANDARD 2 OF 5 LENGTH 1 SETTING**				
4	**Scan Two Characters From** Appendix B,	'0' and '1'	'0' and '7'	'1' and '5'	'5' AND '0'
5	**Scan ENTER/EXIT PROGRAMMING MODE**				



Select Standard 2 of 5 Length 1 Setting

Make a mistake? Scan the CANCEL barcode to abort and not save the entry string. You can then start again at the beginning.



CANCEL

DEFAULT **06 = Length 1 is 6 Characters**

Standard 2 of 5 Set Length 2

This feature specifies one of the barcode lengths for Standard 2 of 5. Length 2 is the maximum label length if in Variable Length on page 100, or the second fixed length if in Fixed Length on page 100. Length includes the barcode's check and data characters.

The length can be set from 1 to 50 characters. A setting of 0 specifies to ignore this length (only one fixed length). See "Set Length" on References on page 189 for more detailed programming instructions.

Table 9 provides examples for setting Length 2.

Table 9. Standard 2 of 5 Length 2 Setting Examples

STEP	ACTION	EXAMPLES			
1	**Desired Setting (pad with leading zeroes)**	00 (Ignore This Length)	07 Characters	15 Characters	50 Characters
2	**Scan ENTER/EXIT PROGRAMMING MODE**				
3	**Scan SELECT STANDARD 2 OF 5 LENGTH 2 SETTING**				
4	**Scan Two Characters From Appendix B,**	'0' and '0'	'0' and '7'	'1' and '5'	'5' AND '0'
5	**Scan ENTER/EXIT PROGRAMMING MODE**				


Select Standard 2 of 5 Length 2 Setting

Make a mistake? Scan the CANCEL barcode to abort and not save the entry string. You can then start again at the beginning.


CANCEL

DEFAULT **50 = Length 2 is 50 Characters**

INDUSTRIAL 2 OF 5

The following options apply to the Industrial 2 of 5 symbology.

Industrial 2 of 5 Enable/Disable

Enables/Disables ability of reader to decode Industrial 2 of 5 labels.

DEFAULT

Industrial 2 of 5 = Disable

Industrial 2 of 5 = Enable

Industrial 2 of 5 Check Character Calculation

Enables/Disables calculation and verification of an optional Industrial 2 of 5 check character.

DEFAULT

Industrial 2 of 5 Check Character Calculation = Disable

Industrial 2 of 5 Check Character Calculation = Enable

Industrial 2 of 5 Check Character Transmission

Enables/disables transmission of an Industrial 2 of 5 check character.

Industrial 2 of 5 Check Character Transmission = Disable

Industrial 2 of 5 Check Character Transmission = Enable

DEFAULT

Industrial 2 of 5 Length Control

This feature specifies either variable length decoding, fixed length decoding or no check length decoding for the Industrial 2 of 5 symbology.

Variable Length: For variable length decoding, a minimum and maximum length may be set.

Fixed Length: For fixed length decoding, two different lengths may be set.

Industrial 2 of 5 Length Control = Variable Length

Industrial 2 of 5 = Fixed Length

DEFAULT

Industrial 2 of 5 Length Control = No Check

Industrial 2 of 5 Set Length 1

This feature specifies one of the barcode lengths for Industrial 2 of 5. Length 1 is the minimum label length if in Variable Length on page 104, or the first fixed length if in Fixed Length on page 104. Length includes the barcode's data characters only. The length can be set from 0 to 50 characters.

Table 10 provides some examples for setting Length 1. See "Set Length" on References on page 189 for more detailed programming instructions.

Table 10. Industrial 2 of 5 Length 1 Setting Examples

STEP	ACTION	EXAMPLES			
1	Desired Setting	00 Characters	07 Characters	15 Characters	50 Characters
2	Scan ENTER/EXIT PROGRAMMING MODE				
3	Scan SELECT INDUSTRIAL 2 OF 5 LENGTH 1 SETTING				
4	Scan Two Characters From Appendix B,	'0' and '0'	'0' and '7'	'1' and '5'	'5' AND '0'
5	Scan ENTER/EXIT PROGRAMMING MODE				

Select Industrial 2 of 5 Set Length 1 Setting

Make a mistake? Scan the CANCEL barcode to abort and not save the entry string. You can then start again at the beginning.

CANCEL

DEFAULT **06 = Length 1 is 6 Characters**

Industrial 2 of 5 Set Length 2

This feature specifies one of the barcode lengths for Industrial 2 of 5. Length 2 is the maximum label length if in Variable Length on page 104, or the second fixed length if in Fixed Length on page 104. Length includes the barcode's check, data, and full–ASCII shift characters. The length does not include start/stop characters.

The length can be set from 1 to 50 characters. A setting of 0 specifies to ignore this length (only one fixed length). See "Set Length" on References on page 189 for more detailed programming instructions.

Table 11 provides examples for setting Length 2.

Table 11. Industrial 2 of 5 Length 2 Setting Examples

STEP	ACTION	EXAMPLES			
1	**Desired Setting**	00 (Ignore This Length)	07 Characters	15 Characters	50 Characters
2	**Scan ENTER/EXIT PROGRAMMING MODE**				
3	**Scan SELECT INDUSTRIAL 2 OF 5 LENGTH 2 SETTING**				
4	**Scan Two Characters From Appendix B,**	'0' and '0'	'0' and '7'	'1' and '5'	'5' AND '0'
5	**Scan ENTER/EXIT PROGRAMMING MODE**				

Select Industrial 2 of5 Length 2 Setting

Make a mistake? Scan the CANCEL barcode to abort and not save the entry string. You can then start again at the beginning.

CANCEL

DEFAULT **50 = Length 2 is 50 Characters**

CODE IATA

The following options apply to the IATA symbology.

IATA Enable/Disable

Enables/Disables the ability of the reader to decode IATA labels.

DEFAULT

IATA = Disable

IATA = Enable

IATA Check Character Transmission

Enables/Disables calculation and verification of an optional Industrial 2 of 5 check character.

IATA Check Character Transmission = Disable

IATA Check Character Transmission = Enable

DEFAULT

DATALOGIC 2 OF 5

The following options apply to the Datalogic 2 of 5 symbology.

Datalogic 2 of 5 Enable/Disable

When disabled, the reader will not read Datalogic 2 of 5 barcodes.

DEFAULT

Datalogic 2 of 5 = Disable

Datalogic 2 of 5 = Enable

Datalogic 2 of 5 Check Character Calculation

This option enables/disables calculation and verification of an optional Datalogic 2 of 5 check character.

DEFAULT

Datalogic 2 of 5 Check Character Calculation = Disable

Datalogic 2 of 5 Check Character Calculation = Enable

Datalogic 2 of 5 Length Control

This feature specifies either variable length decoding, fixed length decoding or no check length decoding for the Datalogic 2 of 5 symbology.

Variable Length: For variable length decoding, a minimum and maximum length may be set.

Fixed Length: For fixed length decoding, two different lengths may be set.

Datalogic 2 of 5 Length Control = Variable Length

Datalogic 2 of 5 Length Control = Fixed Length

DEFAULT

Datalogic 2 of 5 Length Control = No Check

Datalogic 2 of 5 Set Length 1

This feature specifies one of the barcode lengths for Datalogic 2 of 5. Length 1 is the minimum label length if in Variable Length on page 109, or the first fixed length if in Fixed Length on page 109. The length includes the barcode's check and data characters. The length can be set from 2 to 50 characters. See "Set Length" on "References" on page 189 for more detailed programming instructions.

Table 12 provides some examples for setting Length 1.

Table 12. Datalogic 2 of 5 Length 1 Setting Examples

STEP	ACTION	EXAMPLES			
1	Desired Setting	2 Characters	6 Characters	14 Characters	50 Characters
2	Pad with leading zeroes to yield two digits	02	06	14	50
3	Scan ENTER/EXIT PROGRAMMING MODE				
4	Scan SELECT Datalogic 2 of 5 LENGTH 1 SETTING				
5	Scan Two Characters From Appendix B,	'0' and '2'	'0' and '6'	'1' and '4'	'5' AND '0'
6	Scan ENTER/EXIT PROGRAMMING MODE				

Select Datalogic 2 of 5 Length 1 Setting

Make a mistake? Scan the CANCEL barcode to abort and not save the entry string. You can then start again at the beginning.

CANCEL

DEFAULT **01 = Length 1 is 1 Characters**

Datalogic 2 of 5 Set Length 2

This feature specifies one of the barcode lengths for Datalogic 2 of 5. Length 2 is the maximum label length if in Variable Length on page 109, or the second fixed length if in Fixed Length on page 109. The length includes the barcode's check and data characters.

The length can be set from 2 to 50 characters. A setting of 0 specifies to ignore this length (only one fixed length). See "Set Length" on References on page 189 for more detailed programming instructions.

Table 13 provides examples for setting Length 2.

Table 13. Datalogic 2 of 5 Length 2 Setting Examples

STEP	ACTION	EXAMPLES			
1	Desired Setting	Ignore This Length	4 Characters	14 Characters	50 Characters
2	Pad with leading zeroes to yield two digits	00	04	14	50
3	Scan ENTER/EXIT PROGRAMMING MODE				
4	Scan SELECT DATALOGIC 2 OF 5 LENGTH 2 SETTING				
5	Scan Two Characters From Appendix B,	'0' and '0'	'0' and '4'	'1' and '4'	'5' AND '0'
6	Scan ENTER/EXIT PROGRAMMING MODE				

Select Datalogic 2 of 5 Length 2 Setting

Make a mistake? Scan the CANCEL barcode to abort and not save the entry string. You can then start again at the beginning.

CANCEL

DEFAULT **50 = Length 2 is 50 Characters**

CODABAR

The following options apply to the Codabar symbology.

Codabar Enable/Disable

When disabled, the reader will not read Codabar barcodes.

DEFAULT

Codabar = Disable

Codabar = Enable

Codabar Check Character Calculation

Enable this option to enables/disables calculation and verification of an optional Codabar check character. When disabled, any check character in the label is treated as a data character

DEFAULT

Codabar Check Character Calculation = Don't Calculate

Codabar Check Character Calculation = Enable AIM standard check char.

Codabar Check Character Calculation = Enable Modulo 10 check char.

Codabar Check Character Transmission

Enable this option to transmit the check character along with Codabar barcode data.

Codabar Check Character Transmission = Don't Send

Codabar Check Character Transmission = Send

DEFAULT

Codabar Start/Stop Character Transmission

Enable this option to enable/disable transmission of Codabar start and stop characters.

Codabar Start/Stop Character Transmission = Don't Transmit

Codabar Start/Stop Character Transmission = Transmit

DEFAULT

Codabar Start/Stop Character Match

When enabled, this option requires that start and stop characters match.

