

Honeywell

Hyperion 1300g

General Purpose Handheld Linear Scanner

User's Guide

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Product Agency Compliance

USA

FCC Part 15 Subpart B Class B

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio or television technician for help.

Caution: Any changes or modifications made to this equipment not expressly approved by Honeywell International Inc. may void the FCC authorization to operate this equipment.

Note: To maintain compliance with EMC Regulations, cables connected to this device must be shielded cables. This unit has been tested with cables less than 3 meters. Cables greater than 3 meters may not meet class B performance.

UL Statement

UL listed: UL60950-1, 2nd Edition for I.T.E. product safety.

Note: Use only a Listed Limited Power Source (LPS) or Class 2 type power supply with output rated 5 to 5.2Vdc, 1A.

Canada

Industry Canada ICES-003

This Class B digital apparatus complies with Canadian ICES-003. Operation is subject to the following conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Note: To maintain compliance with EMC Regulations, cables connected to this device must be shielded cables. This unit has been tested with cables less than 3 meters. Cables greater than 3 meters may not meet class B performance.

Note: Use only a Listed Limited Power Source (LPS) or Class 2 type power supply with output rated 5 to 5.2Vdc, 1A.

Conformité à la réglementation canadienne

Cet appareil numérique de la Classe B est conforme à la norme NMB-003 du Canada. Son fonctionnement est assujéti aux conditions suivantes :

1. Cet appareil ne doit pas causer de brouillage préjudiciable.
2. Cet appareil doit pouvoir accepter tout brouillage reçu, y compris le brouillage pouvant causer un fonctionnement indésirable.

C-UL Statement

C-UL listed: CSA C22.2 No.60950-1-07, 2nd Edition for I.T.E. product safety.

Europe



The CE marking indicates compliance to 2004/108/EC EMC Directive with Standards EN55022 CLASS B, EN55024, EN61000-3-2, EN61000-3-3. In addition, complies to 2006/95/EC Low Voltage Directive, when shipped with recommended power supply.

For CE-related inquiries, please contact:
Honeywell Imaging & Mobility Europe BV
Nijverheidsweg 9
5627 BT Eindhoven
The Netherlands

Honeywell shall not be liable for use of our product with equipment (i.e., power supplies, personal computers, etc.) that is not CE marked and does not comply with the Low Voltage Directive.

Waste Electrical and Electronic Equipment Information

Honeywell complies with Directive 2002/96/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 January 2003 on waste electrical and electronic equipment (WEEE).

This product has required the extraction and use of natural resources for its production. It may contain hazardous substances that could impact health and the environment, if not properly disposed.

In order to avoid the dissemination of those substances in our environment and to diminish the pressure on the natural resources, we encourage you to use the appropriate take-back systems for product disposal. Those systems will reuse or recycle most of the materials of the product you are disposing in a sound way.



The crossed out wheeled bin symbol informs you that the product should not be disposed of along with municipal waste and invites you to use the appropriate separate take-back systems for product disposal.

If you need more information on the collection, reuse, and recycling systems, please contact your local or regional waste administration.

You may also contact your supplier for more information on the environmental performances of this product.

Germany



GS Mark Applicable if GS logo is marked on product to indicate meeting geprüfte Sicherheit approval.

Russia



Australia/NZ

C-Tick Statement



Conforms to AS/NZS 3548 EMC requirements.

Mexico



Applicable if NOM logo is marked on product. Conforms to NOM-019.

South Korea



Taiwan



BSMI Standard: CNS13438, CNS14336

依據標準 : CNS13438, CNS14336

International

LED Safety Statement

LEDs have been tested and classified as “EXEMPT RISK GROUP” to the standard: IEC 62471:2006.

CB Scheme

Certified to IEC60950-1 Second Edition I.T.E. Product Safety.

Solids and Water Protection

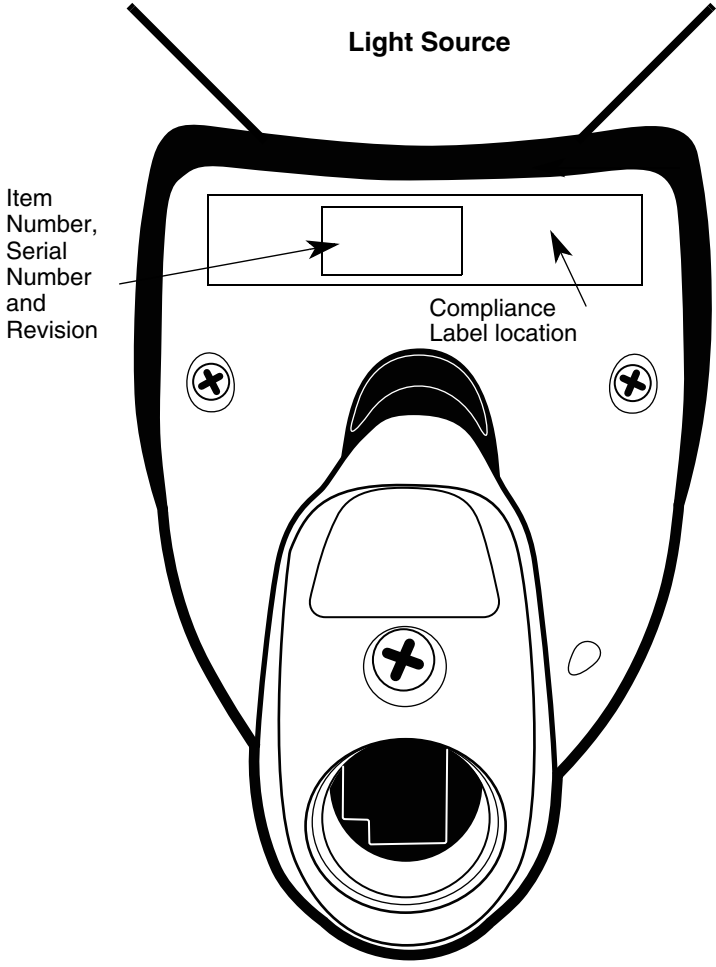
The devices have a rating of IP41, immunity of foreign particles and dripping water tested to Standard EN60259.

Patents

For patent information, please refer to www.honeywellaidc.com/patents.



Required Safety Label Locations



About This Manual

This User's Guide provides installation and programming instructions for the Hyperion 1300g. Product specifications, dimensions, warranty, and customer support information are also included.

Honeywell bar code scanners are factory programmed for the most common terminal and communications settings. If you need to change these settings, programming is accomplished by scanning the bar codes in this guide.

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

Unpacking the Scanner

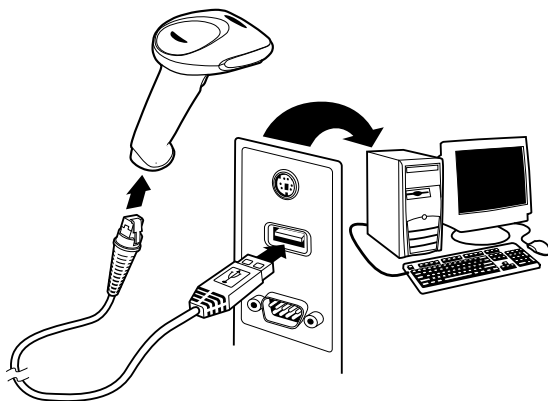
After you open the shipping carton containing the product, take the following steps:

- Check for damage during shipment. Report damage immediately to the carrier who delivered the carton.
- Make sure the items in the carton match your order.
- Save the shipping container for later storage or shipping.

Connecting with USB

A scanner can be connected to the USB port of a computer.

1. Connect the appropriate interface cable to the scanner first, then to the computer.



2. The scanner beeps.

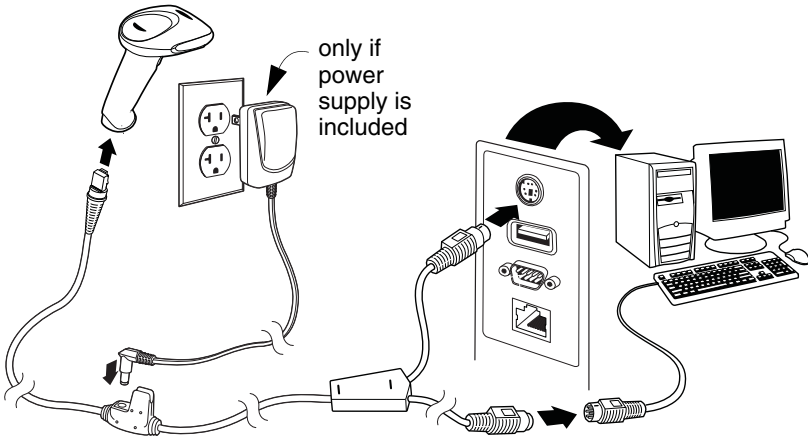
-
3. Verify the scanner operation by scanning a bar code from the [Sample Symbols](#) in the back of this manual.

For additional USB programming and technical information, refer to the Honeywell “USB Application Note,” available at www.honeywellaidc.com.

Connecting with Keyboard Wedge

A scanner can be connected between the keyboard and PC as a “keyboard wedge,” plugged into the serial port or connected to a portable data terminal. The following is an example of a keyboard wedge connection:

1. Turn off power and disconnect the keyboard cables from the back of the terminal/computer.
2. Connect the appropriate interface cable to the scanner and to the terminal/computer.

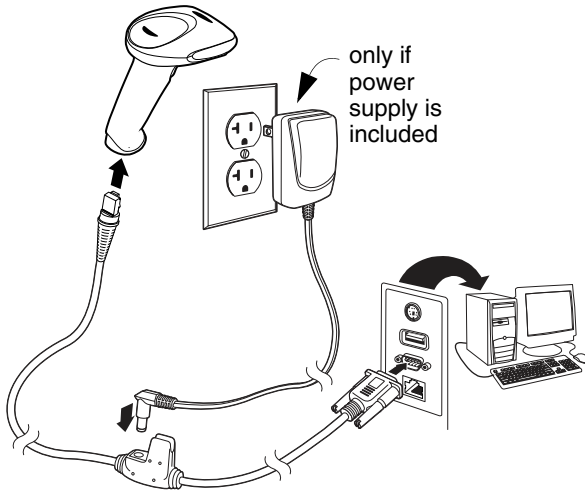


3. Turn the terminal/computer power back on. The scanner beeps.
4. Verify the scanner operation by scanning a bar code from the [Sample Symbols](#) in the back of this manual. The scanner beeps once.

The unit defaults to an IBM PC AT and compatibles keyboard wedge interface with a USA keyboard. A carriage return (CR) suffix is added to bar code data.

Connecting with RS-232 Serial Port

1. Turn off power to the terminal/computer.
2. Connect the appropriate interface cable to the scanner.

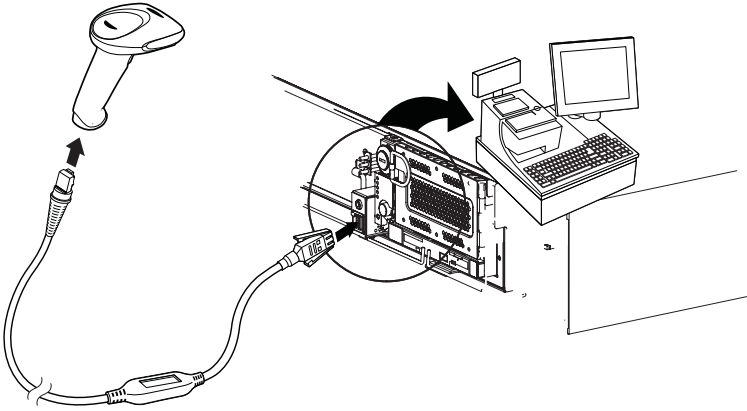


3. Plug the serial connector into the serial port on your computer. Tighten the two screws to secure the connector to the port.
4. Once the scanner has been completely connected, power up the computer.
5. This interface programs 38,400 baud, 8 data bits, no parity, and 1 stop bit.

Connecting with RS485

A scanner can be connected for an IBM POS terminal interface.

-
1. Connect the appropriate interface cable to the device, then to the computer.



2. Turn the terminal/computer power back on. The scanner beeps.
3. Verify the scanner operation by scanning a bar code from the [Sample Symbols](#) in the back of this manual. The scanner beeps once.
4. For further RS485 settings, refer to [RS485](#) on page 2-3.

Reading Techniques

The scanner has a bright red aiming beam that corresponds to its horizontal field of view. The aiming beam should be centered horizontally over the bar code; it will not read if the aiming beam is in any other direction.

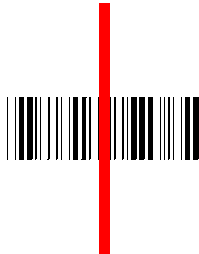
Good Technique



Bad Technique



Bad Technique



The best focus point for reading most code densities is about 5 inches (12.7 cm) from the unit. To read a single bar code or multiple bar codes (on a page or on an object), hold the scanner at an appropriate distance from the target, pull the trigger, and center the aiming beam on the bar code.

Menu Bar Code Security Settings

Honeywell scanners are programmed by scanning menu bar codes or by sending serial commands to the scanner. If you want to restrict the ability to scan menu codes, you can use the Menu Bar Code Security settings. Please contact the nearest technical support office (see [Technical Assistance](#) on page 12-1) for further information.

Resetting the Standard Product Defaults

If you aren't sure what programming options are in your scanner, or you've changed some options and want the factory settings restored, scan the ***Standard Product Default Settings*** bar code below.



DEFAULT.

Standard Product Default Settings

The [Menu Commands](#) starting on [page 9-5](#) lists the factory default settings for each of the commands (indicated by an asterisk (*)) on the programming pages).



Introduction

This chapter describes how to program your system for the desired interface.

Programming the Interface - Plug and Play

Plug and Play bar codes provide instant scanner set up for commonly used interfaces.

Note: After you scan one of the codes, power cycle the host terminal to have the interface in effect.

Keyboard Wedge

If you want your system programmed for an IBM PC AT and compatibles keyboard wedge interface with a USA keyboard, scan the bar code below. Keyboard wedge is the default interface.

Note: The following bar code also programs a carriage return (CR) suffix.



PAP_AT.

IBM PC AT and Compatibles with CR Suffix

Laptop Direct Connect

For most laptops, scanning the **Laptop Direct Connect** bar code allows operation of the scanner in parallel with the integral keyboard. The following Laptop Direct Connect bar code selects terminal ID 03, programs a carriage return (CR) suffix and turns on Emulate External Keyboard ([page 2-10](#)).



PAPLTD.

**Laptop Direct Connect
with CR suffix**

IBM PS2 Keyboard

The following bar code programs you scanner for an IBM PS2 keyboard wedge interface with a USA keyboard.

Note: The following bar code also programs a carriage return (CR) suffix.



PAPPS2.

IBM PS2 with CR Suffix

RS232 Serial Port

The **RS232 Interface** bar code is used when connecting to the serial port of a PC or terminal. The following **RS232 Interface** bar code also programs a carriage return (CR) and a line feed (LF) suffix, baud rate, and data format as indicated below.

Option	Setting
Baud Rate	38,400 bps
Data Format	8 data bits, no parity bit, 1 stop bit



PAP232.

RS232 Interface

RS485

Scan one of the following “Plug and Play” codes to program the scanner for an IBM POS terminal interface.

Note: After scanning one of these codes, you must power cycle the cash register.



PAPP5B.

IBM Port 5B Interface



PAP9B1.

**IBM Port 9B
HHBCR-1 Interface**



PAPP17.

IBM Port 17 Interface



PAP9B2.

**IBM Port 9B
HHBCR-2 Interface**

Each bar code above also programs the following suffixes for each symbology:

Symbology	Suffix	Symbology	Suffix
EAN 8	0C	Code 39	00 0A 0B
EAN 13	16	Interleaved 2 of 5	00 0D 0B
UPC A	0D	Code 128 *	00 0A 0B
UPC E	0A	Code 128 **	00 18 0B

* Suffixes programmed for Code 128 with IBM 4683 Port 5B, IBM 4683 Port 9B HHBCR-1, and IBM 4683 Port 17 Interfaces

**Suffixes programmed for Code 128 with IBM 4683 Port 9 HHBCR-2 Interface

OPOS Mode

The following bar code configures your scanner for OPOS (OLE for Retail Point of Sale) by modifying the following OPOS-related settings:

Option	Setting
Interface	RS232
Baud Rate	38400
RS232 Handshaking	Flow Control, No Timeout
	XON/XOFF Off
	ACK/NAK Off
Data Bits, Stop Bits, and Parity	8 Data, 1 Stop, Parity None
Prefix/Suffix	Clear All Prefixes and Suffixes
	Add Code ID and AIM ID Prefix
	Add CR Suffix
Intercharacter Delay	Off
Symbologies	Enable UPC-A with check digit and number system
	Enable UPC-E0 with check digit
	Enable EAN/JAN-8 with check digit
	Enable EAN/JAN-13 with check digit
	Enable Code 128
	Enable Code 39
	Enable OPOS with automatic disable off



PAPOPS.

