

Honeywell

Hyperion 1300g

General Purpose Handheld Linear Scanner

User's Guide

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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

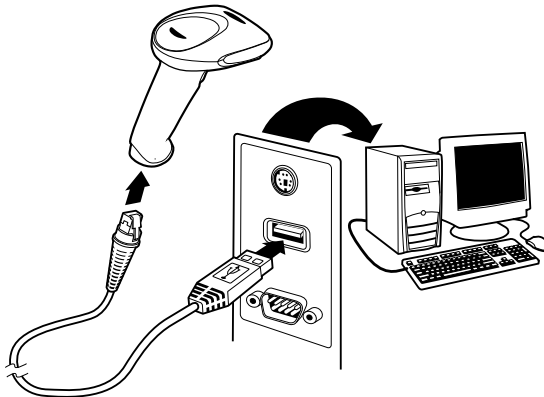
After you open the shipping carton containing the product, take the following steps:

- 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. The scanner emulates the keyboard.

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



2. The scanner beeps.

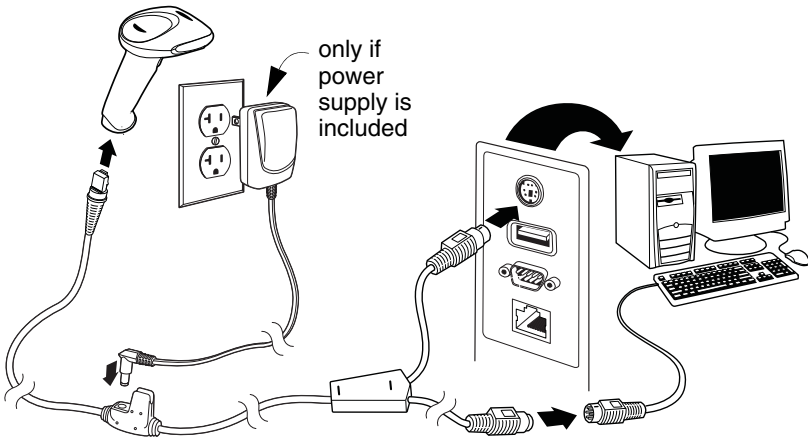
3. Verify the scanner operation by scanning a bar code from the [Sample Symbols](#) in the back of this manual.

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," where the scanner provides data output that is similar to keyboard entries. 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.

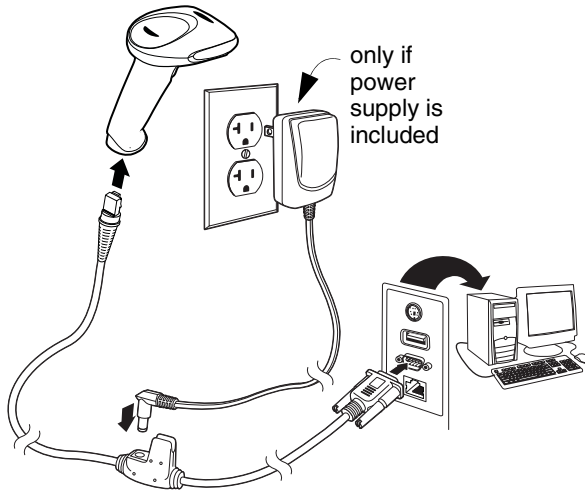


3. Turn the terminal/computer power back on. The scanner beeps.
4. Verify the scanner operation by scanning a bar code from the [Sample Symbols](#) in the back of this manual. The scanner beeps once.

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.

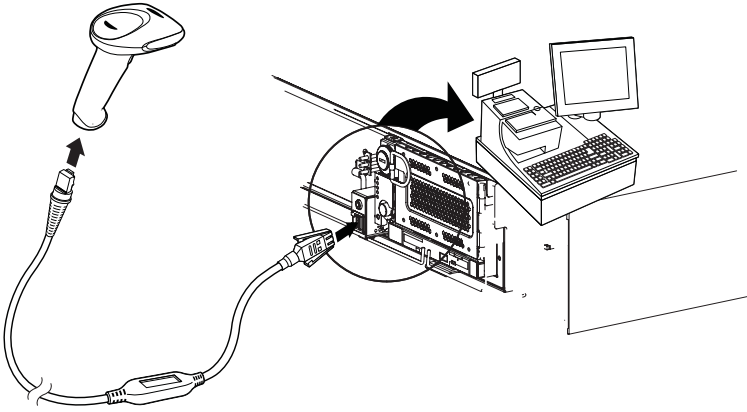


3. Plug the serial connector into the serial port on your computer. Tighten the two screws to secure the connector to the port.
4. Once the scanner has been completely connected, power up the computer.
5. This interface programs 38,400 baud, 8 data bits, no parity, and 1 stop bit.