DEFAULT

Codabar Start/Stop Character Match = Don't Require Match

Codabar Start/Stop Character Match = Require Match

Codabar Quiet Zones

Specifies the number of quiet zones for Codabar labels. Quiet zones are blank areas at the ends of a barcode and are typically 10 times the width of the narrowest bar or space in the label.

Codabar Quiet Zones = Auto

DEFAULT

Codabar Quiet Zones = Small Quiet Zones on two sides

Codabar Length Control

This feature specifies either variable length decoding or fixed length decoding for the Codabar symbology.

Variable Length: For variable length decoding, a minimum and maximum length may be set.

Fixed Length. For fixed length decoding, two different lengths may be set.

Codabar Length Control = Variable Length

Codabar Length Control = Fixed Length

DEFAULT

Codabar Length Control = No Check

Codabar Set Length 1

This feature specifies one of the barcode lengths for Codabar. Length 1 is the minimum label length if in Variable Length on page 115, or the first fixed length if in Fixed Length on page 115. Length includes the barcode's start, stop, check and data characters. The length must include at least one data character. The length can be set from 3 to 50 characters. See "Set Length" on References on page 189 for more detailed programming instructions.

Table 14 provides some examples for setting Length 1.

Table 14. Codabar Length 1 Setting Examples

STEP	ACTION	EXAMPLES			
1	Desired Setting (and pad with leading zeroes)	03 Characters	09 Characters	15 Characters	50 Characters
2	Scan ENTER/EXIT PROGRAMMING MODE				
3	Scan SELECT CODABAR LENGTH 1 SETTING				
4	Scan Two Characters From Appendix B,	'0' and '3'	'0' and '9'	'1' and '5'	'5' AND '0'
5	Scan ENTER/EXIT PROGRAMMING MODE				

Select Codabar Length 1 Setting

Make a mistake? Scan the CANCEL barcode to abort and not save the entry string. You can then start again at the beginning.

CANCEL

DEFAULT **01 = Length 1 is 1 Character**

Codabar Set Length 2

This feature specifies one of the barcode lengths for Codabar. Length 2 is the maximum label length if in Variable Length on page 115, or the second fixed length if in Fixed Length on page 115. The length includes the barcode's start, stop, check and data characters. The length must include at least one data character.

The length can be set from 3 to 50 characters. A setting of 0 specifies to ignore this length (only one fixed length). See "Set Length" on References on page 189 for more detailed programming instructions.

Table 15 provides examples for setting Length 2.

Table 15. Codabar Length 2 Setting Examples

STEP	ACTION	EXAMPLES			
1	Desired Setting (and pad with leading zeroes)	00 Ignore This Length	07 Characters	15 Characters	50 Characters
2	Scan ENTER/EXIT PROGRAMMING MODE				
3	Scan SELECT CODABAR LENGTH 2 SETTING				
4	Scan Two Characters From Appendix B,	'0' and '0'	'0' and '7'	'1' and '5'	'5' AND '0'
5	Scan ENTER/EXIT PROGRAMMING MODE				

Select Codabar Length 2 Setting

Make a mistake? Scan the CANCEL barcode to abort and not save the entry string. You can then start again at the beginning.

CANCEL

DEFAULT **50 = Length 2 is 50 Characters**

ABC CODABAR

The following options apply to the ABC Codabar symbology.

ABC Codabar Enable/Disable

Enables/Disables ability of reader to decode ABC Codabar labels.

DEFAULT

ABC Codabar = Disable

ABC Codabar = Enable

ABC Codabar Concatenation Mode

Specifies the concatenation mode between Static and Dynamic.

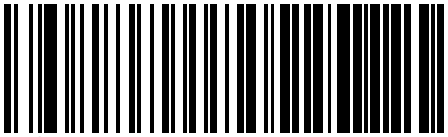
DEFAULT

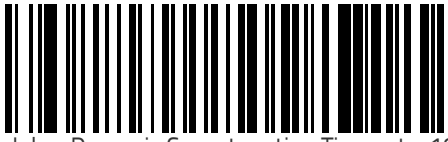
ABC Codabar Concatenation Mode = Static

ABC Codabar Concatenation Mode = Dynamic

ABC Codabar Dynamic Concatenation Timeout

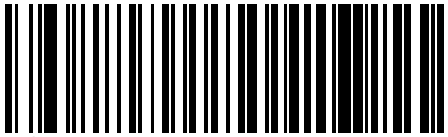
Specifies the timeout in 10-millisecond ticks used by the ABC Codabar Dynamic Concatenation Mode.

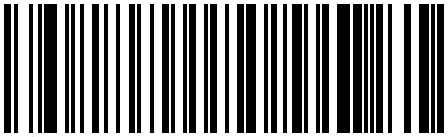

ABC Codabar Dynamic Concatenation Timeout = 50 msec

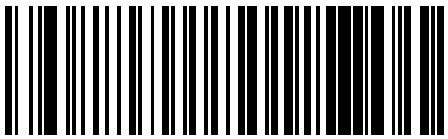

ABC Codabar Dynamic Concatenation Timeout = 100 msec

DEFAULT


ABC Codabar Dynamic Concatenation Timeout = 200 msec


ABC Codabar Dynamic Concatenation Timeout = 500 msec

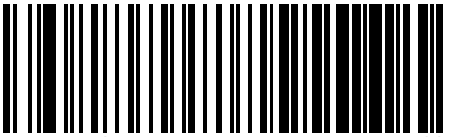

ABC Codabar Dynamic Concatenation Timeout = 750 msec

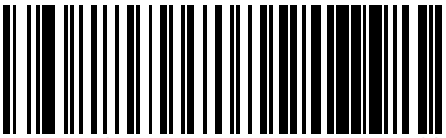

ABC Codabar Dynamic Concatenation Timeout = 1 Second

ABC Codabar Force Concatenation

Forces labels starting or ending with D to be concatenated.

DEFAULT


ABC Codabar Force Concatenation = Disable


ABC Codabar Force Concatenation = Enable

CODE 11

The following options apply to the Code 11 symbology.

Code 11 Enable/Disable

When disabled, the reader will not read Code 11 barcodes.

DEFAULT

Code 11 = Disable

Code 11 = Enable

Code 11 Check Character Calculation

This option enables/disables calculation and verification of optional Code 11 check character.

Code 11 Check Character Calculation = Disable

Code 11 Check Character Calculation = Check C

Code 11 Check Character Calculation = Check K

Code 11 Check Character Calculation = Check C and K

DEFAULT

Code 11 Check Character Transmission

This feature enables/disables transmission of an optional Code 11 check character.

Code 11 Check Character Transmission = Don't Send

Code 11 Check Character Transmission = Send

DEFAULT

Code 11 Length Control

This feature specifies either variable length decoding, fixed length decoding or no check length decoding for the Code 11 symbology.

Variable Length: For variable length decoding, a minimum and maximum length may be set.

Fixed Length: For fixed length decoding, two different lengths may be set.

Code 11 Length Control = Variable Length

Code 11 Length Control = Fixed Length

DEFAULT

Code 11 Length Control = No Check

Code 11 Set Length 1

This feature specifies one of the barcode lengths for Code 11. Length 1 is the minimum label length if in Variable Length on page 122, or the first fixed length if in Fixed Length on page 122. Length includes the barcode's check and data characters. The length can be set from 2 to 50 characters. See "Set Length" on References on page 189 for more detailed programming instructions.

Table 16 provides some examples for setting Length 1.

Table 16. Code 11 Length 1 Setting Examples

STEP	ACTION	EXAMPLES			
1	Desired Setting (pad with leading zeroes)	02 Characters	07 Characters	15 Characters	50 Characters
2	Scan ENTER/EXIT PROGRAMMING MODE				
3	Scan SELECT CODE 11 LENGTH 1 SETTING				
4	Scan Two Characters From Appendix B,	'0' and '2'	'0' and '7'	'1' and '5'	'5' AND '0'
5	Scan ENTER/EXIT PROGRAMMING MODE				

Select Code 11 Set Length 1 Setting

Make a mistake? Scan the CANCEL barcode to abort and not save the entry string. You can then start again at the beginning.

CANCEL

DEFAULT 01 = Length 1 is 1 Character

Code 11 Set Length 2

This feature specifies one of the barcode lengths for Code 11. Length 2 is the minimum label length if in Variable Length on page 122, or the first fixed length if in Fixed Length on page 122. Length includes the barcode's check and data characters.

The length can be set from 2 to 50 characters. A setting of 0 specifies to ignore this length (only one fixed length). See "Set Length" on References on page 189 for more detailed programming instructions.

Table 17 provides examples for setting Length 2.

Table 17. Code 11 Length 2 Setting Examples

STEP	ACTION	EXAMPLES			
1	Desired Setting (pad with leading zeroes)	00 (Ignore This Length)	07 Characters	15 Characters	50 Characters
2	Scan ENTER/EXIT PROGRAMMING MODE				
3	Scan SELECT CODE 11 LENGTH 2 SETTING				
4	Scan Two Characters From Appendix B,	'0' and '0'	'0' and '7'	'0' and 'F'	'3' AND 2'
5	Scan ENTER/EXIT PROGRAMMING MODE				

Select Code 11 Length 2 Setting

Make a mistake? Scan the CANCEL barcode to abort and not save the entry string. You can then start again at the beginning.

CANCEL

DEFAULT **50 = Length 2 is 50 Characters**

GS1 DATABAR™ OMNIDIRECTIONAL

The following options apply to the GS1 DataBar™ Omnidirectional (formerly RSS-14) symbology.

GS1 DataBar™ Omnidirectional Enable/Disable

When disabled, the reader will not read GS1 DataBar™ Omnidirectional bar-codes.

DEFAULT

GS1 DataBar™ Omnidirectional = Disable

GS1 DataBar™ Omnidirectional = Enable

GS1 DataBar™ Omnidirectional GS1-128 Emulation

When enabled, GS1 DataBar™ Omnidirectional barcodes will be translated to the GS1-128 label data format.

DEFAULT

GS1 DataBar™ Omnidirectional GS1-128 Emulation = Disable

GS1 DataBar™ Omnidirectional GS1-128 Emulation = Enable

GS1 DATABAR™ EXPANDED

The following options apply to the GS1 DataBar™ Expanded (formerly RSS Expanded) symbology.

GS1 DataBar™ Expanded Enable/Disable

When disabled, the reader will not read GS1 DataBar™ Expanded barcodes.

DEFAULT

GS1 DataBar™ Expanded = Disable

GS1 DataBar™ Expanded = Enable

GS1 DataBar™ Expanded GS1-128 Emulation

When enabled, GS1 DataBar™ Expanded barcodes will be translated to the GS1-128 label data format.