OPOS Mode

USB IBM SurePos

Scan the following “Plug and Play” codes to program the scanner for an IBM SurePos (USB handheld scanner) interface.

Note: After scanning the code below, you must power cycle the cash register.



PAPSPH.

**USB IBM SurePos
(USB Handheld Scanner)
Interface**



PAPSPT.

**USB IBM SurePos
(USB Tabletop Scanner)
Interface**

The bar code above also programs the following suffixes for each symbology:

Symbology	Suffix	Symbology	Suffix
EAN 8	0C	Code 39	00 0A 0B
EAN 13	16	Interleaved 2 of 5	00 0D 0B
UPC A	0D	Code 128	00 18 0B
UPC E	0A	Code 39	00 0A 0B

USB PC or Macintosh Keyboard

Scan one of the following codes to program the scanner for USB PC Keyboard or USB Macintosh Keyboard. Scanning these codes also adds a CR and LF.



PAP124.

USB Keyboard (PC)



PAP125.

USB Keyboard (Mac)

USB HID

Scan the following code to program the scanner for USB HID bar code scanners.



USB HID Bar Code Scanner

USB Serial Commands

USB Serial Emulation

Scan the following code to program the scanner to emulate a regular RS232-based COM Port. If you are using a Microsoft® Windows® PC, you will need to download a driver from the Honeywell website (www.honeywellaidc.com). The driver will use the next available COM Port number. Apple® Macintosh computers recognize the scanner as a USB CDC class device and automatically uses a class driver.

Scanning this code also adds a CR and LF.



USB Serial Emulation

Note: No extra configuration (e.g., baud rate) is necessary.

CTS/RTS Emulation



CTS/RTS Emulation On



*** CTS/RTS Emulation Off**

ACK/NAK Mode



USBACK1.

ACK/NAK Mode On



USBACK0.

*** ACK/NAK Mode Off**

Keyboard Country Layout

Scan the appropriate country code below to program the keyboard layout for your country. As a general rule, the following characters are supported, but need special care for countries other than the United States:

@ | \$ # { } [] = / ' \ < > ~



KBDCTY0.

*** United States**



KBDCTY1.

Belgium



KBDCTY8.

Denmark



KBDCTY2.

Finland



KBDCTY3.

France



KBDCTY4.

Germany/Austria



KBDCTY7.

Great Britain



KBDCTY5.

Italy



KBDCTY9.

Norway



KBDCTY10.

Spain



KBDCTY6.

Switzerland

Please refer to Honeywell website (www.honeywellaidc.com) for complete keyboard country support information and applicable interfaces. If you need to program a keyboard for a country other than one listed above, scan the **Program Keyboard Country** bar code below, then scan the numeric bar code(s) for the appropriate country from the inside back cover, then the **Save** bar code.



KBDCTY.

Program Keyboard Country

Keyboard Wedge Modifiers

Keyboard Style

This programs keyboard styles, such as Caps Lock and Shift Lock. *Default = Regular.*

Regular is used when you normally have the Caps Lock key off.



KBDSTY0.

* **Regular**

Caps Lock is used when you normally have the Caps Lock key on.



KBDSTY1.

Caps Lock

Shift Lock is used when you normally have the Shift Lock key on (not common to U.S. keyboards).



KBDSTY2.

Shift Lock

Automatic Caps Lock is used if you change the Caps Lock key on and off. The software tracks and reflects if you have Caps Lock on or off (AT and PS/2 only). This selection can only be used with systems that have an LED, which notes the Caps Lock status.



KBDSTY6.

Automatic Caps Lock

Autocaps via NumLock bar code should be scanned in countries (e.g., Germany, France) where the Caps Lock key cannot be used to toggle Caps Lock. The NumLock option works similarly to the regular Autocaps, but uses the NumLock key to retrieve the current state of the Caps Lock.



KBDSTY7.

Autocaps via NumLock

Emulate External Keyboard should be scanned if you do not have an external keyboard (IBM AT or equivalent).



KBDSTY5.

Emulate External Keyboard

Note: After scanning the Emulate External Keyboard bar code, you must power cycle your computer.

Keyboard Modifiers

This modifies special keyboard features, such as CTRL+ ASCII codes.

Control + ASCII Mode On: The scanner sends key combinations for ASCII control characters for values 00-1F. Windows is the preferred mode. All keyboard country codes are supported. DOS mode is a legacy mode, and it does not support all keyboard country codes. New users should use the Windows mode. Refer to [Keyboard Function Relationships](#), page 7-1 for CTRL+ ASCII Values. *Default = Off*



KBDCAS2.

**Windows Mode Control + ASCII
Mode On**



KBDCAS0.

*** Control + ASCII Mode Off**



KBDCAS1.

**DOS Mode Control + ASCII
Mode On**

Numeric Keypad Mode: Sends numeric characters as if entered from a numeric keypad. *Default = Off*



KBDNPS1.

Numeric Keypad Mode On



KBDNPS0.

*** Numeric Keypad Mode Off**

Automatic Direct Connect Mode: This selection can be used if you have an IBM AT style terminal and the system is dropping characters. *Default = Off*



KBDADC1.

**Automatic Direct
Connect Mode On**



KBDADC0.

*** Automatic Direct Connect
Mode Off**

RS232 Modifiers

RS-232 Baud Rate

Baud Rate sends the data from the scanner to the terminal at the specified rate. The host terminal must be set for the same baud rate as the scanner.

Default = 38,400.



232BAD0.

300



232BAD1.

600



232BAD2.

1200



232BAD3.

2400



232BAD4.

4800



232BAD5.

9600



232BAD6.

19200



232BAD7.

* 38400



232BAD8.

57,600



232BAD9.

115,200

RS-232 Word Length: Data Bits, Stop Bits, and Parity

Data Bits sets the word length at 7 or 8 bits of data per character. If an application requires only ASCII Hex characters 0 through 7F decimal (text, digits, and punctuation), select 7 data bits. For applications which require use of the full ASCII set, select 8 data bits per character. *Default = 8.*

Stop Bits sets the stop bits at 1 or 2. *Default = 1.*

Parity provides a means of checking character bit patterns for validity.
Default = None.



232WRD3.

7 Data, 1 Stop, Parity Even



232WRD0.

7 Data, 1 Stop, Parity None



232WRD6.

7 Data, 1 Stop, Parity Odd



232WRD4.

7 Data, 2 Stop, Parity Even



232WRD1.

7 Data, 2 Stop Parity None



232WRD7.

7 Data, 2 Stop, Parity Odd



232WRD5.

8 Data, 1 Stop, Parity Even



232WRD2.

*** 8 Data, 1 Stop, Parity None**



232WRD8.

8 Data, 1 Stop, Parity Odd

RS-232 Handshaking

RS232 Handshaking allows control of data transmission from the scanner using software commands from the host device. When RTS/CTS is turned **Off**, no data flow control is used.

RTS/CTS

The scanner asserts RTS when it has data to send, and waits indefinitely for CTS to be asserted by the host.

Default = RTS/CTS Off.



232CTS1.

RTS/CTS On



232CTS0.

*** RTS/CTS Off**

XON/XOFF

Standard ASCII control characters can be used to tell the scanner to start sending data (**XON/XOFF On**) or to stop sending data (**XON/XOFF Off**). When the host sends the XOFF character (DC3, hex 13) to the scanner, data transmission stops. To resume transmission, the host sends the XON character (DC1, hex 11). Data transmission continues where it left off when XOFF was sent.

Default = XON/XOFF Off.



232XON1.

XON/XOFF On



232XON0.

*** XON/XOFF Off**

ACK/NAK

After transmitting data, the scanner waits for an ACK character (hex 06) or a NAK character (hex 15) response from the host. If ACK is received, the communications cycle is completed and the scanner looks for more bar codes. If NAK is received, the last set of bar code data is retransmitted and the scanner waits

for ACK/NAK again. Turn on the ACK/NAK protocol by scanning the **ACK/NAK On** bar code below. To turn off the protocol, scan **ACK/NAK Off**. *Default = ACK/NAK Off.*



232ACK1.

ACK/NAK On



232ACK0.

*** ACK/NAK Off**



Good Read Indicators

Beeper – Good Read

The beeper may be programmed On or Off in response to a good read. Turning this option off, only turns off the beeper response to a good read indication. All error and menu beeps are still audible. *Default = On.*



BEPBEP1.

* On



BEPBEP0.

Off

Beeper Volume – Good Read

The beeper volume codes modify the volume of the beep the scanner emits on a good read. *Default = High.*



BEPLVL1.

Low



BEPLVL2.

Medium



BEPLVL3.

*High



BEPLVL0.

Off

Beeper Pitch – Good Read

The beeper pitch codes modify the pitch (frequency) of the beep the scanner emits on a good read. *Default = Medium*



BEPFQ11600.

Low (1600 Hz)



BEPFQ12750.

*** Medium (2750 Hz)**



BEPFQ14200.

High (4200 Hz)

Beeper Duration – Good Read

The beeper duration codes modify the length of the beep the scanner emits on a good read. *Default = Normal.*



BEPBIP0.

*** Normal Beep**



BEPBIP1.

Short Beep

Beeper Pitch – Error

The beeper pitch codes modify the pitch (frequency) of the sound the scanner emits when there is a bad read or error. *Default = 100 Hz.*



BEPFQ2100.

*** Razz (100 Hz)**



BEPFQ22000.

*** Medium (2000 Hz)**



BEPFQ24200.

High (4200 Hz)

LED – Good Read

The LED indicator can be programmed On or Off in response to a good read. *Default = On.*



BEPLED1.

*** On**



BEPLED0.

Off

Number of Beeps – Good Read

The number of beeps of a good read can be programmed from 1 - 9. The same number of beeps will be applied to the beeper and LED in response to a good read. For example, if you program this option to have five beeps, there will be five beeps and five LED flashes in response to a good read. The beeps and LED flashes are in sync with one another. To change the number of beeps,

scan the bar code below and then scan a digit (1-9) bar code and the **Save** bar code on the [Programming Chart](#) inside the back cover of this manual. *Default = One.*



BEPRPT.

Number of Pulses

Good Read Delay

This sets the minimum amount of time before the scanner can read another bar code. *Default = No Delay.*



DLYGRD0.

*** No Delay**



DLYGRD500.

Short Delay (500 ms)



DLYGRD1000.

Medium Delay (1000 ms)



DLYGRD1500.

Long Delay (1500 ms)

User-Specified Good Read Delay

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



DLYGRD.

User-Specified Good Read Delay

Trigger Modes

Manual/Serial Trigger

You can activate the scanner either by pressing the trigger, or using a serial trigger command (see [Trigger Commands](#) on page 9-4). When in manual trigger mode, the scanner scans until a bar code is read, or until the trigger is released.

When in serial mode, the scanner scans until a bar code has been read or until the deactivate command is sent. In serial mode, the scanner can also be set to turn itself off after a specified time has elapsed (see [Read Time-Out](#), which follows).



* Manual/Serial Trigger

Read Time-Out

Use this selection to set a time-out (in milliseconds) of the scanner's trigger when using serial commands to trigger the scanner. Once the scanner has timed out, you can activate the scanner either by pressing the trigger or using a serial trigger command. After scanning the **Read Time-Out** bar code, set the time-out duration (from 0-300,000 milliseconds) by scanning digits from the inside back cover, then scanning **Save**. *Default = 30,000.*



Read Time-Out

Automatic Trigger

The scanner scans continuously using internal LEDs to detect bar codes.



Automatic Trigger

Presentation Mode

Presentation Mode uses ambient light to detect bar codes. The LEDs are off for ambient conditions until a change occurs in the scanner's field of view. Then the LEDs turn on automatically to read the code. If the light level in the room is not high enough, Presentation Mode may not work properly.



Presentation Mode

Continuous Illumination Mode

If you have several bar codes that are close together, you may wish to have a continuous aiming beam on in order to properly aim the scanner at one bar code. Scan the **Continuous Illumination On** bar code to program the scanner for this capability. Once you have the aiming beam over the correct bar code, pull the trigger to read the code. Scan the **Continuous Illumination Off** bar code to turn off this feature.



**Continuous Illumination
Mode On**



*** Continuous Illumination
Mode Off**

Hands Free Time-Out

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

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



TRGPTO.

Hands Free Time-Out

Reread Delay

This sets the time period before the scanner can read the *same* bar code a second time. Setting a reread delay protects against accidental rereads of the same bar code. Longer delays are effective in minimizing accidental rereads at POS (point of sale). Use shorter delays in applications where repetitive bar code scanning is required. *Default = Medium.*

Reread Delay only works when in automatic trigger mode or presentation mode (see [page 3-5](#)).



DLYRRD500.

Short (500 ms)



DLYRRD750.

*** Medium (750 ms)**



DLYRRD1000.

Long (1000 ms)



DLYRRD2000.

Extra Long (2000 ms)

User-Specified Reread Delay

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



DLYRRD.

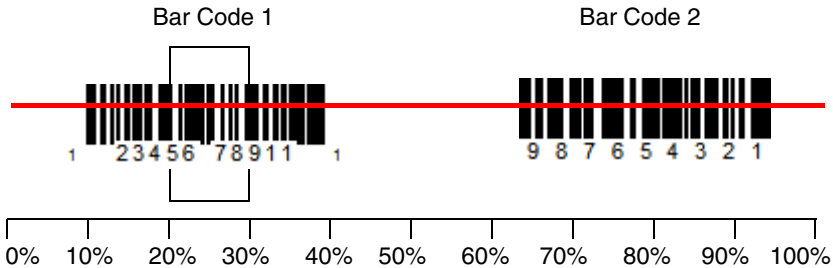
User-Specified Reread Delay

Centering

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

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

In the example below, the red line is the full scanner field of view and the white boxed area is the centering window. The centering window has been set to 20% left and 30% right, as shown in the legend at the bottom. Since Bar Code 1 passes through the centering window, it will be read. Bar Code 2 does not pass through the centering window, so it will not be read.



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



DECWIN1.

Centering On



DECWIND.

*** Centering Off**



DECLFT.

Left of Centering Window



DECRGT.

Right of Centering Window

Output Sequence Overview

Require Output Sequence

When turned off, the bar code data will be output to the host as the scanner decodes it. When turned on, all output data must conform to an edited sequence or the scanner will not transmit the output data to the host device.

Note: This selection is unavailable when the Multiple Symbols Selection is turned on.

Output Sequence Editor

This programming selection allows you to program the scanner to output data (when scanning more than one symbol) in whatever order your application requires, regardless of the order in which the bar codes are scanned. Reading the **Default Sequence** symbol programs the scanner to the Universal values, shown below. These are the defaults. Be **certain** you want to delete or clear all formats before you read the **Default Sequence** symbol.

Note: To make Output Sequence Editor selections, you'll need to know the code I.D., code length, and character match(es) your application requires. Use the Alphanumeric symbols (inside back cover) to read these options.

Note: You must hold the trigger while reading each bar code in a sequence.

To Add an Output Sequence

1. Scan the **Enter Sequence** symbol (see [Require Output Sequence](#), page 3-11).
2. **Code I.D.**
On the [Symbology Chart](#) on page A-1, find the symbology to which you want to apply the output sequence format. Locate the Hex value for that symbology and scan the 2 digit hex value from the Programming Chart (inside back cover).
3. **Length**
Specify what length (up to 9999 characters) of data output will be acceptable for this symbology. Scan the four digit data length from the Programming Chart. (Note: 50 characters is entered as 0050. 9999 is a universal number, indicating all lengths.) When calculating the length, you must count any programmed prefixes, suffixes, or formatted characters as part of the length (unless using 9999).
4. **Character Match Sequences**
On the [ASCII Conversion Chart \(Code Page 1252\)](#), page A-2, find the Hex value that represents the character(s) you want to match. Use the Programming Chart to read the alphanumeric combination that represents the ASCII characters. (99 is the Universal number, indicating all characters.)
5. **End Output Sequence Editor**
Scan **FF** to enter an Output Sequence for an additional symbology, or **Save** to save your entries.