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 2-2.

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.

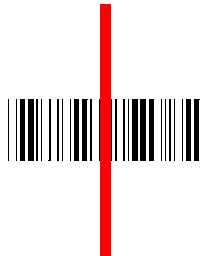
Good Technique



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. Contact Technical Support (see [Customer Support](#) on page 12-1) for further information.

Setting Custom Defaults

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



MNUCDF.

Set Custom Defaults

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

Resetting the Custom Defaults

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



DEFAULT.

Activate Custom Defaults

The [Serial Programming Commands](#) starting on [page 9-1](#) 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 2-19](#)).



PAPLTD.

**Laptop Direct Connect
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.



PAPSHP.

**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 POS

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



PAP131.

**USB HID POS 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.



PAP130.

USB Serial Emulation

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

CTS/RTS Emulation



USBCTS1.

CTS/RTS Emulation On



USBCTS0.

*** CTS/RTS Emulation Off**

ACK/NAK Mode



USBACK1.

ACK/NAK Mode On



USBACK0.

*** ACK/NAK Mode Off**

Honeywell Bioptic Aux Port Configuration

Scan the following Plug and Play code to program the scanner for a Honeywell bioptic scanner auxiliary port configuration. This bar code sets the baud rate to 38400 bps and the data format to 8 data bits, no parity, 1 stop bit. Character RTS/CTS with timeout and 232 ACK/NAK are also enabled.



PAPBIO.

Honeywell Bioptic Settings

Note: If you are having unexpected results with this programming code, scan the [Resetting the Custom Defaults](#) bar code on page 1-5 first, then scan the programming code above.

Datalogic™ Magellan® Bioptic Aux Port Configuration

Scan the following Plug and Play code to program the scanner for a Datalogic Magellan bioptic scanner auxiliary port configuration. This bar code sets the baud rate to 9600 bps and the data format to 8 data bits, no parity, 1 stop bit.



PAPMAG.

Datalogic Magellan Bioptic Settings

Note: If you are having unexpected results with this programming code, scan the [Resetting the Custom Defaults](#) bar code on page 1-5 first, then scan the programming code above.

Wincor Mode A

Scan the following Plug and Play code to program the scanner for Wincor Mode A mode. This bar code sets the baud rate to 9600 bps and the data format to 8 data bits, odd parity, 1 stop bit.



PAPWMA.

Wincor Mode A

Note: If you are having unexpected results with this programming code, scan the [Resetting the Custom Defaults](#) bar code on page 1-5 first, then scan the programming code above.

Keyboard Country Layout

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

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



KBDCTY0.

* **United States**



KBDCTY35.

Albania



KBDCTY91.

Arabic



KBDCTY81.

Azeri (Cyrillic)



KBDCTY80.

Azeri (Latin)



KBDCTY82.

Belarus



KBDCTY1.

Belgium



KBDCTY33.

Bosnia



KBDCTY16.
Brazil



KBDCTY59.
Brazil (MS)



KBDCTY52.
Bulgaria (Cyrillic)



KBDCTY53.
Bulgaria (Latin)



KBDCTY54.
Canada (French legacy)



KBDCTY18.
Canada (French)



KBDCTY55.
Canada (Multilingual)



KBDCTY92.
China



KBDCTY32.
Croatia



KBDCTY15.
Czech



KBDCTY40.
Czech (Programmers)



KBDCTY39.
Czech (QWERTY)



KBDCTY38.
Czech (QWERTZ)



KBDCTY8.
Denmark



KBDCTY11.
Dutch (Netherlands)



KBDCTY41.
Estonia



KBDCTY83.
Faroese



KBDCTY2.
Finland



KBDCTY3.
France



KBDCTY84.
Gaelic



KBDCTY4.
Germany



KBDCTY17.
Greek



KBDCTY64.
Greek (220 Latin)