DEFAULT

GS1 DataBar™ Expanded GS1-128 Emulation = Disable

GS1 DataBar™ Expanded GS1-128 Emulation = Enable

GS1 DataBar™ Expanded Length Control

This feature specifies either variable length decoding, fixed length decoding or no check length decoding for the GS1 DataBar™ Expanded symbology.

Variable Length. For variable-length decoding, a minimum length may be set.

Fixed Length. For fixed-length decoding, two different lengths may be set.

GS1 DataBar™ Expanded Length Control = Variable Length

GS1 DataBar™ Expanded Length Control = Fixed Length

DEFAULT

GS1 DataBar™ Expanded Length Control = No check

GS1 DataBar™ Expanded Set Length 1

This feature specifies one of the barcode lengths for GS1 DataBar™ Expanded. Length 1 is the minimum label length if in Variable Length on page 127, or the first fixed length if in Fixed Length on page 127. Length includes the barcode's data characters only. The length can be set from 1 to 74 characters. See "Set Length" on References on page 189 for more detailed programming instructions.

Table 18 provides some examples for setting Length 1.

Table 18. GS1 DataBar™ Expanded Length 1 Setting Examples

STEP	ACTION	EXAMPLES			
1	Desired Setting	01 Character	07 Characters	52 Characters	74 Characters
2	Scan ENTER/EXIT PROGRAMMING MODE				
3	Scan SELECT GS1 DataBar™ EXPANDED LENGTH 1SETTING				
4	Scan Two Characters From Appendix B,	'0' and '1'	'0' and '7'	'5' and '2'	'7' AND '4'
5	Scan ENTER/EXIT PROGRAMMING MODE				

Select GS1 DataBar™ Expanded Set Length 1 Setting

Make a mistake? Scan the CANCEL barcode to abort and not save the entry string. You can then start again at the beginning.

CANCEL

DEFAULT **01 = Length 1 is 1 Character**

GS1 DataBar™ Expanded Set Length 2

This feature specifies one of the barcode lengths for GS1 DataBar™ Expanded. Length 2 is the minimum label length if in Variable Length on page 127, or the first fixed length if in Fixed Length on page 127. Length includes the barcode's data characters only. The length can be set from 1 to 74 characters. See "Set Length" on References on page 189 for more detailed programming instructions.

Table 19 provides examples for setting Length 2.

Table 19. GS1 DataBar™ Expanded Length 2 Setting Examples

STEP	ACTION	EXAMPLES			
1	Desired Setting	00 (ignore second length)	07 Characters	52 Characters	74 Characters
2	Scan ENTER/EXIT PROGRAMMING MODE				
3	Scan SELECT GS1 DataBar™ EXPANDED LENGTH 2 SETTING				
4	Scan Two Characters From Appendix B,	'0' and '0'	'0' and '7'	'5' and '2'	'7' and '4'
5	Scan ENTER/EXIT PROGRAMMING MODE				

Select GS1 DataBar™ Expanded Set Length 2 Setting

Make a mistake? Scan the CANCEL barcode to abort and not save the entry string. You can then start again at the beginning.

CANCEL

DEFAULT **74 = Length 2 is 74 Characters**

GS1 DATABAR™ LIMITED

The following options apply to the GS1 DataBar™ Limited (formerly RSS Limited) symbology.

GS1 DataBar™ Limited Enable/Disable

When disabled, the reader will not read GS1 DataBar™ Limited barcodes.

DEFAULT

GS1 DataBar™ Limited = Disable

GS1 DataBar™ Limited = Enable

GS1 DataBar™ Limited GS1-128 Emulation

When enabled, GS1 DataBar™ Limited barcodes will be translated to the GS1-128 label data format.

DEFAULT

GS1 DataBar™ Limited GS1-128 Emulation = Disable

GS1 DataBar™ Limited GS1-128 Emulation = Enable

CODE 93

The following options apply to the Code 93 symbology.

Code 93 Enable/Disable

Enables/Disables ability of reader to decode Code 93 labels.

DEFAULT

Code 93 = Disable

Code 93 = Enable

Code 93 Check Character Calculation

Enables/disables calculation and verification of an optional Code 93 check character.

Code 93 Check Character Calculation = Disable

Code 93 Check Character Calculation = Enable Check C

Code 93 Check Character Calculation = Enable Check K

Code 93 Check Character Calculation = Enable Check C and K

DEFAULT

Code 93 Check Character Transmission

Enables/disables transmission of an optional Code 93 check character.

DEFAULT

Code 93 Check Character Transmission = Disable

Code 93 Check Character Transmission = Enable

Code 93 Length Control

This feature specifies either variable length decoding, fixed length decoding or no check length decoding for the Code 93 symbology.

Variable Length: For variable length decoding, a minimum and maximum length may be set.

Fixed Length: For fixed length decoding, two different lengths may be set.

Code 93 Length Control = Variable Length

Code 93 = Fixed Length

DEFAULT

Code 93 Length Control = No Check

Code 93 Set Length 1

Specifies one of the barcode lengths for Code 93. Length 1 is the minimum label length if in Variable Length on page 132, or the first fixed length if in Fixed Length on page 132 Mode. Length includes the barcode's data characters only. The length can be set from 01 to 50 characters. See "Set Length" on References on page 189 for more detailed programming instructions.

Table 20 provides some examples for setting Length 1.

Table 20. Code 93 Length 1 Setting Examples

STEP	ACTION	EXAMPLES			
1	**Desired Setting**	01 Characters	07 Characters	15 Characters	50 Characters
2	**Scan ENTER/EXIT PROGRAMMING MODE**				
3	**Scan SELECT CODE 93 LENGTH 1 SETTING**				
4	**Scan Two Characters From** Appendix B,	'0' and '1'	'0' and '7'	'1' and '5'	'5' AND '0'
5	**Scan ENTER/EXIT PROGRAMMING MODE**				

Select Code 93 Set Length 1 Setting

Make a mistake? Scan the CANCEL barcode to abort and not save the entry string. You can then start again at the beginning.

CANCEL

DEFAULT **01 = Length 1 is 1 Character**

Code 93 Set Length 2

This feature specifies one of the barcode lengths for Code 93. Length 2 is the minimum label length if in Variable Length on page 132, or the first fixed length if in Fixed Length on page 132 Mode. Length includes the barcode's check, data, and full-ASCII shift characters. The length does not include start/stop characters. The length can be set from 1 to 50 characters. A setting of 0 specifies to ignore this length (only one fixed length). See "Set Length" on References on page 189 for more detailed programming instructions.

Table 21 provides examples for setting Length 2.

Table 21. CODE 93 Length 2 Setting Examples

STEP	ACTION	EXAMPLES			
1	**Desired Setting**	00 (Ignore This Length)	07 Characters	15 Characters	50 Characters
2	**Scan ENTER/EXIT PROGRAMMING MODE**				
3	**Scan SELECT CODE 93 LENGTH 2 SETTING**				
4	**Scan Two Characters From Appendix B,**	'0' and '0'	'0' and '7'	'1' and '5'	'5' AND '0'
5	**Scan ENTER/EXIT PROGRAMMING MODE**				

Select Code 93 Length 2 Setting

Make a mistake? Scan the CANCEL barcode to abort and not save the entry string. You can then start again at the beginning.

CANCEL

DEFAULT **50 = Length 2 is 50 Characters**

Code 93 Quiet Zones

Enables/disables quiet zones for Code 93.

Code 93 Quiet Zones = No Quiet Zones

Code 93 Quiet Zones = Auto

DEFAULT

MSI

The following options apply to the MSI symbology.

MSI Enable/Disable

Enables/Disables ability of reader to decode MSI labels.

DEFAULT

MSI = Disable

MSI = Enable

MSI Check Character Calculation

Enables/Disables calculation and verification of an optional MSI check character.

MSI Check Character Calculation = Disable

MSI Check Character Calculation = Enable Mod10

DEFAULT

MSI Check Character Calculation = Enable Mod11/10

MSI Check Character Calculation = Enable Mod10/10

MSI Check Character Transmission

Enables/disables transmission of an MSI check character.

MSI Check Character Transmission = Disable

MSI Check Character Transmission = Enable

DEFAULT

MSI Length Control

This feature specifies either variable length decoding, fixed length decoding or no check length decoding for the MSI symbology.

Variable Length: For variable length decoding, a minimum and maximum length may be set.

Fixed Length: For fixed length decoding, two different lengths may be set.

MSI Length Control = Variable Length

MSI = Fixed Length

DEFAULT

MSI Length Control = No Check

MSI Set Length 1

This feature specifies one of the barcode lengths for MSI. Length 1 is the minimum label length if in Variable Length on page 137, or the first fixed length if in Fixed Length on page 137. Length includes the bar-code's data characters only. The length can be set from 01 to 50 characters. See "Set Length" on References on page 189 for more detailed programming instructions.

Table 22 provides some examples for setting Length 1.

Table 22. MSI Length 1 Setting Examples

STEP	ACTION	EXAMPLES			
1	**Desired Setting**	01 Characters	07 Characters	15 Characters	50 Characters
2	**Scan ENTER/EXIT PROGRAMMING MODE**				
3	**Scan SELECT MSI LENGTH 1 SETTING**				
4	**Scan Two Characters From Appendix B,**	'0' and '1'	'0' and '7'	'1' and '5'	'5' AND '0'
5	**Scan ENTER/EXIT PROGRAMMING MODE**				

Select MSI Set Length 1 Setting

Make a mistake? Scan the CANCEL barcode to abort and not save the entry string. You can then start again at the beginning.

CANCEL

DEFAULT **01 = Length 1 is 1 Character**

MSI Set Length 2

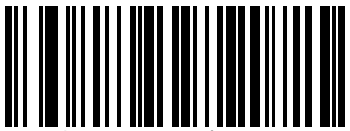
This feature specifies one of the barcode lengths for MSI. Length 2 is the maximum label length if in Variable Length on page 137, or the second fixed length if in Fixed Length on page 137. Length includes the barcode's check, data, and full-ASCII shift characters. The length does not include start/stop characters.

The length can be set from 1 to 50 characters. A setting of 0 specifies to ignore this length (only one fixed length). See "Set Length" on References on page 189 for more detailed programming instructions.

Table 23 provides examples for setting Length 2.

Table 23. MSI Length 2 Setting Examples

STEP	ACTION	EXAMPLES			
1	**Desired Setting**	00 (Ignore This Length)	07 Characters	15 Characters	50 Characters
2	**Scan ENTER/EXIT PROGRAMMING MODE**				
3	**Scan SELECT MSI LENGTH 2 SETTING**				
4	**Scan Two Characters From Appendix B,**	'0' and '0'	'0' and '7'	'1' and '5'	'5' AND '0'
5	**Scan ENTER/EXIT PROGRAMMING MODE**				


Select MSI Length 2 Setting

Make a mistake? Scan the CANCEL barcode to abort and not save the entry string. You can then start again at the beginning.