Other Programming Selections

•Discard

This exits without saving any Output Sequence changes.

Output Sequence Editor



SEQBLK.

Enter Sequence



SEQDFT.

Default Sequence

Require Output Sequence

When an output sequence is **Required**, all output data must conform to an edited sequence or the scanner will not transmit the output data to the host device. When it's **On/Not Required**, the scanner will attempt to get the output data to conform to an edited sequence, but if it cannot, the scanner transmits all output data to the host device as is.

When the output sequence is **Off**, the bar code data is output to the host as the scanner decodes it.

Note: This selection is unavailable when the Multiple Symbols Selection is turned on.



SEQ_EN2.

Required



SEQ_EN1.

On/Not Required



SEQ_END.

*** Off**

Output Sequence Example

In this example, you are scanning Code 93, Code 128, and Code 39 barcodes, but you want the image scanner to output Code 39 1st, Code 128 2nd, and Code 93 3rd, as shown below.

Note: Code 93 must be enabled to use this example.



A - Code 39



B - Code 128



C - Code 93

You would set up the sequence editor with the following command line:

```
SEQBLK62999941FF6A999942FF69999943FF
```

The breakdown of the command line is shown below:

SEQBLKsequence editor start command

62 code identifier for **Code 39**

9999 code length that must match for Code 39, 9999 = all lengths

41 start character match for Code 39, 41h = "A"

FF termination string for first code

6A code identifier for **Code 128**

9999 code length that must match for Code 128, 9999 = all lengths

42 start character match for Code 128, 42h = "B"

FF termination string for second code

69 code identifier for **Code 93**

9999 code length that must match for Code 93, 9999 = all lengths

43 start character match for Code 93, 43h = "C"

FF termination string for third code

To program the previous example using specific lengths, you would have to count any programmed prefixes, suffixes, or formatted characters as part of the length. If you use the example on page 3-12, but assume a <CR> suffix and specific code lengths, you would use the following command line:

```
SEQBLK62001241FF6A001342FF69001243FF
```

The breakdown of the command line is shown below:

SEQBLK sequence editor start command
62 code identifier for **Code 39**
0012 A - Code 39 sample length (11) plus CR suffix (1) = 12
41 start character match for Code 39, 41h = "A"
FF termination string for first code
6A code identifier for **Code 128**
0013 B - Code 128 sample length (12) plus CR suffix (1) = 13
42 start character match for Code 128, 42h = "B"
FF termination string for second code
69 code identifier for **Code 93**
0012 C - Code 93 sample length (11) plus CR suffix (1) = 12
43 start character match for Code 93, 43h = "C"
FF termination string for third code

Output Sequence Editor



SEQBLK.

Enter Sequence



SEQDFT.

Default Sequence

Require Output Sequence

When an output sequence is ***Required***, all output data must conform to an edited sequence or the image scanner will not transmit the output data to the host device. When it's ***On/Not Required***, the image scanner will attempt to get the output data to conform to an edited sequence, but if it cannot, the image scanner transmits all output data to the host device as is.

When the output sequence is **Off**, the barcode data is output to the host as the image scanner decodes it.

Note: This selection is unavailable when the Multiple Symbols Selection is turned on.



SEQ_EN2.

Required



SEQ_EN1.

On/Not Required



SEQ_EN0.

***Off**

Multiple Symbols

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



SHOTGN1.

On



SHOTGN0.

*** Off**

No Read

With No Read turned **On**, the scanner sends an “NR” to the host if you pull and release the trigger without reading a code (e.g., bad bar code). If No Read is turned **Off**, the “NR” will not be sent to the host.



SHWNRD1.

On



SHWNRD0.

*** Off**

If you want a different notation than “NR,” for example, “Error,” or “Bad Code,” you can edit the output message using the [Data Formatter](#) (page 5-8). The hex code for the No Read symbol is 9C.

Video Reverse

Video Reverse is used to allow the scanner to read bar codes that are inverted. The “Off” bar code below is an example of this type of bar code.

Note: If additional menuing is required, Video Reverse must be disabled to read the menu bar codes and then re-enabled after menuing is completed.



VIDREV1.

On



VIDREV0REV.

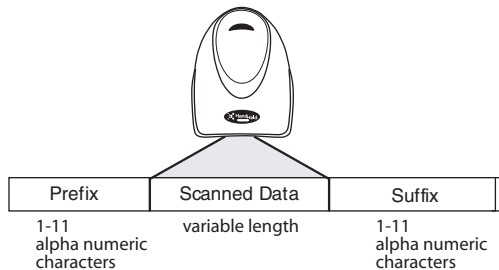
*** Off**



Prefix/Suffix Overview

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

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



Points to Keep In Mind

- It is not necessary to build a message string. The selections in this chapter are only used if you wish to alter the default settings. *Default prefix = None. Default suffix = None.*
- A prefix or suffix may be added or cleared from one symbology or all symbologies.
- You can add any prefix or suffix from the [ASCII Conversion Chart \(Code Page 1252\)](#) on page A-2, plus Code I.D. and AIM I.D.
- You can string together several entries for several symbologies at one time.
- Enter prefixes and suffixes in the order in which you want them to appear on the output.
- When setting up for specific symbologies (as opposed to all symbologies), the specific symbology ID value counts as an added prefix or suffix character.
- The maximum size of a prefix or suffix configuration is 200 characters, which includes header information

To Add a Prefix or Suffix

Step 1. Scan the **Add Prefix** or **Add Suffix** symbol ([page 4-3](#)).

Step 2. Determine the 2 digit Hex value from the Symbology Chart (included in [Appendix A](#)) for the symbology to which you want to apply the prefix or suffix. For example, for Code 128, Code ID is “j” and Hex ID is “6A”.

-
- Step 3.** Scan the 2 hex digits from the [Programming Chart](#) inside the back cover of this manual or scan **9, 9** for all symbologies.
- Step 4.** Determine the hex value from the [ASCII Conversion Chart \(Code Page 1252\)](#) on page A-2, for the prefix or suffix you wish to enter.
- Step 5.** Scan the 2 digit hex value from the [Programming Chart](#) inside the back cover of this manual.
- Step 6.** Repeat Steps 4 and 5 for every prefix or suffix character.
- Step 7.** To add the Code I.D., scan **5, C, 8, 0**.
To add AIM I.D., scan **5, C, 8, 1**.
To add a backslash (\), scan **5, C, 5, C**.

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

- Step 8.** Scan **Save** to exit and save, or scan **Discard** to exit without saving.
Repeat Steps 1-6 to add a prefix or suffix for another symbology.

Example: Add a Suffix to a specific symbology

To send a CR (carriage return) Suffix for UPC only:

- Step 1.** Scan **Add Suffix**.
- Step 2.** Determine the 2 digit hex value from the Symbology Chart (included in the [ASCII Conversion Chart \(Code Page 1252\)](#) on page A-2) for UPC.
- Step 3.** Scan **6, 3** from the [Programming Chart](#) inside the back cover of this manual.
- Step 4.** Determine the hex value from the [ASCII Conversion Chart \(Code Page 1252\)](#) on page A-2, for the CR (carriage return).
- Step 5.** Scan **0, D** from the [Programming Chart](#) inside the back cover of this manual.
- Step 6.** Scan **Save**, or scan **Discard** to exit without saving.

To Clear One or All Prefixes or Suffixes

You can clear a single prefix or suffix, or clear all prefixes/suffixes for a symbology. When you Clear One Prefix (Suffix), the specific character you select is deleted from the symbology you want. When you Clear All Prefixes (Suffixes), all the prefixes or suffixes for a symbology are deleted.

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

Step 2. Determine the 2 digit Hex value from the Symbology Chart (included in [Appendix A](#)) for the symbology from which you want to clear the prefix or suffix.

Step 3. Scan the 2 digit hex value from the [Programming Chart](#) inside the back cover of this manual or scan **9, 9** for all symbologies.

Your change is automatically saved.

To Add a Carriage Return Suffix to All Symbologies

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



**Add CR Suffix
All Symbologies**

Prefix Selections



PREBK2.

Add Prefix



PRECL2.

Clear One Prefix



PRECA2.

Clear All Prefixes

Suffix Selections



SUFBK2.

Add Suffix



SUFCL2.

Clear One Suffix



SUFCA2.

Clear All Suffixes

Function Code Transmit

When this selection is enabled and function codes are contained within the scanned data, the scanner transmits the function code to the terminal. Charts of these function codes are provided in [Supported Interface Keys](#) starting on [page 7-3](#). When the scanner is in keyboard wedge mode, the scan code is converted to a key code before it is transmitted. *Default = Enable.*



RMVFNC0.

*** Enable**



RMVFNC1.

Disable

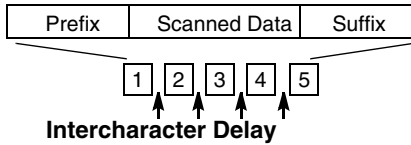
Intercharacter, Interfunction, and Intermassage Delays

Some terminals drop information (characters) if data comes through too quickly. Intercharacter, interfunction, and intermessage delays slow the transmission of data, increasing data integrity.

Each delay is composed of a 5 millisecond step. You can program up to 99 steps (of 5 ms each) for a range of 0-495 ms.

Intercharacter Delay

An intercharacter delay of up to 495 milliseconds may be placed between the transmission of each character of scanned data. Scan the **Intercharacter Delay** bar code below, then scan the number of milliseconds and the **Save** bar code using the [Programming Chart](#) inside the back cover of this manual.



DLYCHR.

Intercharacter Delay

To remove this delay, scan the **Intercharacter Delay** bar code, then set the number of steps to 0. Scan the **Save** bar code using the [Programming Chart](#) inside the back cover of this manual.

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

User Specified Intercharacter Delay

An intercharacter delay of up to 495 milliseconds may be placed after the transmission of a particular character of scanned data. Scan the **Delay Length** bar code below, then scan the number of milliseconds and the **Save** bar code using the [Programming Chart](#) inside the back cover of this manual.

Next, scan the **Character to Trigger Delay** bar code, then the 2-digit hex value for the ASCII character that will trigger the delay [ASCII Conversion Chart \(Code Page 1252\)](#) on page A-2.



DLYCRX.

Delay Length



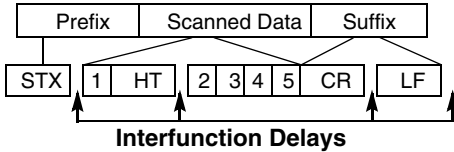
DLY_XX.

Character to Trigger Delay

To remove this delay, scan the **Delay Length** bar code, and set the number of steps to 0. Scan the **Save** bar code using the [Programming Chart](#) inside the back cover of this manual.

Interfunction Delay

An interfunction delay of up to 495 milliseconds may be placed between the transmission of each segment of the message string. Scan the **Interfunction Delay** bar code below, then scan the number of milliseconds and the **Save** bar code using the [Programming Chart](#) inside the back cover of this manual.



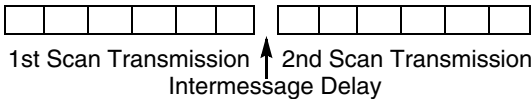
DLYFNC.

Interfunction Delay

To remove this delay, scan the **Interfunction Delay** bar code, then set the number of steps to 0. Scan the **Save** bar code using the [Programming Chart](#) inside the back cover of this manual.

Intermessage Delay

An intermessage delay of up to 495 milliseconds may be placed between each scan transmission. Scan the **Intermessage Delay** bar code below, then scan the number of milliseconds and the **Save** bar code using the [Programming Chart](#) inside the back cover of this manual.



DLYMSG.

Intermessage Delay

To remove this delay, scan the **Intermessage Delay** bar code, then set the number of steps to 0. Scan the **Save** bar code using the [Programming Chart](#) inside the back cover of this manual.

Data Format Editor Introduction

You may use the Data Format Editor to change the scanner's output. For example, you can use the Data Format Editor to insert characters at certain points in bar code data as it is scanned. The selections in the following pages are used only if you wish to alter the output. *Default Data Format setting = None.*

Normally, when you scan a bar code, it gets outputted automatically; however when you do a format, you must use a "send" command (see [Send Commands](#) on page 5-4) within the format program to output data.

Multiple formats may be programmed into the scanner. They are stacked in the order in which they are entered. However, the following list presents the order in which formats are applied:

1. Specific Term ID, Actual Code ID, Actual Length
2. Specific Term ID, Actual Code ID, Universal Length
3. Specific Term ID, Universal Code ID, Actual Length
4. Specific Term ID, Universal Code ID, Universal Length
5. Universal Term ID, Actual Code ID, Actual Length
6. Universal Term ID, Actual Code ID, Universal Length
7. Universal Term ID, Universal Code ID, Actual Length
8. Universal Term ID, Universal Code ID, Universal Length

The maximum size of a data format configuration is 256 bytes, which includes header information. No format can contain more than 50 bytes.

If you have changed data format settings, and wish to clear all formats and return to the factory defaults, scan the **Default Data Format** code below.



DFMDF3.

* **Default Data Format**

To Add a Data Format

Step 1. Scan the **Enter Data Format** symbol ([page 5-8](#)).

Step 2. Select **Primary/Alternate Format**

Determine if this will be your primary data format or one of 3 alternate formats. This allows you to save a total of 4 different data formats. To program your primary format scan **0** using the [Programming Chart](#) inside the back cover of this manual. If you are programming an alter-

nate format, scan **1**, **2**, or **3**, depending on which alternate format you are programming.

Step 3. Terminal Type

Refer to the Supported Terminals Chart ([page 5-4](#)) and locate the Terminal ID number for your PC. Scan three numeric bar codes on the inside back cover to program the scanner for your terminal ID (you must enter 3 digits). For example, scan **0 0 3** for an AT wedge.

Note: The wildcard for all terminal types is 099.

Step 4. Code I.D.

In [Appendix A](#) find the symbology to which you want to apply the data format. Locate the Hex value for that symbology and scan the 2 digit hex value from the [Programming Chart](#) inside the back cover of this manual.

Step 5. Length

Specify what length (up to 9999 characters) of data will be acceptable for this symbology. Scan the four digit data length from the [Programming Chart](#) inside the back cover of this manual. (Note: 50 characters is entered as 0050. 9999 is a universal number, indicating all lengths.)

Step 6. Editor Commands

Refer to the Format Editor Commands Chart ([page 5-4](#)). Scan the symbols that represent the command you want to enter. 94 alphanumeric characters may be entered for each symbology data format.

Step 7. Scan **Save** from the [Programming Chart](#) inside the back cover of this manual to save your entries.



DFMBK3.

Enter Data Format



MNUSAV.

Save



MNUABT.

Discard

Other Programming Selections

- **Clear One Data Format**

This deletes one data format for one symbology. If you are clearing the primary format, scan **0** from the [Programming Chart](#) inside the back cover of this manual. If you are clearing an alternate format, scan **1**, **2**, or **3**, depending on the alternate format you are clearing. Scan the Terminal Type (refer to the Supported Terminals Chart on [page 5-4](#)), Code I.D. (refer to the [Symbology Chart](#) on page A-1), and the bar code data length for the specific data format that you want to delete. All other formats remain unaffected.

- **Save** from the [Programming Chart](#) inside the back cover of this manual
This exits, saving any Data Format changes.

- **Discard** from the [Programming Chart](#) inside the back cover of this manual
This exits without saving any Data Format changes.



DFMCL3.

Clear One Data Format



DFMCA3.

Clear All Data Formats



MNUSAV.

Save



MNUABT.

Discard

Terminal ID Table

<u>Terminal</u>	<u>Model(s)</u>	<u>Terminal ID</u>
IBM	AT, PS/2 30–286, 50, 55SX, 60, 70, 70–061, 70–121, 80	003
	USB SurePOS Handheld Scanner	128
	USB SurePOS Tabletop Scanner	129
RS232	TTL	000
RS485	IBM Tailgate 4682	051
USB	Com Port	130
	PC Keyboard	124*
	Mac Keyboard	125
	HID POS	131

* Factory default setting

Data Format Editor Commands

Send Commands

Send all Characters

- F1 Include in the output message all of the characters from the input message, starting from current cursor position, followed by an insert character. *Syntax = F1xx* where xx stands for the insert character's hex value for its ASCII code. Refer to [ASCII Conversion Chart \(Code Page 1252\)](#) on page A-2 for decimal, hex and character codes.
- F2 Include in the output message a number of characters followed by an insert character. Start from the current cursor position and continue for “nn” characters or through the last character in the input message, followed by character “xx.” *Syntax = F2nnxx* where nn stands for the numeric value (00-99) for the number of characters, and xx stands for the insert character's hex value for its ASCII code.
Refer to [ASCII Conversion Chart \(Code Page 1252\)](#) on page A-2 for decimal, hex and character codes.