CANCEL

DEFAULT **50 = Length 2 is 50 Characters**

PLESSEY

The following options apply to the Plessey symbology.

Plessey Enable/Disable

Enables/Disables ability of reader to decode Plessey labels.

DEFAULT

Plessey = Disable

Plessey = Enable

Plessey Check Character Calculation

Enables/Disables calculation and verification of an optional Plessey check character.

Plessey Check Character Calculation = Disable

DEFAULT

Plessey Check Character Calculation =
Enable Plessey std. check char. verification

Plessey Check Character Calculation =
Enable Anker check char. verification

Plessey Check Character Calculation =
Enable Plessey std. and Anker check char verification

Plessey Check Character Transmission

Enables/disables transmission of an MSI check character.

Plessey Check Character Transmission = Disable

Plessey Check Character Transmission = Enable

DEFAULT

Plessey Length Control

This feature specifies either variable length decoding, fixed length decoding or no check length decoding for the Plessey symbology.

Variable Length: For variable length decoding, a minimum and maximum length may be set.

Fixed Length: For fixed length decoding, two different lengths may be set.

Plessey Length Control = Variable Length

Plessey = Fixed Length

DEFAULT

Plessey Length Control = No Check

Plessey Set Length 1

This feature specifies one of the barcode lengths for Plessey Length Control. Length 1 is the minimum label length if in Variable Length on page 141, or the first fixed length if in Fixed Length on page 141. Length includes the barcode's data characters only. The length can be set from 01 to 50 characters. See "Set Length" on References on page 189 for more detailed programming instructions.

Table 24 provides some examples for setting Length 1.

Table 24. Plessey Length 1 Setting Examples

STEP	ACTION	EXAMPLES			
1	Desired Setting	01 Characters	07 Characters	15 Characters	50 Characters
2	Scan ENTER/EXIT PROGRAMMING MODE				
3	Scan SELECT Plessey LENGTH 1 SETTING				
4	Scan Two Characters From Appendix B,	'0' and '1'	'0' and '7'	'1' and '5'	'5' AND '0'
5	Scan ENTER/EXIT PROGRAMMING MODE				

Select Plessey Set Length 1 Setting

Make a mistake? Scan the CANCEL barcode to abort and not save the entry string. You can then start again at the beginning.

CANCEL

DEFAULT **01 = Length 1 is 1 Character**

Plessey Set Length 2

This feature specifies one of the barcode lengths for Plessey Length Control. Length 2 is the maximum label length if in Variable Length on page 141, or the second fixed length if in Fixed Length on page 141. Length includes the bar-code's check, data, and full-ASCII shift characters. The length does not include start/stop characters.

The length can be set from 1 to 50 characters. A setting of 0 specifies to ignore this length (only one fixed length). See "Set Length" on References on page 189 for more detailed programming instructions.

Table 25 provides examples for setting Length 2.

Table 25. Plessey Length 2 Setting Examples

STEP	ACTION	EXAMPLES			
1	**Desired Setting**	00 (Ignore This Length)	07 Characters	15 Characters	50 Characters
2	**Scan ENTER/EXIT PROGRAMMING MODE**				
3	**Scan SELECT PLESSEY LENGTH 2 SETTING**				
4	**Scan Two Characters From Appendix B,**	'0' and '0'	'0' and '7'	'1' and '5'	'5' AND '0'
5	**Scan ENTER/EXIT PROGRAMMING MODE**				

Select Plessey Length 2 Setting

Make a mistake? Scan the CANCEL barcode to abort and not save the entry string. You can then start again at the beginning.

CANCEL

DEFAULT **50 = Length 2 is 50 Characters**

NOTES

2D Symbologies

2D Global Features
• **2D STRUCTURED APPEND** on page 147
• **2D NORMAL/INVERSE SYMBOL CONTROL** on page 148

The reader supports the following 2D symbologies (bar code types). Symbology-dependent options for each symbology are included in this chapter.

2D Symbologies
• **AZTEC CODE** on page 149
• **HAN XIN CODE** on page 152
• **DATA MATRIX** on page 155
• **DOT CODE** on page 159
• **MAXICODE** on page 165
• **PDF417** on page 169
• **MICRO PDF417** on page 172
• **QR CODE** on page 176
• **MICRO QR CODE** on page 179
• **OCR** on page 182
• **UCC COMPOSITE** on page 183
• **POSTAL CODE SELECTION** on page 184

2D GLOBAL FEATURES

The following features are common to all, or in some cases, most of the available 2D symbologies. Default settings are indicated at each feature/option with a green arrow. To set most features:

1. Scan the ENTER/EXIT PROGRAMMING bar code at the top of applicable programming pages.
2. Scan the correct bar code to set the desired programming feature or parameter. You may need to cover unused bar codes on the page, and possibly the facing page, to ensure that the reader reads only the bar code you intend to scan.
3. If additional input parameters are needed, go to Appendix B,, and scan the appropriate characters from the keypad.



NOTE

Additional information about many features can be found in the "References" chapter.

If you make a mistake before the last character, scan the CANCEL bar code to abort and not save the entry string. You can then start again at the beginning.

Complete the programming sequence by scanning the ENTER/EXIT PROGRAMMING bar code to exit Programming Mode.

2D Structured Append

Enables/disables ability of reader to append multiple 2D Codes labels in a structured format. The structured append property is globally applied to the following symbologies, if these are enabled:

- Aztec
- Data Matrix
- PDF 417
- QR Code

DEFAULT

Structured Append = Disable

Structured Append = Enable

2D Normal/Inverse Symbol Control

Specifies the options available for decoding normal/negative printed 2D symbols. This configuration item applies globally to all the 2D symbologies that support that feature according to Standard AIM Specification: Data Matrix, QR, MicroQR, Aztec and Han Xin Code.

Normal/Inverse Symbol Control = Normal

Normal/Inverse Symbol Control = Inverse

DEFAULT

Normal/Inverse Symbol Control = Both Normal and Inverse

SYMBOLOGY SELECTION

AZTEC CODE

Aztec Code Enable / Disable

Enables/disables the ability of the reader to decode Aztec Code labels.

DEFAULT

Aztec Code = Disable

Aztec Code = Enable

Aztec Code Length Control

This feature specifies either variable length decoding, fixed length decoding or no check length decoding for this symbology.

Variable Length. For variable length decoding, a minimum and maximum length may be set.

Fixed Length. For fixed length decoding, two different lengths may be set.

Aztec Code Length Control = Variable Length

Aztec Code Length Control = Fixed Length

DEFAULT

Aztec Code Length Control = No Check

Aztec Code Set Length 1

Specifies one of the bar code lengths for Aztec Code. Length 1 is the minimum label length if in Variable Length on page 149, or the first fixed length if in Fixed Length on page 149. Characters can be set from 0001 to 3,832 characters in increments of 0001 (pad with zeroes). Always use four digits (e.g.: scan the barcodes '0', '0', '0', '2' for setting length = 2). See "Set Length" on References on page 189 for more detailed programming instructions.

Select Aztec Code Length 1 Setting

To configure this feature, scan the ENTER/EXIT PROGRAMMING MODE bar code above, then the bar code at left followed by the digits from the Alphanumeric characters in Appendix B, representing your desired character(s). End by scanning the ENTER/EXIT bar code again.

Make a mistake? Scan the CANCEL bar code to abort and not save the entry string. You can then start again at the beginning.

CANCEL

DEFAULT **0001 = Length 1 is 1 Character**

Aztec Code Set Length 2

This feature specifies one of the bar code lengths for Aztec Code. Length 2 is the minimum label length if in Variable Length on page 149, or the first fixed length if in Fixed Length on page 149. Characters can be set from 0001 to 3,832 characters in increments of 0001 (pad with zeroes). Always use four digits (e.g.: scan the barcodes '0', '0', '0', '2' for setting length = 2). See "Set Length" on References on page 189 for more detailed programming instructions.

Select Aztec Code Length 2 Setting

To configure this feature, scan the ENTER/EXIT PROGRAMMING MODE bar code above, then the bar code at left followed by the digits from the Alphanumeric characters in Appendix B, representing your desired character(s). End by scanning the ENTER/EXIT bar code again.

Make a mistake? Scan the CANCEL bar code to abort and not save the entry string. You can then start again at the beginning.

CANCEL

DEFAULT **Length 2 is 3,832 Characters**

HAN XIN CODE

Han Xin Code Enable / Disable

Enables/disables the ability of the reader to decode Han Xin Code labels.

DEFAULT

Han Xin Code = Disable

Han Xin Code = Enable

Han Xin Code: Code Length Control

This feature specifies either variable length decoding, fixed length decoding or no check length decoding for this symbology.

Variable Length. For variable length decoding, a minimum and maximum length may be set.

Fixed Length. For fixed length decoding, two different lengths may be set.

Han Xin Code Length Control = Variable Length

Han Xin Code Length Control = Fixed Length

DEFAULT

Han Xin Code Length Control = No Check

Han Xin Code Set Length 1

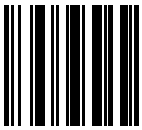
Specifies one of the bar code lengths for Han Xin Code. Length 1 is the minimum label length if in "Variable Length" on page 152, or the first fixed length if in "Fixed Length" on page 152. Characters can be set from 0001 to 7,827 characters in increments of 0001 (pad with zeroes). Always use four digits (e.g.: scan the barcodes '0', '0', '0', '2' for setting length = 2). See "Set Length" on References on page 189 for more detailed programming instructions.



Select Han Xin Code Length 1 Setting

To configure this feature, scan the ENTER/EXIT PROGRAMMING MODE bar code above, then the bar code at left followed by the digits from the Alphanumeric characters in Appendix B, representing your desired character(s). End by scanning the ENTER/EXIT bar code again.

Make a mistake? Scan the CANCEL bar code to abort and not save the entry string. You can then start again at the beginning.



CANCEL

DEFAULT **0001 = Length 1 is 1 Character**

Han Xin Code Set Length 2

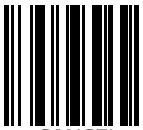
This feature specifies one of the bar code lengths for Han Xin Code. Length 2 is the minimum label length if in "Variable Length" on page 152, or the first fixed length if in "Fixed Length" on page 152. Characters can be set from 0001 to 7,827 characters in increments of 0001 (pad with zeroes). Always use four digits (e.g.: scan the bar-codes '0', '0', '0', '2' for setting length = 2). See "Set Length" on References on page 189 for more detailed programming instructions.