Send all characters up to a particular character

- F3 Include in the output message all characters from the input message, starting with the character at the current cursor position and continuing to, but not including, the search character “ss,” followed by an insert character. The cursor is moved forward to the “ss” character. *Syntax = F3ssxx* where ss stands for the search character's hex value for its ASCII code, and xx stands for the insert character's hex value for its ASCII code.

Refer to [ASCII Conversion Chart \(Code Page 1252\)](#) on page A-2 for decimal, hex and character codes.

Send all but the last characters

E9 Include in the output message all but the last “nn” characters, starting from the current cursor position. The cursor is moved forward to one position past the last input message character included. *Syntax = E9nn* where nn stands for the numeric value (00-99) for the number of characters that will not be sent at the end of the message.

Insert a character multiple times

F4 Send “xx” character “nn” times in the output message, leaving the cursor in the current position. *Syntax = F4xxnn* where xx stands for the insert character’s hex value for its ASCII code, and nn is the numeric value (00-99) for the number of times it should be sent.
Refer to the [ASCII Conversion Chart \(Code Page 1252\)](#) on page A-4 for decimal, hex and character codes.

Move Commands

Move the cursor forward a number of characters

F5 Move the cursor ahead “nn” characters from current cursor position.
Syntax = F5nn where nn is the numeric value (00-99) for the number of characters the cursor should be moved ahead.

Move the cursor backward a number of characters

F6 Move the cursor back “nn” characters from current cursor position.
Syntax = F6nn where nn is the numeric value (00-99) for the number of characters the cursor should be moved back.

Move the cursor to the beginning

F7 Move the cursor to the first character in the input message. *Syntax = F7.*

Move the cursor to the end

EA Move the cursor to the last character in the input message. *Syntax = EA*

Search Commands

Search forward for a character

F8 Search the input message forward for “xx” character from the current cursor position, leaving the cursor pointing to the “xx” character. *Syntax = F8xx* where xx stands for the search character’s hex value for its ASCII code.
Refer to the [ASCII Conversion Chart \(Code Page 1252\)](#) on page A-4 for decimal, hex and character codes.

Search backward for a character

F9 Search the input message backward for “xx” character from the current cursor position, leaving the cursor pointing to the “xx” character. *Syntax = F9xx* where xx stands for the search character’s hex value for its ASCII code.

Refer to the [ASCII Conversion Chart \(Code Page 1252\)](#) on page A-4 for decimal, hex and character codes.

Search forward for a non-matching character

E6 Search the input message forward for the first non-“xx” character from the current cursor position, leaving the cursor pointing to the non-“xx” character. *Syntax = E6xx* where xx stands for the search character’s hex value for its ASCII code.

Refer to the [ASCII Conversion Chart \(Code Page 1252\)](#) on page A-4 for decimal, hex and character codes.

Search backward for a non-matching character

E7 Search the input message backward for the first non-“xx” character from the current cursor position, leaving the cursor pointing to the non-“xx” character. *Syntax = E7xx* where xx stands for the search character’s hex value for its ASCII code.

Refer to the [ASCII Conversion Chart \(Code Page 1252\)](#) on page A-4 for decimal, hex and character codes.

Miscellaneous Commands

Suppress characters

FB Suppress all occurrences of up to 15 different characters, starting at the current cursor position, as the cursor is advanced by other commands. When the FC command is encountered, the suppress function is terminated. The cursor is not moved by the FB command.

Syntax = FBnnxxyy . .zz where nn is a count of the number of suppressed characters in the list, and xxyy .. zz is the list of characters to be suppressed.

Stop suppressing characters

FC Disables suppress filter and clear all suppressed characters. *Syntax = FC.*

Replace characters

E4 Replaces up to 15 characters in the output message, without moving the cursor. Replacement continues until the E5 command is encountered.

Syntax = E4nnxx₁xx₂yy₁yy₂...zz₁zz₂ where nn is the total count of the number of characters in the list (characters to be replaced plus replacement characters); xx₁ defines characters to be replaced and xx₂ defines replacement characters, continuing through zz₁ and zz₂.

Stop replacing characters

E5 Terminates character replacement. *Syntax = E5.*

Compare characters

FE Compare the character in the current cursor position to the character “xx.”
If characters are equal, move the cursor forward one position. *Syntax = FExx* where xx stands for the comparison character’s hex value for its ASCII code.
Refer to the [ASCII Conversion Chart \(Code Page 1252\)](#) on page A-4 for decimal, hex and character codes.

Check for a number

EC Check to make sure there is an ASCII number at the current cursor position.
The format is aborted if the character is not numeric.

Check for non-numeric character

ED Check to make sure there is a non-numeric ASCII character at the current cursor position. The format is aborted if the character is not numeric.

Data Format Editor



DFMBK3.

Enter Data Format



DFMCL3.

Clear One Data Format



MNUSAV.

Save



DFMD3.

*** Default Data Format**



DFMC3.

Clear All Data Formats



MNUABT.

Discard

Data Formatter

When Data Formatter is turned off, the bar code data is output to the host as read (including prefixes and suffixes). Choose one of the following options.

Default = Data Formatter On.



DFM_EN1.

*** Data Formatter On,
but Not Required**



DFM_END.

Data Formatter Off

When Data Formatter is required, all input data must conform to an edited format or the scanner does not transmit the input data to the host device.



DFM_EN2.

Data Format On, Format Required



Introduction

This programming section contains the following menu selections. Refer to [Chapter 9](#) for settings and defaults.

- All Symbologies
- China Post Code
- Codabar
- Codablock F
- Code 11
- Code 39
- Code 32 Pharmaceutical (PARAF)
- Code 49
- Code 93
- Code 128
- UPC-A/EAN-13 with Extended Coupon Code
- EAN/JAN 8
- GS1 DataBar Omnidirectional
- GS1 DataBar Limited
- GS1 DataBar Expanded
- Interleaved 2 of 5
- Label Code
- Matrix 2 of 5
- MSI
- Plessey Code
- Straight 2 of 5 IATA (two-bar start/stop)
- Straight 2 of 5 Industrial (three-bar start/stop)
- Telepen
- Trioptic Code
- UPC A
- UPC E
- Straight 2 of 5 IATA (two-bar start/stop)
- Straight 2 of 5 Industrial (three-bar start/stop)

All Symbologies

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



ALLEN.A1.

All Symbologies On



ALLEN.A0.

All Symbologies Off

Message Length

You are able to set the valid reading length of some of the bar code symbologies. If the data length of the scanned bar code doesn't match the valid reading length, the scanner will issue an error beep. You may wish to set the same value for minimum and maximum length to force the scanner to read fixed length bar code data. This helps reduce the chances of a misread.

EXAMPLE: Decode only those bar codes with a count of 9-20 characters.

Min. length = 09 Max. length = 20

EXAMPLE: Decode only those bar codes with a count of 15 characters.

Min. length = 15 Max. length = 15

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

Codabar

<Default All Codabar Settings>



Codabar



***On**



Off

Codabar Start/Stop Characters

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



Transmit



*** Don't Transmit**

Codabar Check Character

Codabar check characters are created using different “modulos.” You can program the scanner to read only Codabar bar codes with Modulo 16 check characters. *Default = No Check Character.*

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

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

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



CBRCK20.

* No Check Character



CBRCK21.

Validate Modulo 16, but Don't Transmit



CBRCK22.

Validate Modulo 16 and Transmit

Codabar Concatenation

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



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



CBRCCT1.

On



CBRCCT0.

*** Off**



CBRCCT2.

Require

Codabar Message Length

Scan the bar codes below to change the message length. Refer to [Message Length](#) on page 6-2 for additional information. Minimum and Maximum lengths = 2-60. Minimum Default = 4, Maximum Default = 60.



CBRMIN.

Minimum Message Length



CBRMAX.

Maximum Message Length

Code 39

< Default All Code 39 Settings >



C39DFT.

Code 39



C39ENA1.

***On**



C39ENA0.

Off

Code 39 Start/Stop Characters

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



C39SSX1.

Transmit



C39SSX0.

*** Don't Transmit**

Code 39 Check Character

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

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

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



* **No Check Character**



Validate, but Don't Transmit



Validate and Transmit

Code 39 Message Length

Scan the bar codes below to change the message length. Refer to [Message Length](#) on page 6-2 for additional information. Minimum and Maximum lengths = 0-48. Minimum Default = 0, Maximum Default = 48.



Minimum Message Length



Maximum Message Length

Code 39 Append

This function allows the scanner to append the data from several Code 39 bar codes together before transmitting them to the host computer. When this function is enabled, the scanner stores those Code 39 bar codes that start with a space (excluding the start and stop symbols), and does not immediately transmit the data. The scanner stores the data in the order in which the bar codes

are read, deleting the first space from each. The scanner transmits the appended data when it reads a Code 39 bar code that starts with a character other than a space. *Default = Off.*



C39APP1.

On



C39APP0.

***Off**

Code 32 Pharmaceutical (PARAF)

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



C39B321.

On



C39B320.

*** Off**

Full ASCII

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

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

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



C39ASC1.

Full ASCII On



C39ASC0.

*** Full ASCII Off**

Code 39 Code Page

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

Code Page Mapping of Printed Bar Codes on page A-5, and scan the value and the **Save** bar code from the **Programming Chart** inside the back cover of this manual. The data characters should then appear properly.



C39DCP.

Code 39 Code Page

Interleaved 2 of 5

< Default All Interleaved 2 of 5 Settings >



I25DFT.

Interleaved 2 of 5



I25ENA1.

*** On**



I25ENAD.

Off

Check Digit

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

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

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



*** No Check Digit**



Validate, but Don't Transmit



Validate and Transmit

Interleaved 2 of 5 Message Length

Scan the bar codes below to change the message length. Refer to [Message Length](#) on page 6-2 for additional information. Minimum and Maximum lengths = 2-80. Minimum Default = 4, Maximum Default = 80.



Minimum Message Length



Maximum Message Length

Code 93

< Default All Code 93 Settings >



Code 93



Code 93 Message Length

Scan the bar codes below to change the message length. Refer to [Message Length](#) on page 6-2 for additional information. Minimum and Maximum lengths = 0-80. Minimum Default = 0, Maximum Default = 80.



Minimum Message Length



Maximum Message Length

Code 93 Code Page

Code pages define the mapping of character codes to characters. If the data received does not display with the proper characters, it may be because the bar code being scanned was created using a code page that is different from the one the host program is expecting. If this is the case, scan the bar code below,

select the code page with which the bar codes were created from the chart, [Code Page Mapping of Printed Bar Codes](#) on page A-5, and scan the value and the **Save** bar code from the [Programming Chart](#) inside the back cover of this manual. The data characters should then appear properly.



C93DCP.

Code 93 Code Page

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

<Default All Straight 2 of 5 Settings>



Straight 2 of 5 Industrial



*** On**



Off

Straight 2 of 5 Industrial Message Length

Scan the bar codes below to change the message length. Refer to [Message Length](#) on page 6-2 for additional information. Minimum and Maximum lengths = 1-48. Minimum Default = 4, Maximum Default = 48.



Minimum Message Length



Maximum Message Length

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

<Default All Code IATA 2 of 5 Settings>



A25DFT.

Straight 2 of 5 IATA



A25ENA1.

On



A25ENAO.

Off

Straight 2 of 5 IATA Message Length

Scan the bar codes below to change the message length. Refer to [Message Length](#) on page 6-2 for additional information. Minimum and Maximum lengths = 1-48. Minimum Default = 4, Maximum Default = 48.



A25MIN.

Minimum Message Length



A25MAX.

Maximum Message Length

Matrix 2 of 5

<Default All Matrix 2 of 5 Settings>



Matrix 2 of 5



Matrix 2 of 5 Message Length

Scan the bar codes below to change the message length. Refer to [Message Length](#) on page 6-2 for additional information. Minimum and Maximum lengths = 1-80. Minimum Default = 4, Maximum Default = 80.



Minimum Message Length



Maximum Message Length

Code 11

<Default All Code 11 Settings>



C11DFT.

Code 11



C11ENA1.

On



C11ENAD.

*** Off**

Check Digits Required

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



C11CK20.

One Check Digit



C11CK21.

*** Two Check Digits**

Code 11 Message Length

Scan the bar codes below to change the message length. Refer to [Message Length](#) on page 6-2 for additional information. Minimum and Maximum lengths = 1-80. Minimum Default = 4, Maximum Default = 80.



C11MIN.

Minimum Message Length



C11MAX.

Maximum Message Length

Code 128

<Default All Code 128 Settings>



128DFT.

Code 128



128ENA1.

*** On**



128ENA0.

Off

ISBT 128 Concatenation

In 1994 the International Society of Blood Transfusion (ISBT) ratified a standard for communicating critical blood information in a uniform manner. The use of ISBT formats requires a paid license. The ISBT 128 Application Specification describes 1) the critical data elements for labeling blood products, 2) the current recommendation to use Code 128 due to its high degree of security and its

space-efficient design, 3) a variation of Code 128 that supports concatenation of neighboring symbols, and 4) the standard layout for bar codes on a blood product label. Use the bar codes below to turn concatenation on or off. *Default = Off.*



ISBENA1.

On



ISBENA0.

*** Off**

Code 128 Message Length

Scan the bar codes below to change the message length. Refer to [Message Length](#) on page 6-2 for additional information. Minimum and Maximum lengths = 0-80. Minimum Default = 0, Maximum Default = 80.



128MIN.

Minimum Message Length



128MAX.

Maximum Message Length

Code 128 Code Page

Code pages define the mapping of character codes to characters. If the data received does not display with the proper characters, it may be because the bar code being scanned was created using a code page that is different from the one the host program is expecting. If this is the case, scan the bar code below, select the code page with which the bar codes were created from the chart, [Code Page Mapping of Printed Bar Codes](#) on page A-5, and scan the value and the **Save** bar code from the [Programming Chart](#) inside the back cover of this manual. The data characters should then appear properly.



128DCP.

Code 128 Code Page

Code 128 Function Code Transmit

By default, Code 128 function codes are not transmitted with Code 128 bar code data. However, if you wish to transmit Code 128 function codes with the bar code data, scan the **Function Codes On** bar code, below. *Default = Off*



128FNXD.

*** Function Codes Off**



128FNX1.

Function Codes On

Telepen

<Default All Telepen Settings>



TELDFT.

Telepen



TELENA1.

On



TELENA0.

*** Off**

Telepen Output

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



TELOLD0.

***AIM Telepen Output**



TELOLD1.

Original Telepen Output

Telepen Message Length

Scan the bar codes below to change the message length. Refer to [Message Length](#) on page 6-2 for additional information. Minimum and Maximum lengths = 1-60. Minimum Default = 1, Maximum Default = 60.



TELMIN.

Minimum Message Length



TELMAX.

Maximum Message Length

UPC A

<Default All UPC A Settings>



UPC A



* On



Off

UPC A Check Digit

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



* On



Off

UPC A Number System

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



UPANSX1.

*** On**



UPANSXD.

Off

UPC A Addenda

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



UPAAD21.

2 Digit Addenda On



UPAAD20.

*** 2 Digit Addenda Off**



UPAAD51.

5 Digit Addenda On



UPAAD50.

*** 5 Digit Addenda Off**

UPC A Addenda Required

When Addenda Required is set to on, the scanner will only read UPC A bar codes that have addenda. *Default = Not Required.*



UPAARQ1.

Required



UPAARQ0.

*** Not Required**

UPC A Addenda Separator

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



UPAADS1.

*** On**



UPAADS0.

Off

UPC-A/EAN-13 with Extended Coupon Code

Use the following codes to enable or disable UPC-A **and** EAN-13 with Extended Coupon Code. *Default = On.*



CPNENA1.

On



CPNENAD.

*** Off**

UPC E

<Default All UPC E Settings>



UPC E0 and UPC E1

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



* **UPC E0 On**



UPC E0 and UPC E1 Expand

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



UPEEXP1.

On



UPEEXP0.

*** Off**

UPC E0 and UPC E1 Addenda Required

When Addenda Required is set to on, the scanner will only read UPC E bar codes that have addenda. *Default = Not Required.*



UPEARQ1.

Required



UPEARQ0.

*** Not Required**

UPC E0 and UPC E1 Addenda Separator

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



UPEADS1.

* On



UPEADS0.

Off

UPC E0 Check Digit

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



UPECKX1.

* On



UPECKXD.

Off

UPC E0 Number System

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



UPENSX1.

*** On**



UPENSX0.

Off

UPC E0 Addenda

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



UPEAD21.

2 Digit Addenda On



UPEAD20.

*** 2 Digit Addenda Off**



UPEAD51.

5 Digit Addenda On



UPEAD50.

*** 5 Digit Addenda Off**

EAN/JAN 13

<Default All EAN/JAN Settings>



E13DFT.

EAN/JAN 13



E13ENA1.

* On



E13ENAD.

Off

EAN/JAN 13 Check Digit

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



E13CKX1.

* On



E13CKX0.

Off

EAN/JAN 13 Addenda

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



E13AD21.

2 Digit Addenda On



E13AD20.

*** 2 Digit Addenda Off**



E13AD51.

5 Digit Addenda On



E13AD50.

*** 5 Digit Addenda Off**

EAN/JAN 13 Addenda Required

When Addenda Required is set to on, the scanner will only read EAN/JAN 13 bar codes that have addenda. *Default = Not Required.*



E13ARQ1.

Required



E13ARQ0.

*** Not Required**

EAN/JAN 13 Addenda Separator

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



E13ADS1.

* On



E13ADS0.

Off

Note: If you want to enable or disable EAN13 with Extended Coupon Code, refer to [UPC-A/EAN-13 with Extended Coupon Code](#) on page 6-26.

ISBN Translate

This selection causes EAN-13 Bookland symbols to be translated into their equivalent ISBN number format. *Default = Off.*



E13ISB1.

On



E13ISB0.

* Off

EAN/JAN 8

<Default All EAN/JAN 8 Settings>



EA8DFT.

EAN/JAN 8



EABENA1.

* **On**



EABENA0.

Off

EAN/JAN 8 Check Digit

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



EABCKX1.

* **On**



EABCKX0.

Off

EAN/JAN 8 Addenda

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



EABAD21.

2 Digit Addenda On



EABAD20.

*** 2 Digit Addenda Off**



EABAD51.

5 Digit Addenda On



EABAD50.

*** 5 Digit Addenda Off**

EAN/JAN 8 Addenda Required

When Addenda Required is set to on, the scanner will only read EAN/JAN 8 bar codes that have addenda. *Default = Not Required.*



EABARQ1.

Required



EABARQ0.

*** Not Required**

EAN/JAN 8 Addenda Separator

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



MSI

<Default All MSI Settings>



MSI



MSI Check Character

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

When Check Character is set to **Validate and Transmit**, the scanner will only read MSI bar codes printed with the specified type check character, and will transmit this character at the end of the scanned data.

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



*** Validate Type 10, but Don't Transmit**



Validate Type 10 and Transmit

MSI Message Length

Scan the bar codes below to change the message length. Refer to [Message Length](#) on page 6-2 for additional information. Minimum and Maximum lengths = 4-48. Minimum Default = 4, Maximum Default = 48.



Minimum Message Length



Maximum Message Length

Plessey Code

<Default All Plessey Code Settings>



Plessey Code



PLSENA1.

On



PLSENA0.

*** Off**

Plessey Message Length

Scan the bar codes below to change the message length. Refer to [Message Length](#) on page 6-2 for additional information. Minimum and Maximum lengths = 4-48. Minimum Default = 4, Maximum Default = 48.



PLSMIN.

Minimum Message Length



PLSMAX.

Maximum Message Length

GS1 DataBar Omnidirectional

< Default All GS1 DataBar Omnidirectional Settings >



RSSDFT.

GS1 DataBar Omnidirectional



RSENA1.

*** On**



RSENA0.

Off

GS1 DataBar Limited

< Default All GS1 DataBar Limited Settings >



RSLDFT.

GS1 DataBar Limited



RSENA1.

*** On**



RSENA0.

Off

GS1 DataBar Expanded

< Default All GS1 DataBar Expanded Settings >



RSEDFT.

GS1 DataBar Expanded



RSEENA1.

*** On**



RSEENA0.

Off

GS1 DataBar Expanded Message Length

Scan the bar codes below to change the message length. Refer to [Message Length](#) on page 6-2 for additional information. Minimum and Maximum lengths = 4-74. Minimum Default = 4, Maximum Default = 74.



RSEMIN.

Minimum Message Length



RSEMAX.

Maximum Message Length

China Post Code

<Default All China Post Code Settings>



CPCDFT.

China Post Code



CPCENA1.

On



CPCENAD.

*** Off**

China Post Message Length

Scan the bar codes below to change the message length. Refer to [Message Length](#) on page 6-2 for additional information. Minimum and Maximum lengths = 2-80. Minimum Default = 4, Maximum Default = 80.



CPCMIN.

Minimum Message Length



CPCMAX.

Maximum Message Length

Korea Post Code

<Default All Korea Post Code Settings>



KPCDFT.

Korea Post Code



KPCENA1.

On



KPCENAD.

* Off

Korea Post Message Length

Scan the bar codes below to change the message length. Refer to [Message Length](#) on page 6-2 for additional information. Minimum and Maximum lengths = 2-80. Minimum Default = 4, Maximum Default = 48.



KPCMIN.

Minimum Message Length



KPCMAX.

Maximum Message Length

Codablock F

<Default All Codablock F Settings>



CBFDF.T.

Codablock F



CBFENA1.

On



CBFENA0.

*** Off**

Codablock F Message Length

Scan the bar codes below to change the message length. Refer to [Message Length](#) on page 6-2 for additional information. Minimum and Maximum lengths = 1-2048. Minimum Default = 1, Maximum Default = 2048.



CBFMIN.

Minimum Message Length



CBFMAX.

Maximum Message Length

Code 49

<Default All Code 49 Settings>



C49DFT.

Code 49



C49ENA1.

On



C49ENA0.

* Off

Code 49 Message Length

Scan the bar codes below to change the message length. Refer to [Message Length](#) on page 6-2 for additional information. Minimum and Maximum lengths = 1-81. Minimum Default = 1, Maximum Default = 81.



C49MIN.

Minimum Message Length



C49MAX.

Maximum Message Length

Trioptic Code

Trioptic Code is used for labeling magnetic storage media.



TRIENA1.

On



TRIENAO.

Off

GS1 Emulation

The scanner can automatically format the output from any GS1 data carrier to emulate what would be encoded in an equivalent GS1-128 or GS1 DataBar symbol. GS1 data carriers include UPC-A and UPC-E, EAN-13 and EAN-8, ITF-14, GS1-128, and GS1-128 DataBar and GS1Composites. If GS1-128 Emulation is selected, the AIM Symbology Identifier will be reported as “]C1”. If GS1 DataBar Emulation is selected, the AIM Symbology Identifier will be reported as “]e0.” Any application that accepts GS1 data can be simplified since it only needs to recognize one data carrier type. *Default = GS1 Emulation Off.*



EANEMU2.

GS1 Data Bar Emulation



EANEMU1.

GS1-128 Emulation



EANEMU0.

*** GS1 Emulation Off**

Label Code

The standard Label Code is used in library situations. *Default = Off.*



LBLENA1.

On



LBLENA0.

* Off

Keyboard Function Relationships

The following Keyboard Function Code, Hex/ASCII Value, and Full ASCII “CTRL”+ relationships apply to all terminals that can be used with the scanner. Refer to page 2-12 enable Control + ASCII mode.

Function Code	HEX/ASCII Value	Full ASCII “CTRL” +
NUL	00	2
SOH	01	A
STX	02	B
ETX	03	C
EOT	04	D
ENQ	05	E
ACK	06	F
BEL	07	G
BS	08	H
HT	09	I
LF	0A	J
VT	0B	K
FF	0C	L
CR	0D	M
SO	0E	N
SI	0F	O
DLE	10	P
DC1	11	Q
DC2	12	R
DC3	13	S
DC4	14	T
NAK	15	U
SYN	16	V
ETB	17	W
CAN	18	X
EM	19	Y
SUB	1A	Z
ESC	1B	[
FS	1C	\
GS	1D]
RS	1E	6
US	1F	-

The last five characters in the Full ASCII "CTRL" column ([\] 6 -), apply to US only. The following chart indicates the equivalents of these five characters for different countries.

Country	Codes				
United States	[	\	\]	6	-
Belgium	[	<	]	6	-
Scandinavia	8	<	9	6	-
France	^	8	\$	6	=
Germany		Ã	+	6	-
Italy		\	+	6	-
Switzerland		<	..	6	-
United Kingdom	[	¢	]	6	-
Denmark	8	\	9	6	-
Norway	8	\	9	6	-
Spain	[	\	\]	6	-

Supported Interface Keys

ASCII	HEX	IBM AT/XT and PS/2 Compatibles, WYSE PC/AT Supported Keys
NUL	00	Reserved
SOH	01	Enter (KP)
STX	02	Cap Lock
ETX	03	ALT make
EOT	04	ALT break
ENQ	05	CTRL make
ACK	06	CTRL break
BEL	07	CR/Enter
BS	08	Reserved
HT	09	Tab
LF	0A	Reserved
VT	0B	Tab
FF	0C	Delete
CR	0D	CR/Enter
SO	0E	Insert
SI	0F	Escape
DLE	10	F11
DC1	11	Home
DC2	12	Print
DC3	13	Back Space
DC4	14	Back Tab
NAK	15	F12
SYN	16	F1
ETB	17	F2
CAN	18	F3
EM	19	F4
SUB	1A	F5
ESC	1B	F6
FS	1C	F7
GS	1D	F8
RS	1E	F9
US	1F	F10

* IBM 3191/92, 3471/72, 3196/97, 3476/77,
Telex (all models)

Supported Interface Keys

ASCII	HEX	Apple Mac/iMac Supported Keys
NUL	00	Reserved
SOH	01	Enter/Numpad Enter
STX	02	CAPS
ETX	03	ALT make
EOT	04	ALT break
ENQ	05	CNTRL make
ACK	06	CNTRL break
BEL	07	RETURN
BS	08	APPLE make
HT	09	TAB
LF	0A	APPLE break
VT	0B	TAB
FF	0C	Del
CR	0D	RETURN
SO	0E	Ins Help
SI	0F	ESC
DLE	10	F11
DC1	11	Home
DC2	12	Prnt Scrn
DC3	13	BACKSPACE
DC4	14	LSHIFT TAB
NAK	15	F12
SYN	16	F1
ETB	17	F2
CAN	18	F3
EM	19	F4
SUB	1A	F5
ESC	1B	F6
FS	1C	F7
GS	1D	F8
RS	1E	F9
US	1F	F10
DEL	7F	BACKSPACE

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

This selection allows you to turn on transmission of a Code I.D. before the decoded symbology. (See the Symbology Chart, included in the "[Appendix A](#)" on page A-1) for the single character code that identifies each symbology.) This action first clears all current prefixes, then programs a Code I.D. prefix for all symbologies. This is a temporary setting that will be removed when the unit is power cycled.



PRECA2,BK2995C80!

**Add Code I.D. Prefix to
All Symbologies (Temporary)**

Show Software Revision

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



REVINF.

Show Revision

Show Data Format

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



DFMBK3?.

Data Format Settings

Resetting the Standard Product Defaults

If you aren't sure what programming options are in your scanner, or you've changed some options and want the standard product default settings restored, scan the **Standard Product Default Settings** bar code below.



Standard Product Default Settings

The [Menu Commands](#) starting on [page 9-5](#) lists the standard product default settings for each of the commands (indicated by an asterisk (*) on the programming pages).

EZConfig Introduction

EZConfig provides a wide range of PC-based programming functions that can be performed on a scanner connected to your PC's COM port. EZConfig allows you to download upgrades to the scanner's firmware, change programmed parameters, and create and print programming bar codes. Using EZConfig, you can even save/open the programming parameters for a scanner. This saved file can be e-mailed or, if required, you can create a single bar code that contains all the customized programming parameters and mail or fax that bar code to any location. Users in other locations can scan the bar code to load in the customized programming.

To communicate with a scanner, EZConfig requires that the PC have at least one available serial communication port, or a serial port emulation using a physical USB port. If you are using the serial port and RS232 cable, an external power supply is required. When using a USB serial port emulation, only a USB cable is required.

EZConfig Operations

The EZConfig software performs the following operations:

Scan Data

Scan Data allows you to scan bar codes and display the bar code data in a window. Scan Data lets you send serial commands to the scanner and receive scanner response that can be seen in the Scan Data window. The data displayed in the Scan Data window can either be saved in a file or printed.

Configure

Configure displays the programming and configuration data of the scanner. The scanner's programming and configuration data is grouped into different categories. Each category is displayed as a tree item under the "Configure" tree node in the application explorer. When one of these tree nodes is clicked, the right-hand side is loaded with

the parameters' form belonging to that particular category. The "Configure" tree option has all the programming and configuration parameters specified for a scanner. You can set or modify these parameters as required. You can later write the modified settings to the scanner, or save them to a dcf file.

Installing EZConfig from the Web

Note: EZConfig requires .NET software. If .NET is not installed on your PC, you will be prompted to install it during the EZConfig installation.

1. Access the Honeywell web site at www.honeywellaidc.com
2. Click on the **Resources** tab. Select **Product Downloads-Software**.
3. Click on the dropdown for **Select Product Number**. Click on **Xenon**.
4. Click on the listing for **EZConfig**.
5. When prompted, select **Save File**, and save the files to the **c:\windows\temp** directory.
6. Once you have finished downloading the file, exit the web site.
7. Using Explorer, go to the **c:\windows\temp** file.
8. Double click on the **Setup.exe** file. Follow the screen prompts to install the EZConfig program.
9. If you've selected the defaults during installation, you can click on **Start Menu-All Programs-Honeywell-EZConfig**.



Serial Programming Commands

The serial programming commands can be used in place of the programming bar codes. Both the serial commands and the programming bar codes will program the scanner. For complete descriptions and examples of each serial programming command, refer to the corresponding programming bar code in this manual.

The device must be set to an RS-232 interface (see [page 2-2](#)). The following commands can be sent via a PC com port using terminal emulation software.

Conventions

The following conventions are used for menu and query command descriptions:

parameter A label representing the actual value you should send as part of a command.

[*option*] An optional part of a command.

{*Data*} Alternatives in a command.

bold Names of menus, menu commands, buttons, dialog boxes, and windows that appear on the screen.

Menu Command Syntax

Menu commands have the following syntax (spaces have been used for clarity only):

Prefix Tag SubTag {Data} [, SubTag {Data}] [: Tag SubTag {Data}] [...] Storage

Prefix Three ASCII characters: **SYN M CR** (ASCII 22,77,13).

Tag A 3 character case-insensitive field that identifies the desired menu command group. For example, all RS-232 configuration settings are identified with a Tag of **232**.

SubTag A 3 character case-insensitive field that identifies the desired menu command within the tag group. For example, the SubTag for the RS-232 baud rate is **BAD**.

Data The new value for a menu setting, identified by the Tag and Sub-Tag.

Storage A single character that specifies the storage table to which the command is applied. An exclamation point (!) performs the command's operation on the device's volatile menu configuration table. A period (.) performs the command's operation on the device's non-volatile menu configuration table. Use the non-volatile table only for semi-permanent changes you want saved through a power cycle.

Query Commands

Several special characters can be used to query the device about its settings.

- ^ What is the default value for the setting(s).
- ? What is the device's current value for the setting(s).
- * What is the range of possible values for the setting(s). (The device's response uses a dash (-) to indicate a continuous range of values. A pipe (|) separates items in a list of non-continuous values.)

Tag Field Usage

When a query is used in place of a Tag field, the query applies to the *entire* set of commands available for the particular storage table indicated by the Storage field of the command. In this case, the SubTag and Data fields should not be used because they are ignored by the device.

SubTag Field Usage

When a query is used in place of a SubTag field, the query applies only to the subset of commands available that match the Tag field. In this case, the Data field should not be used because it is ignored by the device.

Data Field Usage

When a query is used in place of the Data field, the query applies only to the specific command identified by the Tag and SubTag fields.