Select Han Xin Code Length 2 Setting

To configure this feature, scan the ENTER/EXIT PROGRAMMING MODE bar code above, then the bar code at left followed by the digits from the Alphanumeric characters in Appendix B, representing your desired character(s). End by scanning the ENTER/EXIT bar code again.

Make a mistake? Scan the CANCEL bar code to abort and not save the entry string. You can then start again at the beginning.



CANCEL

DEFAULT **Length 2 is 7,827 Characters**

DATA MATRIX

Data Matrix Enable / Disable

Enables/disables ability of reader to decode Data Matrix labels.

Data Matrix = Disable

Data Matrix = Enable

DEFAULT

Data Matrix Square/Rectangular Style

Specifies the options available when reading Data Matrix with different form factors. Choices are:

- Square Style
- Rectangular Style
- Both Square and Rectangular Style

The configuration item can also be configured as a bit mask to filter one or more Data Matrix labels with different symbol size AND shape styles.

Data Matrix Dimensions Mask = Square Style

Data Matrix Dimensions Mask = Rectangular Style

DEFAULT

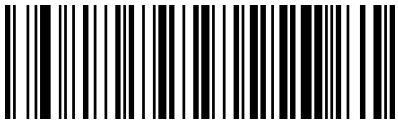
Data Matrix Dimensions Mask =
Both Square and Rectangular Style

Data Matrix Length Control

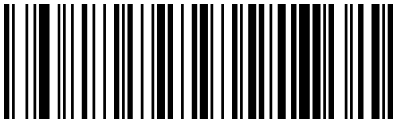
This feature specifies either variable length decoding, fixed length decoding or no check length decoding for this symbology.

Variable Length. For variable length decoding, a minimum and maximum length may be set.

Fixed Length. For fixed length decoding, two different lengths may be set.



Data Matrix Length Control = Variable Length



Data Matrix Length Control = Fixed Length

DEFAULT



Data Matrix Length Control = No Check

Data Matrix Set Length 1

Specifies one of the bar code lengths for Data Matrix. Length 1 is the minimum label length if in Variable Length on page 156, or the first fixed length if in Fixed Length on page 156. Characters can be set from 0001 to 3,116 characters in increments of 0001 (pad with zeroes). Always use four digits (e.g.: scan the barcodes '0', '0', '0', '2' for setting length = 2). See "Set Length" on References on page 189 for more detailed programming instructions.

Select Data Matrix Length 1 Setting

To configure this feature, scan the ENTER/EXIT PROGRAMMING MODE bar code above, then the bar code at left followed by the digits from the Alphanumeric characters in Appendix B, representing your desired character(s). End by scanning the ENTER/EXIT bar code again.

Make a mistake? Scan the CANCEL bar code to abort and not save the entry string. You can then start again at the beginning.

CANCEL

DEFAULT **0001 = Length 1 is 1 Character**

Data Matrix Set Length 2

This feature specifies one of the bar code lengths for Data Matrix. Length 2 is the minimum label length if in Variable Length on page 156, or the first fixed length if in Fixed Length on page 156. Characters can be set from 0001 to 3,116 characters in increments of 0001 (pad with zeroes). Always use four digits (e.g.: scan the barcodes '0', '0', '0', '2' for setting length = 2). See "Set Length" on References on page 189 for more detailed programming instructions.

Select Data Matrix Length 2 Setting

To configure this feature, scan the ENTER/EXIT PROGRAMMING MODE bar code above, then the bar code at left followed by the digits from the Alphanumeric characters in Appendix B, representing your desired character(s). End by scanning the ENTER/EXIT bar code again.

Make a mistake? Scan the CANCEL bar code to abort and not save the entry string. You can then start again at the beginning.

CANCEL

DEFAULT **Length 2 is 3,116 Characters**

DOT CODE

Dot Code Enable / Disable

Enables/disables ability of reader to decode Dot Code labels.

DEFAULT

Dot Code = Disable

Dot Code = Enable

Dot Code Length Control

This feature specifies either variable length decoding, fixed length decoding or no check length decoding for this symbology.

Variable Length. For variable length decoding, a minimum and maximum length may be set.

Fixed Length. For fixed length decoding, two different lengths may be set.

Dot Code Length Control = Variable Length

Dot Code Length Control = Fixed Length

DEFAULT

Dot Code Length Control = No Check

Dot Code Set Length 1

Specifies one of the bar code lengths for Dot Code. Length 1 is the minimum label length if in Variable Length on page 159, or the first fixed length if in Fixed Length on page 159. Characters can be set from 0001 to 9999 characters in increments of 0001 (pad with zeroes). Always use four digits (e.g.: scan the barcodes '0', '0', '0', '2' for setting length = 2). See "Set Length" on References on page 189 for more detailed programming instructions.

Select Dot Code Length 1 Setting

To configure this feature, scan the ENTER/EXIT PROGRAMMING MODE bar code above, then the bar code at left followed by the digits from the Alphanumeric characters in Appendix B, representing your desired character(s). End by scanning the ENTER/EXIT bar code again.

Make a mistake? Scan the CANCEL bar code to abort and not save the entry string. You can then start again at the beginning.

CANCEL

DEFAULT **0001 = Length 1 is 1 Character**

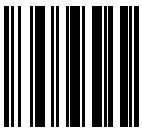
Dot Code Set Length 2

This feature specifies one of the bar code lengths for Dot Code. Length 2 iis the minimum label length if in Variable Length on page 159, or the first fixed length if in Fixed Length on page 159. Characters can be set from 0001 to 9999 characters in increments of 0001 (pad with zeroes). Always use four digits (e.g.: scan the barcodes '0', '0', '0', '2' for setting length = 2). See "Set Length" on References on page 189 for more detailed programming instructions.


Select Dot Code Length 2 Setting

To configure this feature, scan the ENTER/EXIT PROGRAMMING MODE bar code above, then the bar code at left followed by the digits from the Alphanumeric characters in Appendix B, representing your desired character(s). End by scanning the ENTER/EXIT bar code again.

Make a mistake? Scan the CANCEL bar code to abort and not save the entry string. You can then start again at the beginning.


CANCEL

DEFAULT **Length 2 is 3,116 Characters**

Dot Code High Resolution

Enables or disables the high resolution configuration for detecting codes. Useful for decoding high resolution Dot Code.

DEFAULT

Dot Code High Resolution = Disable

Dot Code High Resolution = Enable

Dot Code Constant Position

Enables or disables a mode useful for decoding a series of Dot Codes that will be presented in about the same area of the field of view.

DEFAULT

Dot Code Constant Position = Disable

Dot Code Constant Position = Enable

Dot Code Maximum Dot Diameter

This feature specifies the maximum dot diameter of a Dot Code to be decoded: the measurement unit is pixel and it refers to the diameter of the dots as they appear on the acquired image. Characters can be set from 0001 to 0512 in increments of 1 (pad with zeroes). Always use four digits (e.g.: scan the bar-codes '0', '0', '0', '2' for setting diameter = 2). Default value is 0001.

Maximum Dot Diameter

To configure this feature, scan the ENTER/EXIT PROGRAMMING MODE bar code above, then the bar code at left followed by the digits from the Alphanumeric characters in Appendix B, representing your desired character(s). End by scanning the ENTER/EXIT bar code again.

Make a mistake? Scan the CANCEL bar code to abort and not save the entry string. You can then start again at the beginning.

CANCEL

DEFAULT 0016

Dot Code Minimum Dot Diameter

This feature specifies the minimum dot diameter of a Dot Code to be decoded: the measurement unit is pixel and it refers to the diameter of the dots as they appear on the acquired image. Characters can be set from 0001 to 0512 in increments of 1 (pad with zeroes). Always use four digits (e.g.: scan the bar-codes '0', '0', '0', '2' for setting diameter = 2). Default value is 0001.

Minimum Dot Diameter

To configure this feature, scan the ENTER/EXIT PROGRAMMING MODE bar code above, then the bar code at left followed by the digits from the Alphanumeric characters in Appendix B, representing your desired character(s). End by scanning the ENTER/EXIT bar code again.

Make a mistake? Scan the CANCEL bar code to abort and not save the entry string. You can then start again at the beginning.

CANCEL

DEFAULT 0001

MAXICODE

Maxicode Enable / Disable

Enables/disables ability of reader to decode Maxicode labels.

DEFAULT

Maxicode = Disable

Maxicode = Enable

Maxicode Primary Message Transmission

Enables/disables the transmission of only the Primary Message when the Secondary Message is not readable.

DEFAULT

Maxicode Primary Message Transmission = Disable

Maxicode Primary Message Transmission = Enable

Maxicode Length Control

This feature specifies either variable length decodin, fixed length decoding or no check length decoding for this symbology.

Variable Length. For variable length decoding, a minimum and maximum length may be set.

Fixed Length. For fixed length decoding, two different lengths may be set.

Maxicode Length Control = Variable Length

Maxicode Length Control = Fixed Length

DEFAULT

Maxicode Length Control = No Check

Maxicode Set Length 1

Specifies one of the bar code lengths for Maxicode. Length 1 is the minimum label length if in Variable Length on page 166, or the first fixed length if in Fixed Length on page 166. Characters can be set from 0001 to 0145 characters in increments of 0001 (pad with zeroes). Always use four digits (e.g.: scan the barcodes '0', '0', '0', '2' for setting length = 2). See "Set Length" on References on page 189 for more detailed programming instructions.

Select Maxicode Length 1 Setting

To configure this feature, scan the ENTER/EXIT PROGRAMMING MODE bar code above, then the bar code at left followed by the digits from the Alphanumeric characters in Appendix B, representing your desired character(s). End by scanning the ENTER/EXIT bar code again.

Make a mistake? Scan the CANCEL bar code to abort and not save the entry string. You can then start again at the beginning.

CANCEL

DEFAULT **0001 = Length 1 is 1 Character**

Maxicode Set Length 2

This feature specifies one of the bar code lengths for Maxicode. Length 2 is the minimum label length if in Variable Length on page 166, or the first fixed length if in Fixed Length on page 166. Characters can be set from 0001 to 0138 characters in increments of 0001 (pad with zeroes). Always use four digits (e.g.: scan the barcodes '0', '0', '0', '2' for setting length = 2). See "Set Length" on References on page 189 for more detailed programming instructions.

Select Maxicode Length 2 Setting

To configure this feature, scan the ENTER/EXIT PROGRAMMING MODE bar code above, then the bar code at left followed by the digits from the Alphanumeric characters in Appendix B, representing your desired character(s). End by scanning the ENTER/EXIT bar code again.

Make a mistake? Scan the CANCEL bar code to abort and not save the entry string. You can then start again at the beginning.

CANCEL

DEFAULT **Length 2 is 0145 Characters**

PDF417

PDF417 Enable / Disable

Enables/disables the ability of the reader to decode PDF417 labels.