Concatenation of Multiple Commands

Multiple commands can be issued within one Prefix/Storage sequence. Only the Tag, SubTag, and Data fields must be repeated for each command in the sequence. If additional commands are to be applied to the same Tag, then the new command sequence is separated with a comma (,) and only the SubTag and Data fields of the additional command are issued. If the additional command requires a different Tag field, the command is separated from previous commands by a semicolon (;).

Responses

The device responds to serial commands with one of three responses:

- ACK** Indicates a good command which has been processed.
- ENQ** Indicates an invalid Tag or SubTag command.
- NAK** Indicates the command was good, but the Data field entry was out of the allowable range for this Tag and SubTag combination, e.g., an entry for a minimum message length of 100 when the field will only accept 2 characters.

When responding, the device echoes back the command sequence with the status character inserted directly before each of the punctuation marks (the period, exclamation point, comma, or semicolon) in the command.

Examples of Query Commands

In the following examples, a bracketed notation [] depicts a non-displayable response.

Example: Example #1: What is the range of possible values for Codabar Coding Enable?

Enter: **cbrena*.**

Response: **CBRENA0-1[ACK]**

This response indicates that Codabar Coding Enable (CBRENA) has a range of values from 0 to 1 (off and on).

Example: Example #2: What is the default value for Codabar Coding Enable?

Enter: **cbrena^.**

Response: **CBRENA1[ACK]**

This response indicates that the default setting for Codabar Coding Enable (CBRENA) is 1, or on.

Example: Example #3: What is the device's current setting for Codabar Coding Enable?

Enter: **cbrena?.**

Response: **CBRENA1[ACK]**

This response indicates that the device's Codabar Coding Enable (CBRENA) is set to 1, or on.

Example: Example #4: What are the device's settings for all Codabar selections?

Enter: **cbr?.**

Response: **CBRENA1[ACK],**
 SSX0[ACK],
 CK20[ACK],
 CCT1[ACK],
 MIN2[ACK],
 MAX60[ACK],
 DFT[ACK].

This response indicates that the device's Codabar Coding Enable (CBRENA) is set to 1, or on;
the Start/Stop Character (SSX) is set to 0, or Don't Transmit;
the Check Character (CK2) is set to 0, or Not Required;
concatenation (CCT) is set to 1, or Enabled;
the Minimum Message Length (MIN) is set to 2 characters;
the Maximum Message Length (MAX) is set to 60 characters;
and the Default setting (DFT) has no value.

Trigger Commands

You can activate and deactivate the scanner with serial trigger commands. First, the scanner must be put in Manual/Serial Trigger Mode either by scanning the Manual/Serial Trigger Mode bar code ([page 3-5](#)), or by sending the Manual/Serial Menu Command ([page 9-9](#)). Once the scanner is in serial trigger mode, the trigger is activated and deactivated by sending the following commands:

Activate: **SYN T CR**

Deactivate: **SYN U CR**

The scanner scans until a bar code has been read, until the deactivate command is sent, or until the serial time-out has been reached (see [Read Time-Out](#) on page 3-5 for a description, and the serial command on [page 9-9](#)).

Resetting the Standard Product Defaults

If you aren't sure what programming options are in your scanner, or you've changed some options and want the factory settings restored, scan the **Standard Product Default Settings** bar code below.



DEFAULT.

Standard Product Default Settings

The chart on the following pages lists the factory default settings for each of the menu commands (indicated by an asterisk (*) on the programming pages).

Menu Commands

Selection	Setting <i>* Indicates default</i>	Serial Command <i># Indicates a numeric entry</i>	Page
Factory Default Settings	Default	DEFAULT	
Terminal Interfaces			
Plug and Play Codes	Keyboard Wedge: IBM PC AT and Compatibles with CR suffix	PAP_AT	2-1
	IBM PS2 Keyboard	PAPPS2	2-2
	RS232 Serial Port	PAP232	2-2
Plug and Play Codes: RS485	IBM Port 5B Interface	PAPP5B	2-3
	IBM Port 9B HHBCR-1 Interface	PAP9B1	2-3
	IBM Port 17 Interface	PAPP17	2-3
	IBM Port 9B HHBCR-2 Interface	PAP9B2	2-3
Plug and Play Codes: IBM SurePos	USB IBM SurePos Handheld	PAPSPH	2-5
	USB IBM SurePos Tabletop	PAPSPT	2-5
Plug and Play Codes: USB	USB Keyboard (PC)	PAP124	2-5
	USB Keyboard (Mac)	PAP125	2-5
	USB HID	PAP131	2-6
USB Serial Commands	USB Serial Emulation	PAP130	2-6
	CTS/RTS Emulation On	USBCTS1	2-6
	*CTS/RTS Emulation Off	USBCTS0	2-6
	ACK/NAK Mode On	USBACK1	2-7
	*ACK/NAK Mode Off	USBACK0	2-7

Selection	Setting <i>* Indicates default</i>	Serial Command <i># Indicates a numeric entry</i>	Page
Program Keyboard Country	*USA	KBDCTY0	2-8
	Belgium	KBDCTY1	2-8
	Denmark	KBDCTY8	2-8
	Finland	KBDCTY2	2-8
	France	KBDCTY3	2-8
	Germany/Austria	KBDCTY4	2-8
	Great Britain	KBDCTY7	2-8
	Italy	KBDCTY5	2-9
	Norway	KBDCTY9	2-9
	Spain	KBDCTY10	2-9
	Switzerland	KBDCTY6	2-9
Keyboard Style	*Regular	KBDSTY0	2-10
	Caps Lock	KBDSTY1	2-10
	Shift Lock	KBDSTY2	2-10
	Automatic Caps Lock	KBDSTY6	2-10
	Autocaps via Num-Lock	KBDSTY7	2-10
	Emulate External Keyboard	KBDSTY5	2-11
Keyboard Modifiers	Windows Mode Control + ASCII	KBDCAS2	2-11
	*Control + ASCII Off	KBDCAS0	2-11
	DOS Mode Control + ASCII Mode On	KBDCAS1	2-11
	*Numeric Keypad Off	KBDNPS0	2-12
	Numeric Keypad On	KBDNPS1	2-12
	*Auto Direct Conn. Off	KBDADC0	2-12
	Auto Direct Conn. On	KBDADC1	2-12
Serial Port Connection	RS-232	PAP232	2-2

Selection	Setting <i>* Indicates default</i>	Serial Command <i># Indicates a numeric entry</i>	Page
Baud Rate	300 BPS	232BAD0	2-13
	600 BPS	232BAD1	2-13
	1200 BPS	232BAD2	2-13
	2400 BPS	232BAD3	2-13
	4800 BPS	232BAD4	2-13
	9600 BPS	232BAD5	2-13
	19200 BPS	232BAD6	2-13
	*38400 BPS	232BAD7	2-14
	57600 BPS	232BAD8	2-14
	115200 BPS	232BAD9	2-14
Word Length: Data Bits, Stop Bits, and Parity	7 Data, 1 Stop, Parity Even	232WRD3	2-15
	7 Data, 1 Stop, Parity None	232WRD0	2-15
	7 Data, 1 Stop, Parity Odd	232WRD6	2-15
	7 Data, 2 Stop, Parity Even	232WRD4	2-15
	7 Data, 2 Stop, Parity None	232WRD1	2-15
	7 Data, 2 Stop, Parity Odd	232WRD7	2-15
	8 Data, 1 Stop, Parity Even	232WRD5	2-15
	*8 Data, 1 Stop, Parity None	232WRD2	2-15
	8 Data, 1 Stop, Parity Odd	232WRD8	2-15

Selection	Setting <i>* Indicates default</i>	Serial Command <i># Indicates a numeric entry</i>	Page
RS-232 Handshaking	*RTS/CTS Off	232CTS0	2-16
	RTS/CTS On	232CTS1	2-16
	*XON/XOFF Off	232XON0	2-16
	XON/XOFF On	232XON1	2-16
	*ACK/NAK Off	232ACK0	2-17
	ACK/NAK On	232ACK1	2-17
Output Selections			
Beeper - Good Read	Off	BEPBEP0	3-1
	*On	BEPBEP1	3-1
Beeper Volume - Good Read	Off	BEPLVL0	3-1
	Low	BEPLVL1	3-1
	Medium	BEPLVL2	3-1
	*High	BEPLVL3	3-1
Beeper Pitch - Good Read (Frequency)	Low (1600 Hz)	BEPFQ11600	3-2
	*Medium (2750 Hz)	BEPFQ12750	3-2
	High (4200 Hz)	BEPFQ14200	3-2
Beeper Duration - Good Read	*Normal Beep	BEPBIP0	3-2
	Short Beep	BEPBIP1	3-2
Beeper Pitch - Error	*Razz (100 Hz)	BEPFQ2100	3-3
	*Medium (2000 Hz)	BEPFQ22000	3-3
	High (4200 Hz)	BEPFQ24200	3-3
LED - Good Read	Off	BEPLED0	3-3
	*On	BEPLED1	3-3
Number of Beeps - Good Read	*1	BEPRPT1	3-4
	Range 1 - 9	BEPRPT#	3-4
Good Read Delay	*No Delay	DLYGRD0	3-4
	Short Delay (500 ms)	DLYGRD500	3-4
	Medium Delay (1000 ms)	DLYGRD1000	3-4
	Long Delay (1500 ms)	DLYGRD1500	3-4

Selection	Setting <i>* Indicates default</i>	Serial Command <i># Indicates a numeric entry</i>	Page
User-Specified Good Read Delay	Range 0 - 30,000 ms	DLYGRD#####	3-4
Trigger Mode	*Manual/Serial Trigger	TRGMOD0	3-5
	Read Time-Out (0 - 300,000 ms) *30,000	TRGSTO####	3-5
	Automatic Trigger	TRGMOD1	3-5
	Presentation Mode	TRGMOD3	3-6
	Continuous Illumination On	ILLAON1	3-6
	*Continuous Illumination Off	ILLAON0	3-6
	Hands Free Time-Out (0-300,000 seconds) *5000	TRG-PTO#####	3-7
Reread Delay	Short (500 ms)	DLYRRD500	3-7
	*Medium (750 ms)	DLYRRD750	3-7
	Long (1000 ms)	DLYRRD1000	3-7
	Extra Long (2000 ms)	DLYRRD3000	3-7
User-Specified Reread Delay	Range 0 - 30,000 ms	DLYRRD#####	3-8
Centering	Centering On	DECWIN1	3-9
	*Centering Off	DECWIN0	3-9
	Left of Centering Window *40	DECLFT###	3-9
	Right of Centering Window *60	DECRGT###	3-9
Output Sequence Editor	Enter Sequence	SEQBLK	3-11
	Default Sequence	SEQDFT	3-11
Require Output Sequence	Required	SEQ_EN2	3-11
	On/Not Required	SEQ_EN1	3-11
	*Off	SEQ_EN0	3-11
Multiple Symbols	On	SHOTGN1	3-15
	*Off	SHOTGN0	3-15

Selection	Setting <i>* Indicates default</i>	Serial Command <i># Indicates a numeric entry</i>	Page
No Read	On	SHWNRD1	3-15
	*Off	SHWNRD0	3-15
Video Reverse	On	VIDREV1	3-14
	*Off	VIDREV0	3-14
Prefix/Suffix Selections			
Add CR Suffix to All Symbologies		VSUF CR	4-3
Prefix	Add Prefix	PREBK2##	4-3
	Clear One Prefix	PRECL2	4-3
	Clear All Prefixes	PRECA2	4-3
Suffix	Add Suffix	SUFBK2##	4-4
	Clear One Suffix	SUFCL2	4-4
	Clear All Suffixes	SUFCA2	4-4
Function Code Transmit	*Enable	RMVFNC0	4-4
	Disable	RMVFNC1	4-4
Intercharacter Delay		DLYCHR##	4-5
User Specified Inter-character Delay	Delay Length	DLYCRX##	4-5
	Character to Trigger Delay	DLY_XX###	4-5
Interfunction Delay		DLYFNC##	4-6
Intermessage Delay		DLYMSG##	4-6
Data Formatter Selections			
Data Format Editor	*Default Data Format (None)	DFMDF3	5-8
	Enter Data Format	DFMBK3##	5-8
	Clear One Data Format	DFMCL3	5-8
	Clear All Data Formats	DFMCA3	5-8
Data Formatter	Off	DFM_EN0	5-9
	*On, but Not Required	DFM_EN1	5-9
	On, Required	DFM_EN2	5-9
Symbologies			

Selection	Setting <i>* Indicates default</i>	Serial Command <i># Indicates a numeric entry</i>	Page
All Symbologies	All Symbologies Off	ALLENA0	6-2
	All Symbologies On	ALLENA1	6-2
Codabar	Default All Codabar Settings	CBRDFT	6-3
Codabar	Off	CBRENA0	6-3
	*On	CBRENA1	6-3
Codabar Start/Stop Char.	*Don't Transmit	CBRSSX0	6-3
	Transmit	CBRSSX1	6-3
Codabar Check Char.	*No Check Char.	CBRCK20	6-4
	Validate, But Don't Transmit	CBRCK21	6-4
	Validate, and Transmit	CBRCK22	6-4
Codabar Concatenation	*Off	CBRCCT0	6-5
	On	CBRCCT1	6-5
	Require	CBRCCT2	6-5
Codabar Message Length	Minimum (2 - 60) *4	CBRMIN##	6-5
	Maximum (2 - 60) *60	CBRMAX##	6-5
Code 39	Default All Code 39 Settings	C39DFT	6-6
Code 39	Off	C39ENA0	6-6
	*On	C39ENA1	6-6
Code 39 Start/Stop Char.	*Don't Transmit	C39SSX0	6-6
	Transmit	C39SSX1	6-6
Code 39 Check Char.	*No Check Char.	C39CK20	6-7
	Validate, But Don't Transmit	C39CK21	6-7
	Validate, and Transmit	C39CK22	6-7
Code 39 Message Length	Minimum (0 - 48) *0	C39MIN##	6-7
	Maximum (0 - 48) *48	C39MAX##	6-7
Code 39 Append	*Off	C39APP0	6-8
	On	C39APP1	6-8

Selection	Setting <i>* Indicates default</i>	Serial Command <i># Indicates a numeric entry</i>	Page
Code 32 Pharmaceutical (PARAF)	*Off	C39B320	6-8
	On	C39B321	6-8
Code 39 Full ASCII	*Off	C39ASC0	6-9
	On	C39ASC1	6-9
Interleaved 2 of 5	Default All Interleaved 2 of 5 Settings	I25DFT	6-10
Interleaved 2 of 5	Off	I25ENA0	6-10
	*On	I25ENA1	6-10
Interleaved 2 of 5 Check Digit	*No Check Char.	I25CK20	6-11
	Validate, But Don't Transmit	I25CK21	6-11
	Validate, and Transmit	I25CK22	6-11
Interleaved 2 of 5 Message Length	Minimum (2 - 80) *4	I25MIN##	6-11
	Maximum (2 - 80) *80	I25MAX##	6-11
Code 93	Default All Code 93 Settings	C93DFT	6-12
Code 93	Off	C93ENA0	6-12
	*On	C93ENA1	6-12
Code 93 Message Length	Minimum (0 - 80) *0	C93MIN##	6-12
	Maximum (0 - 80) *80	C93MAX##	6-12
Straight 2 of 5 Industrial	Default All Straight 2 of 5 Settings	R25DFT	6-14
Straight 2 of 5 Industrial	Off	R25ENA0	6-14
	*On	R25ENA1	6-14
Straight 2 of 5 Industrial Message Length	Minimum (1 - 48) *4	R25MIN##	6-14
	Maximum (1 - 48) *48	R25MAX##	6-14
Straight 2 of 5 IATA	Default All Straight 2 of 5 IATA Settings	A25DFT	6-15
Straight 2 of 5 IATA	*Off	A25ENA0	6-15
	On	A25ENA1	6-15