PDF417 = Disable

PDF417 = Enable

DEFAULT

PDF417 Length Control

This feature specifies either variable length decoding, fixed length decoding or no check length decoding for this symbology.

Variable Length. For variable length decoding, a minimum and maximum length may be set.

Fixed Length. For fixed length decoding, two different lengths may be set.

PDF417 Length Control = Variable Length

PDF417 Length Control = Fixed Length

DEFAULT

PDF417 Length Control = No Check

PDF417 Set Length 1

Specifies one of the bar code lengths for PDF417. Length 1 is the minimum label length if in Variable Length on page 169, or the first fixed length if in Fixed Length on page 169. Length includes the bar code's data characters only. Characters can be set from 0001 to 2,710 characters (pad with zeroes) in increments of 01. Any value greater than 2,710 will be considered to be 2,710. Always use four digits (e.g.: scan the barcodes '0', '0', '0', '2' for setting length = 2). See "Set Length" on References on page 189 for more detailed programming instructions.

Select PDF417 Length 1 Setting

To configure this feature, scan the ENTER/EXIT PROGRAMMING MODE bar code above, then the bar code at left followed by the digits from the Alphanumeric characters in Appendix B, representing your desired character(s). End by scanning the ENTER/EXIT bar code again.

Make a mistake? Scan the CANCEL bar code to abort and not save the entry string. You can then start again at the beginning.

CANCEL

DEFAULT **0001 = Length 1 is 1 Character**

PDF417 Set Length 2

This feature specifies one of the bar code lengths for PDF417. Length 2 is the minimum label length if in Variable Length on page 169, or the first fixed length if in Fixed Length on page 169. Length includes the bar code's check, data, and full-ASCII shift characters. The length does not include start/stop characters. Characters can be set from 01 to 2,710 characters (pad with zeroes) in increments of 01. Any value greater than 2,710 will be considered to be 2,710. Always use four digits (e.g.: scan the bar-codes '0', '0', '0', '2' for setting length = 2). See "Set Length" on References on page 189 for more detailed programming instructions.

Select PDF417 Length 2 Setting

To configure this feature, scan the ENTER/EXIT PROGRAMMING MODE bar code above, then the bar code at left followed by the digits from the Alphanumeric characters in Appendix B, representing your desired character(s). End by scanning the ENTER/EXIT bar code again.

Make a mistake? Scan the CANCEL bar code to abort and not save the entry string. You can then start again at the beginning.

CANCEL

DEFAULT **Length 2 is 2,710 Characters**

MICRO PDF417

Micro PDF417 Enable / Disable

Enables/disables the ability of the reader to decode Micro PDF417 labels.

DEFAULT

Micro PDF417 = Disable

Micro PDF417 = Enable

Micro PDF417 Code 128 GS1-128 Emulation

Specifies which AIM ID to use for MicroPDF labels when doing Code 128 or GS1-128 emulation.

Emulation choices are:

- Micro PDF AIM ID and label type
- Code 128 / EAN128 AIM Id and label type

DEFAULT

Micro PDF417 Code 128 GS1-128 Emulation = Micro PDF AIM ID and label type

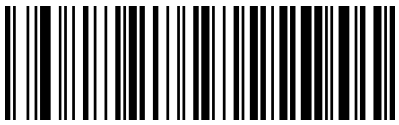
Micro PDF417 Code 128 GS1-128 Emulation = Code 128 / EAN128 AIM ID and label type

Micro PDF417 Length Control

This feature specifies either variable length decoding, fixed length decoding or no check length decoding for this symbology.

Variable Length. For variable length decoding, a minimum and maximum length may be set.

Fixed Length. For fixed length decoding, two different lengths may be set.



Micro PDF417 Length Control = Variable Length



Micro PDF417 Length Control = Fixed Length

DEFAULT



Micro PDF417 Length Control = No Check

Micro PDF417 Set Length 1

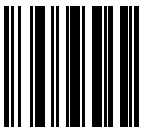
Specifies one of the bar code lengths for Micro PDF417. Length 1 is the minimum label length if in Variable Length on page 173, or the first fixed length if in Fixed Length on page 173. Length includes the bar code's data characters only. Characters can be set from 0001 to 0366 characters (pad with zeroes) in increments of 01. Any value greater than 0366 will be considered to be 0366. Always use four digits (e.g.: scan the barcodes '0', '0', '0', '2' for setting length = 2). See "Set Length" on References on page 189 for more detailed programming instructions.



Select Micro PDF417 Length 1 Setting

To configure this feature, scan the ENTER/EXIT PROGRAMMING MODE bar code above, then the bar code at left followed by the digits from the Alphanumeric characters in Appendix B, representing your desired character(s). End by scanning the ENTER/EXIT bar code again.

Make a mistake? Scan the CANCEL bar code to abort and not save the entry string. You can then start again at the beginning.



CANCEL

DEFAULT **0001 = Length 1 is 1 Character**

Micro PDF417 Set Length 2

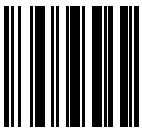
This feature specifies one of the bar code lengths for Micro PDF417. Length 2 is the minimum label length if in Variable Length on page 173, or the first fixed length if in Fixed Length on page 173. Length includes the bar code's data characters only. Characters can be set from 0001 to 0366 characters (pad with zeroes) in increments of 01. Any value greater than 0366 will be considered to be 0366. Always use four digits (e.g.: scan the barcodes '0', '0', '0', '2' for setting length = 2). See "Set Length" on "References" on page 189 for more detailed programming instructions.



Select Micro PDF417 Length 2 Setting

To configure this feature, scan the ENTER/EXIT PROGRAMMING MODE bar code above, then the bar code at left followed by the digits from the Alphanumeric characters in Appendix B, representing your desired character(s). End by scanning the ENTER/EXIT bar code again.

Make a mistake? Scan the CANCEL bar code to abort and not save the entry string. You can then start again at the beginning.



CANCEL

DEFAULT **Length 2 is 0366 Characters**

QR CODE

QR Code Enable / Disable

Enables/disables the ability of the reader to decode QR Code labels.

QR Code = Disable

QR Code = Enable

DEFAULT

QR Code Length Control

This feature specifies either variable length decoding, fixed length decoding or no check length decoding for this symbology.

Variable Length. For variable length decoding, a minimum and maximum length may be set.

Fixed Length. For fixed length decoding, two different lengths may be set.

QR Code Length Control = Variable Length

QR Code Length Control = Fixed Length

DEFAULT

QR Code Length Control = No Check

QR Code Set Length 1

Specifies one of the bar code lengths for QR Code Length Control. Length 1 is the minimum label length if in Variable Length on page 176, or the first fixed length if in Fixed Length on page 176. Characters can be set from 0001 to 7,089 characters in increments of 0001 (pad with zeroes). Always use four digits (e.g.: scan the barcodes '0', '0', '0', '2' for setting length = 2). See "Set Length" on References on page 189 for more detailed programming instructions.

Select QR Code Length 1 Setting

To configure this feature, scan the ENTER/EXIT PROGRAMMING MODE bar code above, then the bar code at left followed by the digits from the Alphanumeric characters in Appendix B, representing your desired character(s). End by scanning the ENTER/EXIT bar code again.

Make a mistake? Scan the CANCEL bar code to abort and not save the entry string. You can then start again at the beginning.

CANCEL

DEFAULT **0001 = Length 1 is 1 Character**

QR Code Set Length 2

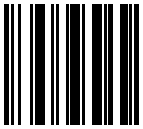
This feature specifies one of the bar code lengths for QR Code Length Control. Length 2 is the minimum label length if in Variable Length on page 176, or the first fixed length if in Fixed Length on page 176. Characters can be set from 0001 to 7,089 characters in increments of 0001 (pad with zeroes). Always use four digits (e.g.: scan the barcodes '0', '0', '0', '2' for setting length = 2). See "Set Length" on References on page 189 for more detailed programming instructions.



Select QR Code Length 2 Setting

To configure this feature, scan the ENTER/EXIT PROGRAMMING MODE bar code above, then the bar code at left followed by the digits from the Alphanumeric characters in Appendix B, representing your desired character(s). End by scanning the ENTER/EXIT bar code again.

Make a mistake? Scan the CANCEL bar code to abort and not save the entry string. You can then start again at the beginning.



CANCEL

DEFAULT **Length 2 is 7,089 Characters**

MICRO QR CODE

Micro QR Code Enable/Disable

Enables/disables the ability of the reader to decode Micro QR Code labels.

DEFAULT

Micro QR Code = Disable

Micro QR Code = Enable

Micro QR Code Length Control

This feature specifies either variable length decoding, fixed length decoding or no check length decoding for this symbology.

Variable Length. For variable length decoding, a minimum and maximum length may be set.

Fixed Length. For fixed length decoding, two different lengths may be set.

Micro QR Code Length Control = Variable Length

Micro QR Code Length Control = Fixed Length

DEFAULT

Micro QR Code Length Control = No Check

Micro QR Code Set Length 1

Specifies one of the bar code lengths for Micro QR Code. Length 1 is the minimum label length if in Variable Length on page 179, or the first fixed length if in Fixed Length on page 179. Characters can be set from 0001 to 0035 characters in increments of 0001 (pad with zeroes). Always use four digits (e.g.: scan the barcodes '0', '0', '0', '2' for setting length = 2). See "Set Length" on References on page 189 for more detailed programming instructions.

Select Micro QR Code Length 1 Setting

To configure this feature, scan the ENTER/EXIT PROGRAMMING MODE bar code above, then the bar code at left followed by the digits from the Alphanumeric characters in Appendix B, representing your desired character(s). End by scanning the ENTER/EXIT bar code again.

Make a mistake? Scan the CANCEL bar code to abort and not save the entry string. You can then start again at the beginning.

CANCEL

DEFAULT **0001 = Length 1 is 1 Character**

Micro QR Code Set Length 2

This feature specifies one of the bar code lengths for Micro QR Code. Length 2 is the minimum label length if in Variable Length on page 179, or the first fixed length if in Fixed Length on page 179. Characters can be set from 0001 to 0035 characters in increments of 0001 (pad with zeroes). Always use four digits (e.g.: scan the barcodes '0', '0', '0', '2' for setting length = 2). See "Set Length" on "References" on page 189 for more detailed programming instructions.

Select Micro QR Code Length 2 Setting

To configure this feature, scan the ENTER/EXIT PROGRAMMING MODE bar code above, then the bar code at left followed by the digits from the Alphanumeric characters in Appendix B, representing your desired character(s). End by scanning the ENTER/EXIT bar code again.

Make a mistake? Scan the CANCEL bar code to abort and not save the entry string. You can then start again at the beginning.

CANCEL

DEFAULT **Length 2 is 0035 Characters**

OCR

Enables or disables the Optical Character Recognition (OCR) capability of the decoder. For additional details and configuration options please contact technical support for assistance.

DEFAULT

OCR = Disable

OCR = Enable

UCC COMPOSITE

UCC Optional Composite Timer

Specifies the amount of time the system will wait for the stacked part of a UCC Composite label before transmitting the linear label without an add-on.

DEFAULT

UCC Optional Composite Timer = Timer Disabled

UCC Optional Composite Timer = 100msec

UCC Optional Composite Timer = 200msec

UCC Optional Composite Timer = 300msec

UCC Optional Composite Timer = 400msec

UCC Optional Composite Timer = 500msec

Postal Code Selection

Enables/disables the ability of the scanner to decode labels of a specific postal symbology.

- Postnet
- Planet
- Royal Mail
- Kix
- Australian Post
- Japanese Post
- IMB
- Swedish Post
- Portuguese Post
- PostNet BB
- NewZealand Postal



PostNet = Enable



PostNet = Disable

DEFAULT



PlaNet = Enable



PlaNet = Disable

DEFAULT



RoyalMail = Enable



RoyalMail = Disable

DEFAULT

Postal Code Selection (continued)



Kix = Enable



Kix = Disable

DEFAULT



Australian Post = Enable

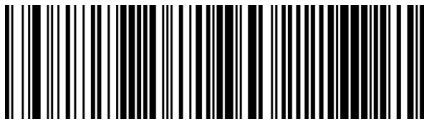


Australian Post = Disable

DEFAULT



Japanese Post = Enable



Japanese Post = Disable

DEFAULT

Postal Code Selection (continued)



IMB Post = Enable



IMB Post = Disable

DEFAULT



Swedish Postal = Enable



Swedish Postal = Disable

DEFAULT



Portugal Post = Enable



Portugal Post = Disable

DEFAULT

Postnet BB Control

Controls the ability of the scanner to decode B and B' fields of Postnet labels.



PostNet BB = Enable



PostNet BB = Disable

DEFAULT

NewZealand Postal Control

Controls the ability of the scanner to decode NewZealand Postal labels.



NewZealand Postal = Enable



NewZealand Postal = Disable

DEFAULT

NOTES

Chapter 4
References

This section contains explanations and examples of selected bar code features. See "Configuration Using Bar Codes" starting on page 37 for the actual bar code labels used to configure the scanner.

RS-232 PARAMETERS on page 190 ▪ RS-232 ONLY on page 190
DATA FORMAT on page 191 ▪ DATA EDITING on page 191 ▪ GLOBAL PREFIX/SUFFIX on page 192 ▪ GLOBAL AIM ID on page 192
SCANNING FEATURES on page 193 ▪ SCANNING FEATURES on page 193
SCANNING FEATURES on page 253 ▪ SCAN MODE on page 193 ▪ FLASH ON TIME on page 194 ▪ FLASH OFF TIME on page 195
SYMBOLOGIES on page 196 ▪ SET LENGTH on page 196

RS-232 Parameters

RS-232 Only

Baud Rate

Baud rate is the number of bits of data transmitted per second. Set the scanner's baud rate to match the baud rate setting of the host device. With an improper baud rate setting, data may not reach the host correctly.

Data Bits

This parameter allows the reader to interface with devices requiring a 7-bit or 8-bit ASCII protocol for sending and receiving data.

Stop Bits

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

Parity

This feature specifies parity required for sending and receiving data. A parity check bit is the most significant bit of each ASCII coded character. Select the parity type according to host device requirements.

- Select None when no parity bit is required.
- Select Odd parity and the parity bit value is set to 0 or 1, based on data, to ensure that an odd number of 1 bits are contained in the coded character.
- Select Even parity and the parity bit value is set to 0 or 1, based on data, to ensure that an even number of 1 bits are contained in the coded character.

Handshaking Control

The data interface consists of an RS-232 port designed to operate either with or without the hardware handshaking lines, Request to Send (RTS), and Clear to Send (CTS). Handshaking Control includes the following options:

- None - no hardware handshaking lines, only TX and RX communication lines are used.
- RTS — RTS is asserted during transmissions. CTS is ignored.
- RTS/CTS — RTS is asserted during transmissions. CTS gates transmissions.
- RTS On/CTS — RTS is always asserted. CTS gates transmissions.

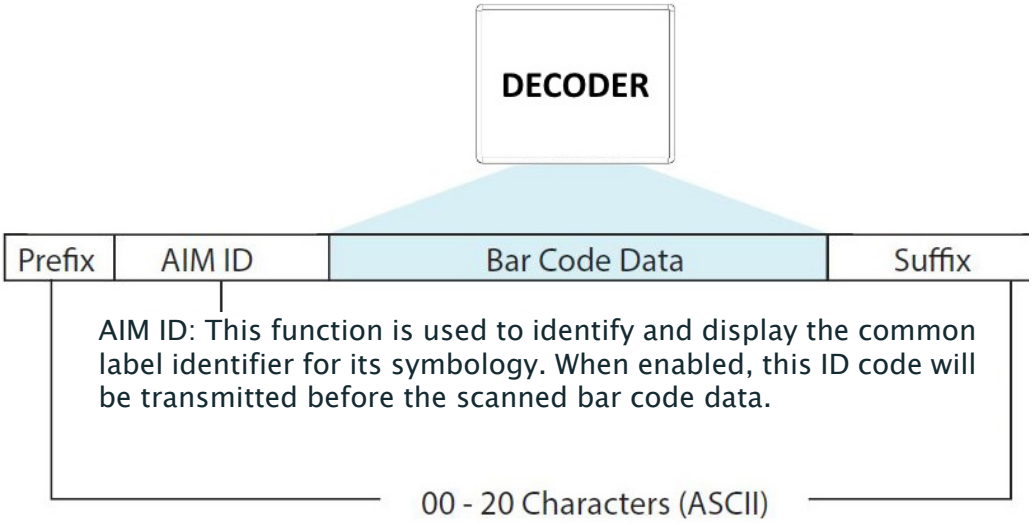
Data Format

Data Editing

When a bar code is scanned, additional information can be sent to the host computer along with the bar code data. This combination of bar code data and supplementary user-defined data is called a "message string." The Data Editing features can be used to build specific user-defined data into a message string.

There are several types of selectable data characters that can be sent before and after scanned data. You can specify if they should be sent with all symbologies, or only with specific symbologies. The following shows the available elements you can add to a message string:

Figure 2. Breakdown of a Message String



NOTE **Additional advanced editing is available. Contact Technical Support (see page 2) for more information.**

Please Keep In Mind...

- Modifying a message string is not a mandatory requirement. Data editing is a sophisticated feature allowing highly customizable output for advanced users. Factory default settings for data editing is typically set to NONE.
- A prefix or suffix may be applied across all symbologies (set via the Global features in **Configuration Using Bar Codes, starting on page 9**).
- You can add any character from the **ASCII Chart on page 202** (from 00-FF) on the inside back cover of this manual as a prefix or suffix.
- Enter prefixes and suffixes in the order in which you want them to appear on the output.

Global Prefix/Suffix

Up to 20 ASCII characters may be added as a prefix (in a position before the bar code data) and/or as a suffix (in a position following the bar code data) as indicated.

Example: Setting a Prefix

In this example, we'll set a prefix for all symbologies.

1. Determine which ASCII character(s) are to be added to scanned bar code data. In this example, we'll add a dollar sign ('$') as a prefix.
2. Go to 57 and scan the ENTER/EXIT PROGRAMMING MODE bar code, then scan the SET GLOBAL PREFIX bar code, on page 43.
3. Reference the **ASCII Chart on page 202** on the inside back cover of this manual to find the hex value assigned to the desired character. The corresponding hex number for the '$' character is 24. To enter this selection code, scan the '2' and '4' bar codes from Appendix **B**.



NOTE

If you make a mistake before the last character, scan the CANCEL bar code to abort and not save the entry string. You can then start again at the beginning.

4. If less than the expected string of 20 characters are selected, scan the ENTER/EXIT bar code to terminate the string.
5. Scan the ENTER/EXIT bar code once again to exit Programming Mode.
6. The resulting message string would appear as follows:
   Scanned bar code data: **12345**
   Resulting message string output: **$12345**

Global AIM ID



NOTE

This feature enables/disables addition of AIM IDs for all symbology types.

AIM label identifiers (as opposed to custom characters you select yourself as with label identifiers) can be included with scanned bar code data. AIM label identifiers consist of three characters as follows:

- A close brace character (ASCII ']'), followed by...
- A code character (see the table below), followed by...
- A modifier character (the modifier character is symbol dependent).

SYMBOLOGY	CHAR	SYMBOLOGY	CHAR
UPC/EAN	E[a]	Code 128/GS1-128	C
Code 39 and Code 32	A	DataBar Omnidirectional, DataBar Expanded	e
Codabar	F	Standard 2 of 5	S
Interleaved 2 of 5	I	ISBN	X[b]
Code 93	G	Code 11	H

a. UPC-A and UPC-E labels are converted to EAN 13 when adding AIM IDs.
b. ISBN (X with a 0 modifier character)

Scanning Features

Scan Mode

Selects the scan operating mode for the reader. Selections are:

Trigger Single: scanning is activated through a DESP command or through the trigger line signal on the interface. When the device is triggered, AIM and illumination are turned on and the scanner attempts to read a label. Scanning is activated until one of the following events occurs:

- the programmable “Scanning Active Time” has elapsed
- a label has been read
- the trigger is released (stop command, trigger signal low)

Trigger Hold Multiple : When the trigger is pulled, scanning starts and the product scans until the trigger is released or ""“Scanning Active Time”" has elapsed. Reading a label does not disable scanning. **Double Read Timeout** prevents undesired multiple reads of the same label while in this mode.

Trigger Pulse Multiple: When the trigger is pulled, continuous scanning is activated until “Scanning Active Time” has elapsed or the trigger has been released and pulled again. **Double Read Timeout** prevents undesired multiple reads of the same label while in this mode.

Flashing: The reader flashes[1] on and off regardless of the trigger status. Flash rate is controlled by **Flash On Time** and **Flash Off Time**. When Flash is ON the reader reads continuously. When Flash is OFF scanning is deactivated.

Always On: No trigger pull is required to read a bar code. Scanning is continuously on. **Double Read Timeout** prevents undesired multiple reads of the same label while in this mode.

[1] Controlled by **Flash On Time**.

Flash On Time

This feature specifies the ON time for the indicator LED while in Flash Mode. The selectable range is 100 to 9,900 milliseconds (0.1 to 9.9 seconds), in 100 millisecond increments.

Follow these instructions to set this feature.