Selection	Setting <i>* Indicates default</i>	Serial Command <i># Indicates a numeric entry</i>	Page
Straight 2 of 5 IATA Message Length	Minimum (1 - 48) *4	A25MIN##	6-15
	Maximum (1 - 48) *48	A25MAX##	6-15
Matrix 2 of 5	Default All Matrix 2 of 5 Settings	X25DFT	6-16
Matrix 2 of 5	*Off	X25ENA0	6-16
	On	X25ENA1	6-16
Matrix 2 of 5 Message Length	Minimum (1 - 80) *4	X25MIN##	6-16
	Maximum (1 - 80) *80	X25MAX##	6-16
Code 11	Default All Code 11 Settings	C11DFT	6-17
Code 11	*Off	C11ENA0	6-17
	On	C11ENA1	6-17
Code 11 Check Digits Required	1 Check Digit	C11CK20	6-17
	*2 Check Digits	C11CK21	6-17
Code 11 Message Length	Minimum (1 - 80) *4	C11MIN##	6-18
	Maximum (1 - 80) *80	C11MAX##	6-18
Code 128	Default All Code 128 Settings	128DFT	6-18
Code 128	Off	128ENA0	6-19
	*On	128ENA1	6-18
ISBT Concatenation	On	ISBENA1	6-19
	*Off	ISBENA0	6-19
Code 128 Message Length	Minimum (0 - 80) *0	128MIN##	6-19
	Maximum (0 - 80) *80	128MAX##	6-19
Code 128 Code Page	Code 128 Code Page	128DCP	6-20
Code 128 Function Code Transmit	*Off	128FNX0	6-20
	On	128FNX1	6-20
Telepen	Default All Telepen Settings	TELDFT	6-21
Telepen	*Off	TELENA0	6-21
	On	TELENA1	6-21

Selection	Setting <i>* Indicates default</i>	Serial Command <i># Indicates a numeric entry</i>	Page
Telepen Output	*AIM Telepen Output	TELOLD0	6-21
	Original Telepen Output	TELOLD1	6-21
Telepen Message Length	Minimum (1 - 60) *1	TELMIN##	6-22
	Maximum (1 - 60) *60	TELMAX##	6-22
UPC A	Default All UPC A Settings	UPADFT	6-23
UPC A	Off	UPAENA0	6-23
	*On	UPAENA1	6-23
UPC A Check Digit	Off	UPACKX0	6-23
	*On	UPACKX1	6-23
UPC A Number System	Off	UPANSX0	6-24
	*On	UPANSX1	6-24
UPC A 2 Digit Addenda	*Off	UPAAD20	6-24
	On	UPAAD21	6-24
UPC A 5 Digit Addenda	*Off	UPAAD50	6-24
	On	UPAAD51	6-24
UPC A Addenda Required	*Not Required	UPAARQ0	6-25
	Required	UPAARQ1	6-25
UPC A Addenda Separator	Off	UPAADS0	6-25
	*On	UPAADS1	6-25
UPC-A/EAN-13 with Extended Coupon Code	*Off	CPNENA0	6-26
	On	CPNENA1	6-26
UPC E	Default All UPC E Settings	UPEDFT	6-27
UPC E0	Off	UPEEN00	6-27
	*On	UPEEN01	6-27
UPC E1	*Off	UPEEN10	6-27
	On	UPEEN11	6-27
UPC E Expand	*Off	UPEEXP0	6-28
	On	UPEEXP1	6-28

Selection	Setting <i>* Indicates default</i>	Serial Command <i># Indicates a numeric entry</i>	Page
UPC E Check Digit	Off	UPECKX0	6-29
	*On	UPECKX1	6-29
UPC E Number System	Off	UPENSX0	6-30
	*On	UPENSX1	6-30
UPC E 2 Digit Addenda	*Off	UPEAD20	6-30
	On	UPEAD21	6-30
UPC E 5 Digit Addenda	*Off	UPEAD50	6-30
	On	UPEAD51	6-30
UPC E Addenda Required	*Not Required	UPEARQ0	6-28
	Required	UPEARQ1	6-28
UPC E Addenda Separator	Off	UPEADS0	6-29
	*On	UPEADS1	6-29
EAN/JAN 13	Default All EAN/ JAN 13 Settings	E13DFT	6-31
EAN/JAN 13	Off	E13ENA0	6-31
	*On	E13ENA1	6-31
EAN/JAN 13 Check Digit	Off	E13CKX0	6-31
	*On	E13CKX1	6-31
EAN/JAN 13 2 Digit Addenda	*Off	E13AD20	6-32
	On	E13AD21	6-32
EAN/JAN 13 5 Digit Addenda	*Off	E13AD50	6-32
	On	E13AD51	6-32
EAN/JAN 13 Addenda Required	*Not Required	E13ARQ0	6-32
	Required	E13ARQ1	6-32
EAN/JAN 13 Addenda Separator	Off	E13ADS0	6-33
	*On	E13ADS1	6-33
ISBN Translate	*Off	E13ISB0	6-33
	On	E13ISB1	6-33
EAN/JAN 8	Default All EAN/ JAN 8 Settings	EA8DFT	6-34

Selection	Setting <i>* Indicates default</i>	Serial Command <i># Indicates a numeric entry</i>	Page
EAN/JAN 8	Off	EA8ENA0	6-34
	*On	EA8ENA1	6-34
EAN/JAN 8 Check Digit	Off	EA8CKX0	6-34
	*On	EA8CKX1	6-34
EAN/JAN 8 2 Digit Addenda	*Off	EA8AD20	6-35
	On	EA8AD21	6-35
EAN/JAN 8 5 Digit Addenda	*Off	EA8AD50	6-35
	On	EA8AD51	6-35
EAN/JAN 8 Addenda Required	*Not Required	EA8ARQ0	6-28
	Required	EA8ARQ1	6-28
EAN/JAN 8 Addenda Separator	Off	EA8ADS0	6-36
	*On	EA8ADS1	6-36
MSI	Default All MSI Settings	MSIDFT	6-36
MSI	*Off	MSIENA0	6-36
	On	MSIENA1	6-36
MSI Check Character	*Validate Type 10, but Don't Transmit	MSICHK0	6-37
	Validate Type 10 and Transmit	MSICHK1	6-37
MSI Message Length	Minimum (4 - 48) *4	MSIMIN##	6-37
	Maximum (4 - 48) *48	MSIMAX##	6-37
Plessey Code	Default All Plessey Settings	PLSDFT	6-38
Plessey Code	*Off	PLSENA0	6-38
	On	PLSENA1	6-38
Plessey Message Length	Minimum (4 - 48) *4	PLSMIN##	6-38
	Maximum (4 - 48) *48	PLSMAX##	6-38
GS1 DataBar Omnidirectional	Default All GS1 DataBar Omnidirectional Settings	RSSDFT	6-39

Selection	Setting <i>* Indicates default</i>	Serial Command <i># Indicates a numeric entry</i>	Page
GS1 DataBar Omnidirectional	Off	RSSENA0	6-39
	*On	RSSENA1	6-39
GS1 DataBar Limited	Default All GS1 DataBar Limited Settings	RSLDFT	6-39
GS1 DataBar Limited	Off	RSLENA0	6-39
	*On	RSLENA1	6-39
GS1 DataBar Expanded	Default All GS1 DataBar Expanded Settings	RSEDFT	6-40
GS1 DataBar Expanded	Off	RSEENA0	6-40
	*On	RSEENA1	6-40
GS1 DataBar Expanded Msg. Length	Minimum (4 - 74) *4	RSEMIN##	6-40
	Maximum (4 - 74) *74	RSEMAX##	6-40
China Post Code	Default All China Post Code Settings	CPCDFT	6-41
China Post Code	*Off	CPCENA0	6-41
	On	CPCENA1	6-41
China Post Code Msg. Length	Minimum (2 - 80) *4	CPCMIN##	6-41
	Maximum (2 - 80) *80	CPCMAX##	6-41
Korea Post Code	Default All Korea Post Code Settings	CPCDFT	6-42
Korea Post Code	*Off	CPCENA0	6-42
	On	CPCENA1	6-42
Korea Post Code Msg. Length	Minimum (2 - 80) *4	CPCMIN##	6-42
	Maximum (2 - 80) *80	CPCMAX##	6-42
Codablock F	Default All Codablock F Settings	CBFDFT	6-43
Codablock F	*Off	CBFENA0	6-43
	On	CBFENA1	6-43

Selection	Setting <i>* Indicates default</i>	Serial Command <i># Indicates a numeric entry</i>	Page
Codablock F Msg. Length	Minimum (1 - 2048) *1	CBFMIN####	6-43
	Maximum (1 - 2048) *2048	CBFMAX####	6-43
Code 49	Default All Code 49 Settings	C49DFT	6-44
Code 49	* Off	C49ENA0	6-44
	On	C49ENA1	6-44
Code 49	Minimum (1 - 81) *1	C49MIN##	6-44
	Maximum (1 - 81) *81	C49MAX##	6-44
GS1 Emulation	GS1 Emulation	EANEMU2	6-45
	GS1-128 Emulation	EANEMU1	6-45
	*GS1 Emulation Off	EANEMU0	6-45
Label Code	*Off	LBLENA0	6-46
	On	LBLENA1	6-46

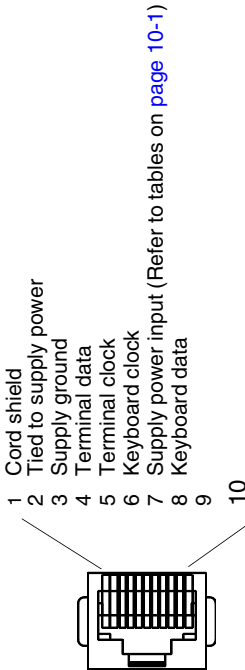
Hyperion 1300g Product Specifications

Parameter	Specification
Mechanical	
Height	5.9 inches (15 cm)
Length	4.4 inches (11.2 cm)
Width	3.1 inches (7.9 cm)
Weight	5.6 ounces (160 g)
Electrical	
LED source	630 nm visible red LED
Input Voltage	4.5-5.5VDC at imager
Operating Power	200mA @ 5V
Standby Power	125mA @5V
Environmental	
Operating Temperature	32° F to +122° F (0° C to +50° C)
Storage Temperature	-40° F to +140° F (-40° C to +60° C)
Humidity	0 to 95% non-condensing
Drop	Operational after 50 drops from 5 feet (1.5 m) to concrete
Environmental Sealing	IP41
Light Levels	70,000 lux
ESD	15 kV to any external surface
Scan Performance	
Scan Pattern	Single Line
Motion Tolerance	20 inches (51 cm) per second
Scan Rate	Up to 270 scans per second
Print Contrast	20%
Pitch, Skew	±65
Decode Capabilities	Reads standard 1D and GS1 DataBar symbologies
Optional External Power Supply Requirements	Use only a Listed Limited Power Source (LPS) or Class 2 type power supply with output rated 5 to 5.2Vdc, 1A

Standard Cable Pinouts

Keyboard Wedge

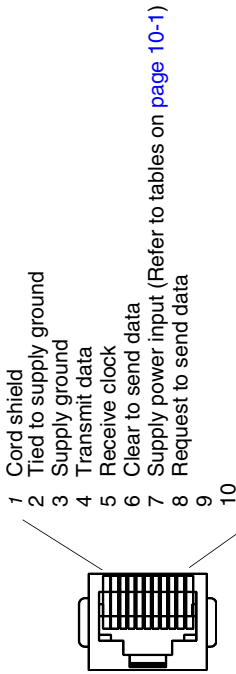
10 Pin RJ41 Modular Plug
connects to the scanner handle



Standard Cable Pinouts

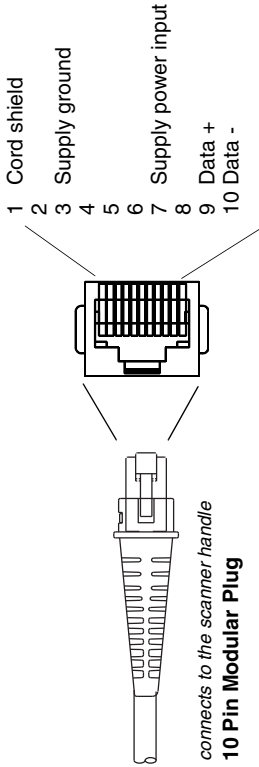
Serial Output

10 Pin RJ41 Modular Plug
connects to the scanner handle



Standard Cable Pinouts

USB



Repairs

Repairs and/or upgrades are not to be performed on this product. These services are to be performed only by an authorized service center. Please see [Customer Support](#) on page 12-1 for further information.

Maintenance

Your device provides reliable and efficient operation with a minimum of care. Although specific maintenance is not required, the following periodic checks ensure dependable scanner operation:

Cleaning the Device

Reading performance may degrade if the scanner's window is not clean. If the window is visibly dirty, or if the scanner isn't operating well, clean the window with a soft cloth or lens tissue dampened with water (or a mild soapy water solution). If a soapy water solution is used, rinse with a clean lens tissue dampened with water only.

The scanner's housing may also be cleaned the same way.



Caution:

Do not submerge the scanner in water. Do not use abrasive wipes or tissues on the scanner's window – abrasive wipes may scratch the window.

Never use solvents (e.g., acetone, benzene, ether, or phenol-based agents) on the housing or window – solvents may damage the finish or the window.

Inspecting Cords and Connectors

Inspect the scanner's interface cable and connector for wear or other signs of damage. A badly worn cable or damaged connector may interfere with scanner operation. Contact your Honeywell distributor for information about cable replacement. Cable replacement instructions are on [page 11-2](#).

Replacing the Interface Cable

The standard interface cable is attached to the scanner with an 10-pin modular connector. When properly seated, the connector is held in the scanner's handle by a flexible retention tab. The interface cable is designed to be field replaceable.

- Order replacement cables from Honeywell or from an authorized distributor.
- When ordering a replacement cable, specify the cable part number of the original interface cable.

Replacing the Interface Cable:

1. Turn the power to the host system OFF.
2. Disconnect the scanner's cable from the terminal or computer.
3. Locate the small hole on the side of the scanner's handle. This is the cable release.
4. Straighten one end of a paper clip.
5. Insert the end of the paper clip into the small hole and press in. This depresses the retention tab, releasing the connector. Pull the connector out while maintaining pressure on the paper clip, then remove the paper clip.
6. Replace with the new cable. Insert the connector into the opening and press firmly. The connector is keyed to go in only one way, and will click into place.



Troubleshooting

The scanner automatically performs self-tests whenever you turn it on. If your scanner is not functioning properly, review the following Troubleshooting Guide to try to isolate the problem.

Is the power on? Is the aiming beam line on?

If the aiming beam line isn't illuminated, check that:

- The cable is connected properly.
- The host system power is on (if external power isn't used).
- The trigger works.

Is the scanner having trouble reading your symbols?

If the scanner isn't reading symbols well, check that the symbols:

- Aren't smeared, rough, scratched, or exhibiting voids.
- Aren't coated with frost or water droplets on the surface.
- Are enabled in the scanner or in the decoder to which the scanner connects.

Is the bar code displayed but not entered?

The bar code is displayed on the host device correctly, but you still have to press a key to enter it (the Enter/Return key or the Tab key, for example).

You need to program a suffix. Programming a suffix enables the scanner to output the bar code data plus the key you need (such as "CR") to enter the data into your application. Refer to [Prefix/Suffix Overview](#) on page 4-1 for further information.

Does the scanner read the bar code incorrectly?

If the scanner reads a bar code, but the data is not displayed correctly on the host screen:

- The scanner may not be programmed for the appropriate terminal interface. For example, you scan "12345" and the host displays "@es%."

Reprogram the scanner with the correct Plug and Play or Terminal selection bar code. See [Chapter 1](#) and [Chapter 2](#).

- The scanner may not be programmed to output your bar code data properly. For example, you scan "12345" and the host displays "A12345B."

Reprogram the scanner with the proper symbology selections. See [Chapter 6](#).

The scanner won't read your bar code at all.

1. Scan the sample bar codes in the back of this manual. If the scanner reads the sample bar codes, check that your bar code is readable. Verify that your bar code symbology is enabled (see [Chapter 6](#)).
2. If the scanner still can't read the sample bar codes, scan [All Symbologies](#) on page 6-2.

If you aren't sure what programming options have been set in the scanner, or if you want the factory default settings restored, scan [Resetting the Standard Product Defaults](#) on page 9-4.



Technical Assistance

If you need assistance installing or troubleshooting your device, please call your distributor or the nearest technical support office:

North America/Canada

Telephone: (800) 782-4263
E-mail: hsmnasupport@honeywell.com

Latin America

Telephone: (803) 835-8000
Telephone: (800) 782-4263
E-mail: hsmlasupport@honeywell.com

Brazil

Telephone: +55 (11) 5185-8222
Fax: +55 (11) 5185-8225
E-mail: brsuporte@honeywell.com

Mexico

Telephone: 01-800-HONEYWELL (01-800-466-3993)
E-mail: soporte.hsm@honeywell.com

Europe, Middle East, and Africa

Telephone: +31 (0) 40 7999 393
Fax: +31 (0) 40 2425 672
E-mail: hsmeurosupport@honeywell.com

Hong Kong

Telephone: +852-29536436
Fax: +852-2511-3557
E-mail: aptechsupport@honeywell.com

Singapore

Telephone: +65-6842-7155
Fax: +65-6842-7166
E-mail: aptechsupport@honeywell.com

China

Telephone: +86 800 828 2803
Fax: +86-512-6762-2560
E-mail: aptechsupport@honeywell.com

Japan

Telephone: +81-3-3839-8511
Fax: +81-3-3839-8519
E-mail: aptechsupport@honeywell.com

Online Technical Assistance

You can also access technical assistance online at www.honeywellaidc.com.

Product Service and Repair

Honeywell International Inc. provides service for all its products through service centers throughout the world. To obtain warranty or non-warranty service, contact the appropriate location below to obtain a Return Material Authorization number (RMA #) before returning the product.

North America

Telephone: (800) 782-4263
E-mail: hsmnaservice@honeywell.com

Latin America

Telephone: (803) 835-8000
Telephone: (800) 782-4263
Fax: (239) 263-9689
E-mail: laservice@honeywell.com

Brazil

Telephone: +55 (11) 5185-8222
Fax: +55 (11) 5185-8225
E-mail: brservice@honeywell.com

Mexico

Telephone: 01-800-HONEYWELL (01-800-466-3993)
Fax: +52 (55) 5531-3672
E-mail: mxservice@honeywell.com

Europe, Middle East, and Africa

Telephone: +31 (0) 40 2901 633
Fax: +31 (0) 40 2901 631
E-mail: euroservice@honeywell.com

Hong Kong

Telephone: +852-29536436
Fax: +852-2511-3557
E-mail: apservice@honeywell.com

Singapore

Telephone: +65-6842-7155
Fax: +65-6842-7166
E-mail: apservice@honeywell.com

China

Telephone: +86 800 828 2803
Fax: +86-512-6762-2560
E-mail: apservice@honeywell.com

Japan

Telephone: +81-3-3839-8511

Fax: +81-3-3839-8519

E-mail: apservice@honeywell.com

Online Product Service and Repair Assistance

You can also access product service and repair assistance online at www.honeywellaidc.com.

Limited Warranty

Honeywell International Inc. ("HII") warrants its products and optional accessories to be free from defects in materials and workmanship and to conform to HII's published specifications applicable to the products purchased at the time of shipment. This warranty does not cover any HII product which is (i) improperly installed or used; (ii) damaged by accident or negligence, including failure to follow the proper maintenance, service, and cleaning schedule; or (iii) damaged as a result of (A) modification or alteration by the purchaser or other party, (B) excessive voltage or current supplied to or drawn from the interface connections, (C) static electricity or electro-static discharge, (D) operation under conditions beyond the specified operating parameters, or (E) repair or service of the product by anyone other than HII or its authorized representatives.

This warranty shall extend from the time of shipment for the duration published by HII for the product at the time of purchase ("Warranty Period"). Any defective product must be returned (at purchaser's expense) during the Warranty Period to HII factory or authorized service center for inspection. No product will be accepted by HII without a Return Materials Authorization, which may be obtained by contacting HII. In the event that the product is returned to HII or its authorized service center within the Warranty Period and HII determines to its satisfaction that the product is defective due to defects in materials or workmanship, HII, at its sole option, will either repair or replace the product without charge, except for return shipping to HII.

EXCEPT AS MAY BE OTHERWISE PROVIDED BY APPLICABLE LAW, THE FOREGOING WARRANTY IS IN LIEU OF ALL OTHER COVENANTS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, ORAL OR WRITTEN, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT.

HII'S RESPONSIBILITY AND PURCHASER'S EXCLUSIVE REMEDY UNDER THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT OF THE DEFECTIVE PRODUCT WITH NEW OR REFURBISHED PARTS. IN NO

EVENT SHALL HII BE LIABLE FOR INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, AND, IN NO EVENT, SHALL ANY LIABILITY OF HII ARISING IN CONNECTION WITH ANY PRODUCT SOLD HEREUNDER (WHETHER SUCH LIABILITY ARISES FROM A CLAIM BASED ON CONTRACT, WARRANTY, TORT, OR OTHERWISE) EXCEED THE ACTUAL AMOUNT PAID TO HII FOR THE PRODUCT. THESE LIMITATIONS ON LIABILITY SHALL REMAIN IN FULL FORCE AND EFFECT EVEN WHEN HII MAY HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH INJURIES, LOSSES, OR DAMAGES. SOME STATES, PROVINCES, OR COUNTRIES DO NOT ALLOW THE EXCLUSION OR LIMITATIONS OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

All provisions of this Limited Warranty are separate and severable, which means that if any provision is held invalid and unenforceable, such determination shall not affect the validity of enforceability of the other provisions hereof. Use of any peripherals not provided by the manufacturer may result in damage not covered by this warranty. This includes but is not limited to: cables, power supplies, cradles, and docking stations. HII extends these warranties only to the first end-users of the products. These warranties are non-transferable.

The duration of the limited warranty for the Hyperion 1300g is five (5) years.

Symbology Chart

Symbology	AIM ID	Possible AIM ID Modifiers (m)	Code ID (hex)
<i>All Symbologies</i>			(0x99)
China Post	]X0		Q (0x51)
Codabar	]Fm	0-1	a (0x61)
Codablock F	]Om	0, 1, 4, 5, 6	q (0x71)
Code 11	]H3		h (0x68)
Code 128	]Cm	0, 1, 2, 4	j (0x6A)
Code 32 Pharmaceutical (PARAF)	]X0		< (0x3C)
Code 39 (supports Full ASCII mode)	]Am	0, 1, 3, 4, 5, 7	b (0x62)
Code 49	]Tm	0, 1, 2, 4	l (0x6C)
Code 93 and 93i	]Gm	0-9, A-Z, a-m	i (0x69)
EAN-13 (including Bookland EAN)	]E0		d (0x64)
EAN-13 with Add-On	]E3		d (0x64)
EAN-13 with Extended Coupon Code	]E3		d (0x64)
EAN-8	]E4		D (0x44)
EAN-8 with Add-On	]E3		D (0x44)
GS1 DataBar	]em	0	y (0x79)
GS1-128	]C1		l (0x49)
Interleaved 2 of 5	]Im	0, 1, 3	e (0x65)
Matrix 2 of 5	]X0		m (0x6D)
MSI	]Mm	0	g (0x67)
Plessey Code	]P0		n (0x6E)
Straight 2 of 5 IATA	]Rm	0, 1, 3	f (0x66)
Straight 2 of 5 Industrial	]S0		f (0x66)
UPC-A	]E0		c (0x63)
UPC-A with Add-On	]E3		c (0x63)
UPC-A with Extended Coupon Code	]E3		c (0x63)
UPC-E	]E0		E (0x45)

Symbology	AIM ID	Possible AIM ID Modifiers (m)	Code ID (hex)
UPC-E with Add-On	]E3		E (0x45)
UPC-E1 (obsolete)	]X0		E (0x45)

Note: "m" represents the AIM modifier character. Refer to International Technical Specification, Symbology Identifiers, for AIM modifier character details.

Prefix/Suffix entries for specific symbologies override the universal (All Symbologies, 99) entry.

ASCII Conversion Chart (Code Page 1252)

Note: This table applies to U.S. style keyboards. Certain characters may differ depending on your Country Code/PC regional settings.

Non-Printable Characters					
DEC	HEX	Character (Code)	DEC	HEX	Character (Code)
0	0	NULL	16	10	DATA LINK ESCAPE (DLE)
1	1	START OF HEADING (SOH)	17	11	DEVICE CONTROL 1 (DC1)
2	2	START OF TEXT (STX)	18	12	DEVICE CONTROL 2 (DC2)
3	3	END OF TEXT (ETX)	19	13	DEVICE CONTROL 3 (DC3)
4	4	END OF TRANSMISSION (EOT)	20	14	DEVICE CONTROL 4 (DC4)
5	5	END OF QUERY (ENQ)	21	15	NEGATIVE ACKNOWLEDGEMENT (NAK)
6	6	ACKNOWLEDGE (ACK)	22	16	SYNCHRONIZE (SYN)
7	7	BEEP (BEL)	23	17	END OF TRANSMISSION BLOCK (ETB)
8	8	BACKSPACE (BS)	24	18	CANCEL (CAN)
9	9	HORIZONTAL TAB (HT)	25	19	END OF MEDIUM (EM)
10	A	LINE FEED (LF)	26	1A	SUBSTITUTE (SUB)
11	B	VERTICAL TAB (VT)	27	1B	ESCAPE (ESC)
12	C	FF (FORM FEED)	28	1C	FILE SEPARATOR (FS) RIGHT ARROW
13	D	CR (CARRIAGE RETURN)	29	1D	GROUP SEPARATOR (GS) LEFT ARROW
14	E	SO (SHIFT OUT)	30	1E	RECORD SEPARATOR (RS) UP ARROW

15	F	SI (SHIFT IN)	31	1F	UNIT SEPARATOR (US) DOWN ARROW
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Printable Characters								
DEC	HEX	Character	DEC	HEX	Character	DEC	HEX	Character
32	20	<SPACE>	64	40	@	96	60	`
33	21	!	65	41	A	97	61	a
34	22	"	66	42	B	98	62	b
35	23	#	67	43	C	99	63	c
36	24	\$	68	44	D	100	64	d
37	25	%	69	45	E	101	65	e
38	26	&	70	46	F	102	66	f
39	27	'	71	47	G	103	67	g
40	28	(	72	48	H	104	68	h
41	29	)	73	49	I	105	69	i
42	2A	*	74	4A	J	106	6A	j
43	2B	+	75	4B	K	107	6B	k
44	2C	,	76	4C	L	108	6C	l
45	2D	-	77	4D	M	109	6D	m
46	2E	.	78	4E	N	110	6E	n
47	2F	/	79	4F	O	111	6F	o
48	30	0	80	50	P	112	70	p
49	31	1	81	51	Q	113	71	q
50	32	2	82	52	R	114	72	r
51	33	3	83	53	S	115	73	s
52	34	4	84	54	T	116	74	t
53	35	5	85	55	U	117	75	u
54	36	6	86	56	V	118	76	v
55	37	7	87	57	W	119	77	w
56	38	8	88	58	X	120	78	x
57	39	9	89	59	Y	121	79	y
58	3A	:	90	5A	Z	122	7A	z
59	3B	;	91	5B	[	123	7B	{
60	3C	<	92	5C	\	124	7C	|
61	3D	=	93	5D	]	125	7D	}
62	3E	>	94	5E	^	126	7E	~
63	3F	?	95	5F	_	127	7F	<DEL>

Extended ASCII Characters								
DEC	HEX	Character	DEC	HEX	Character	DEC	HEX	Character
128	80	€	171	AB	«	214	D6	Ö
129	81		172	AC	¬	215	D7	×
130	82	,	173	AD		216	D8	Ø
131	83	f	174	AE	®	217	D9	Ù
132	84	„	175	AF	˘	218	DA	Ú
133	85	...	176	B0	°	219	DB	Û
134	86	†	177	B1	±	220	DC	Ü
135	87	‡	178	B2	²	221	DD	Ý
136	88	^	179	B3	³	222	DE	Þ
137	89	‰	180	B4	´	223	DF	ß
138	8A	Š	181	B5	µ	224	E0	à
139	8B	‹	182	B6	¶	225	E1	á
140	8C	Œ	183	B7	·	226	E2	â
141	8D		184	B8	,	227	E3	ã
142	8E	Ž	185	B9	¹	228	E4	ä
143	8F		186	BA	º	229	E5	å
144	90		187	BB	»	230	E6	æ
145	91	‘	188	BC	¼	231	E7	ç
146	92	’	189	BD	½	232	E8	è
147	93	“	190	BE	¾	233	E9	é
148	94	”	191	BF	¿	234	EA	ê
149	95	•	192	C0	À	235	EB	ë
150	96	–	193	C1	Á	236	EC	ì
151	97	—	194	C2	Â	237	ED	í
152	98	˜	195	C3	Ã	238	EE	î
153	99	™	196	C4	Ä	239	EF	ï
154	9A	š	197	C5	Å	240	F0	ð
155	9B	›	198	C6	Æ	241	F1	ñ
156	9C	œ	199	C7	Ç	242	F2	ò
157	9D		200	C8	È	243	F3	ó
158	9E	ž	201	C9	É	244	F4	ô
159	9F	ÿ	202	CA	Ê	245	F5	õ
160	A0		203	CB	Ë	246	F6	ö
161	A1	ì	204	CC	Ì	247	F7	÷
162	A2	é	205	CD	Í	248	F8	ø
163	A3	£	206	CE	Î	249	F9	ù
164	A4	¤	207	CF	Ï	250	FA	ú
165	A5	¥	208	D0	Ð	251	FB	û
166	A6	ı	209	D1	Ñ	252	FC	ü

Extended ASCII Characters (Continued)								
DEC	HEX	Character	DEC	HEX	Character	DEC	HEX	Character
167	A7	§	210	D2	Ò	253	FD	ý
168	A8	¨	211	D3	Ó	254	FE	þ
169	A9	©	212	D4	Ô	255	FF	ÿ
170	AA	ª	213	D5	Õ			

Key Code Reference Chart

Key Code	ALT+ Value
↑	ALT+128
↓	ALT+129
→	ALT+130
←	ALT+131
Insert	ALT+132
Delete	ALT+133
Home	ALT+134
End	ALT+135
Page Up	ALT+136
Page Down	ALT+137
Right ALT	ALT+138
Right CTRL	ALT+139
Reserved	ALT+140
Reserved	ALT+141
Numeric Keypad Enter	ALT+142
Numeric Keypad /	ALT+143
F1	ALT+144
F2	ALT+145
F3	ALT+146
F4	ALT+147
F5	ALT+148
F6	ALT+149
F7	ALT+150

Code Page Mapping of Printed Bar Codes

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

which the bar codes were created. The data characters should then appear properly.

Note: The Code Page option is available for Code 39, Code 93, and Code 128.

Code Page	Standard	Description
1	CP ISO646	
2 (Default)	ISO 2022	Automatic National Replacement Characters
3	CP Binary	
82	ISO 2022 11 Swe	Swedish Replacement Characters
83	ISO 2022 69 Fra	French/Belgium Replacement Characters
81	ISO 2022 25 Fra	French/Belgium Replacement Characters
84	ISO 2022 11 Ger	German Replacement Characters
85	ISO 2022 11 Ita	Italian Replacement Characters
86	ISO 2022 11 Swi	Swiss Replacement Characters
87	ISO 2022 11 UK	British Replacement Characters
88	ISO 2022 11 Dan	Danish Replacement Characters
89	ISO 2022 11 Nor	Norwegian Replacement Characters
90	ISO 2022 11 Spa	Spanish Replacement Characters

Sample Symbols

UPC A



0 123456 7890

Interleaved 2 of 5



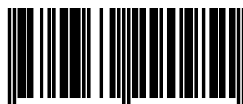
1234567890

Code 128



Code 128

EAN 13



9 780330 290951

EAN 8



654 3210 5

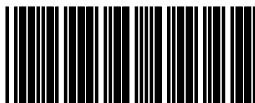
UPC-E



0 456123 8

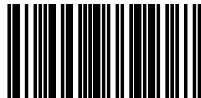
Sample Symbols

Code 39



BC321

Codabar



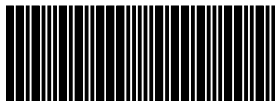
A13579B

Code 93



123456-9\$

Straight 2 of 5 Industrial



123456

Matrix 2 of 5



6543210

GS1 DataBar



(01)00123456789012

Programming Chart



K0K.

0



K2K.

2



K4K.

4



K6K.

6



K8K.

8



K1K.

1



K3K.

3



K5K.

5



K7K.

7



K9K.

9

Programming Chart



KAK.

A



KBK

B



KCK.

C



KDK.

D



KEK.

E



KFK.

F



MNUSAV.

Save



MNUABT.

Discard

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

Programming Chart



K0K

0



K2K

2



K4K

4



K6K

6



K8K

8



K1K

1



K3K

3



K5K

5



K7K

7



K9K

9

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