1. Determine the desired setting in milliseconds.
2. Divide the desired setting by 100 (setting is in 100ms increments). Pad the result with leading zeroes to yield two digits. For example: 0 = 00, 5 = 05, 20 = 20, etc.
3. Scan the ENTER/EXIT PROGRAMMING MODE bar code to enter Programming Mode.
4. Scan the bar code: SELECT FLASH ON TIME SETTING on page 52
5. Scan the appropriate two digits from the keypad in **Appendix B** representing the duration which was determined in the steps above. You will hear a two-beep indication after the last character.



NOTE **If you make a mistake before the last character, scan the CANCEL bar code to abort and not save the entry string. You can then start again at the beginning.**

6. Scan the ENTER/EXIT PROGRAMMING MODE bar code to exit Programming Mode.

This completes the procedure. See the table below for examples of how to set this feature.

Table 26. Flash On Time Setting Examples

STEP	ACTION	EXAMPLES			
1	Desired Setting	500ms	1,000ms (1 sec.)	5200ms (5.2 sec.)	9,900ms (9.9 sec.)
2	Divide by 100 (and pad with leading zeroes to yield two digits)	05	10	52	99
3	Scan ENTER/EXIT PROGRAMMING MODE				
4	Scan SELECT FLASH ON TIME SETTING				
5	Scan Two Characters From Appendix B	'0' and '5'	'1' and '0'	'5' and '2'	'9' and '9'
6	Scan ENTER/EXIT PROGRAMMING MODE				

Flash Off Time

This feature specifies the OFF time for the indicator LED while in Flash Mode. The selectable range is 100 to 9,900 milliseconds (0.1 to 9.9 seconds), in 100 millisecond increments.

Follow these instructions to set this feature.

1. Determine the desired setting in milliseconds.
2. Divide the desired setting by 100 (setting is in 100ms increments). Pad the result with leading zeroes to yield two digits. For example: 0 = 00, 5 = 05, 20 = 20, etc.
3. Scan the ENTER/EXIT PROGRAMMING MODE bar code to enter Programming Mode.
4. Scan the bar code: SELECT FLASH OFF TIME SETTING on page 52.
5. Scan the appropriate two digits from the keypad in **Appendix B**, that represent the duration which was determined in the steps above. You will hear a two-beep indication after the last character.



NOTE

If you make a mistake before the last character, scan the CANCEL bar code to abort and not save the entry string. You can then start again at the beginning.

6. Scan the ENTER/EXIT PROGRAMMING MODE bar code to exit Programming Mode.

This completes the procedure. See the table below for examples of how to set this feature.

Table 27. Flash Off Time Setting Examples

STEP	ACTION	EXAMPLES			
1	Desired Setting	500ms	1,000ms (1 sec.)	5200ms (5.2 sec.)	9,900ms (9.9 sec.)
2	Divide by 100 (and pad with leading zeroes to yield two digits)	05	10	52	99
3	Scan ENTER/EXIT PROGRAMMING MODE				
4	Scan SELECT FLASH OFF TIME SETTING				
5	Scan Two Characters From Appendix B	'0' and '5'	'1' and '0'	'5' and '2'	'9' and '9'
6	Scan ENTER/EXIT PROGRAMMING MODE				

Symbologies

Set Length

Length Control allows you to select either variable length decoding or fixed length decoding for the specified symbology.

Variable Length: For variable length decoding, a minimum and maximum length may be set.

Fixed Length: For fixed length decoding, two different lengths may be set.

Set Length 1

This feature specifies one of the bar code lengths for a given symbology. Length 1 is the minimum label length if in Variable Length Mode, or the first fixed length if in Fixed Length Mode.

Reference the **1D Symbologies on page 58** section to view the selectable range (number of characters) for the symbology being set.

Follow these instructions to set this feature:

1. Determine the desired character length. Pad the number with leading zeroes to yield two digits. For example: 0 = 00, 5 = 05, 20 = 20, etc.
2. Scan the ENTER/EXIT PROGRAMMING MODE bar code to enter Programming Mode.
3. Scan the "Select Length 1 Setting" for the symbology being set.
4. Scan the appropriate two digits from the keypad in **Appendix B**, that represent the length setting which was determined in the steps above. You will hear a two-beep indication after the last character.



NOTE **If you make a mistake before the last character, scan the CANCEL bar code to abort and not save the entry string. You can then start again at the beginning.**

5. Scan the ENTER/EXIT PROGRAMMING MODE bar code to exit Programming Mode.

This completes the procedure. See the table below for examples of how to set this feature.

Table 28. Length 1 Setting Examples

STEP	ACTION	EXAMPLES			
1	Desired Setting	01 Character	07 Characters	52 Characters	74 Characters
2	Scan ENTER/EXIT PROGRAMMING MODE				
3	Scan SELECT LENGTH 1SETTING for the desired symbology				
4	Scan Two Characters From Appendix B	'0' and '1'	'0' and '7'	'5' and '2'	'7' AND '4'
5	Scan ENTER/EXIT PROGRAMMING MODE				

Set Length 2

This feature specifies one of the bar code lengths for a given symbology. Length 2 is the maximum label length if in Variable Length Mode, or the second fixed length if in Fixed Length Mode.

Reference the **1D Symbologies on page 58** section to view the selectable range (number of characters) for the symbology being set. A setting of 00 specifies to ignore this length (only one fixed length).

Follow these instructions to set this feature:

1. Determine the desired character length. Pad the number with leading zeroes to yield two digits. For example: 0 = 00, 5 = 05, 20 = 20, etc.
2. Scan the ENTER/EXIT PROGRAMMING MODE bar code to enter Programming Mode.
3. Scan the “Select Length 2 Setting” for the symbology being set.
4. Scan the appropriate two digits from the keypad in <crossref>, that represent the length setting which was determined in the steps above. You will hear a two-beep indication after the last character.



NOTE

If you make a mistake before the last character, scan the CANCEL bar code to abort and not save the entry string. You can then start again at the beginning.

5. Scan the ENTER/EXIT PROGRAMMING MODE bar code to exit Programming Mode.

This completes the procedure. See the table below for examples of how to set this feature.

Table 29. Length 2 Setting Examples

STEP	ACTION	EXAMPLES			
1	Desired Setting	00 (ignore second length)	07 Characters	52 Characters	74 Characters
2	Scan ENTER/EXIT PROGRAMMING MODE				
3	Scan SELECT LENGTH 2 SETTING				
4	Scan Two Characters From Appendix B	‘0’ and ‘0’	‘0’ and ‘7’	‘5’ and ‘2’	‘7’ and ‘4’
5	Scan ENTER/EXIT PROGRAMMING MODE				

Appendix A
Sample Bar Codes

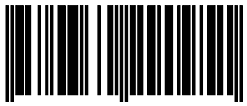
The sample bar codes in this appendix are typical representations for their symbology types.

1D Bar Codes

UPC-A



EAN-13



Code 39



Code 128



Interleaved 2 of 5



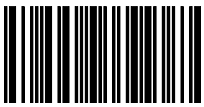
1D Bar Codes - continued

Code 32



345678902

Codabar



13579

Code 93



ABCDEF

Code 11



123456779

GS1 DataBar™ (RSS)

NOTE

GS1 DataBar™ variants must be enabled to read the bar codes below (see "GS1 DataBar™ Omnidirectional" on page 125).

GS1 DataBar™ Expanded Stacked



10293847560192837465019283746029478450366523

GS1 DataBar™ Expanded



1234890hjio9900mnb

GS1 DataBar™ Limited



08672345650916

GS1 DataBar™-14

GS1 DataBar™ Omnidirectional Truncated



55432198673467

GS1 DataBar™ Omnidirectional Stacked



90876523412674

GS1 DataBar™ Omnidirectional Stacked



78123465709811

2D Bar Codes

Aztec



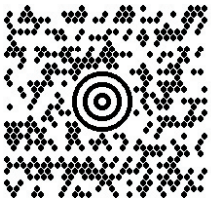
Datamatrix



China Sensible Code



MaxiCode



Test Message

PDF 417



ABCabc

Micro PDF 417



BV17453

QR Code



35900G9

Micro QR Code



123456

UCC Composite

(17) 050923 (10) ABC123



(01) 0 4012345 67890 1 1

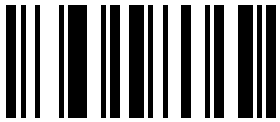
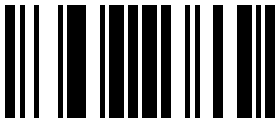
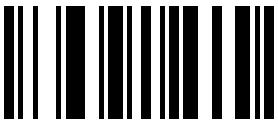
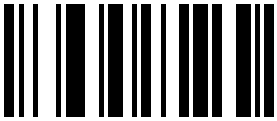
ASCII Chart

ASCII Char.	Hex No.	ASCII Char.	Hex No.	ASCII Char.	Hex No.	ASCII Char.	Hex No.
NUL	00	SP	20	@	40	‘	60
SOH	01	!	21	A	41	a	61
STX	02	“	22	B	42	b	62
ETX	03	#	23	C	43	c	63
EOT	04	$	24	D	44	d	64
ENQ	05	%	25	E	45	e	65
ACK	06	&	26	F	46	f	66
BEL	07	’	27	G	47	g	67
BS	08	(	28	H	48	h	68
HT	09	)	29	I	49	i	69
LF	0A	*	2A	J	4A	j	6A
VT	0B	+	2B	K	4B	k	6B
FF	0C	,	2C	L	4C	l	6C
CR	0D	-	2D	M	4D	m	6D
SO	0E	.	2E	N	4E	n	6E
SI	0F	/	2F	O	4F	o	6F
DLE	10	0	30	P	50	p	70
DC1	11	1	31	Q	51	q	71
DC2	12	2	32	R	52	r	72
DC3	13	3	33	S	53	s	73
DC4	14	4	34	T	54	t	74
NAK	15	5	35	U	55	u	75
SYN	16	6	36	V	56	v	76
ETB	17	7	37	W	57	w	77
CAN	18	8	38	X	58	x	78
EM	19	9	39	Y	59	y	79
SUB	1A	:	3A	Z	5A	z	7A
ESC	1B	;	3B	[	5B	{	7B
FS	1C	<	3C	\	5C	|	7C
GS	1D	=	3D	]	5D	}	7D
RS	1E	>	3E	^	5E	~	7E
US	1F	?	3F	_	5F	DEL	7F

Appendix B
Keypad

Use the barcodes in this appendix to enter numbers as you would select digits/characters from a keypad.

0	
	1
2	
	3
4	
	5

 6	
	 7
 8	
	 9

HID Variable PIN Code

Cancel an incomplete HID Variable PIN Code	
	Exit HID Variable PIN Code
A	
	B
C	
	D
E	
	F

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