KBDCTY61.
Greek (220)



KBDCTY65.
Greek (319 Latin)



KBDCTY62.
Greek (319)



KBDCTY63.
Greek (Latin)



KBDCTY60.
Greek (Polytonic)



KBDCTY66.
Greek (MS)



KBDCTY50.
Hungarian (101 key)



KBDCTY12.
Hebrew



KBDCTY75.
Iceland



KBDCTY19.
Hungary



KBDCTY56.
Italian (142)



KBDCTY73.
Ireland



KBDCTY5.
Italy



KBDCTY28.
Japan ASCII



KBDCTY78.
Kazakh



KBDCTY93.
Korea



KBDCTY79.
Kyrgyz (Cyrillic)



KBDCTY14.
Latin America



KBDCTY42.
Latvia



KBDCTY43.
Latvia (QWERTY)



KBDCTY44.
Lithuania



KBDCTY45.
Lithuania (IBM)



KBDCTY74.
Malta



KBDCTY34.
Macedonia



KBDCTY9.
Norway



KBDCTY86.
Mongolian (Cyrillic)



KBDCTY20.
Poland



KBDCTY57.
Polish (214)



KBDCTY58.
Polish (Programmers)



KBDCTY13.
Portugal



KBDCTY25.
Romania



KBDCTY26.
Russia



KBDCTY67.
Russian (MS)



KBDCTY68.
Russian (Typewriter)



KBDCTY21.
SCS



KBDCTY37.
Serbia (Cyrillic)



KBDCTY36.
Serbia (Latin)



KBDCTY22.
Slovakia



KBDCTY49.
Slovakia (QWERTY)



KBDCTY48.
Slovakia (QWERTZ)



KBDCTY10.

Spain



KBDCTY31.

Slovenia



KBDCTY51.

Spanish variation



KBDCTY23.

Sweden



KBDCTY29.

Switzerland (French)



KBDCTY6.

Switzerland (German)



KBDCTY85.

Tatar



KBDCTY94.

Thailand



KBDCTY27.

Turkey F



KBDCTY24.
Turkey Q



KBDCTY76.
Ukrainian



KBDCTY7.
United Kingdom



KBDCTY89.
United States (Dvorak right)



KBDCTY88.
United States (Dvorak left)



KBDCTY87.
United States (Dvorak)



KBDCTY30.
United States (International)



KBDCTY77.
Uzbek (Cyrillic)



KBDCTY95.
Vietnam

Keyboard Mode Options

ALT Mode

If your bar code contains special characters from the extended ASCII chart for example, an e with an accent grave (è), you will use ALT Mode. (See [Extended ASCII Characters](#) on page A-6.)

Note: Scan the ALT mode bar code after scanning the appropriate Keyboard Country code.

If your keystrokes require the ALT key and 4 characters, scan the **4 Characters** bar code. The data is then output with the special character(s). Default = *Off*.



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.



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



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 + X (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+ X Values.

Windows Mode Prefix/Suffix Off: The scanner sends key combinations for ASCII control characters for values 00-1F (refer to [ASCII Conversion Chart \(Code Page 1252\)](#) on page A-3 for non-reprintable characters), but it does not translate any prefix or suffix information.

Default = Control + ASCII Off



KBDCAS2.

**Windows Mode Control + X
Mode On**



KBDCAS0.

*** Control + X Mode Off**



KBDCAS1.

**DOS Mode Control + X Mode
On**



KBDCAS3.

Windows Mode Prefix/Suffix Off

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.*

Note: When using 7 Data, 1 Stop, Parity None, the host must insert at least a 1 bit delay between characters. If this is not done, a different RS232 Word Length format must be used.



232WRD0.

7 Data, 1 Stop, Parity None
(see note above)



232WRD3.

7 Data, 1 Stop, Parity Even



232WRD6.

7 Data, 1 Stop, Parity Odd



232WRD1.

7 Data, 2 Stop Parity None



232WRD4.

7 Data, 2 Stop, Parity Even



232WRD7.

7 Data, 2 Stop, Parity Odd



232WRD2.

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



232WRD5.

8 Data, 1 Stop, Parity Even



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.

RTS/CTS Off: RTS/CTS is turned off so no data flow control is used, but RTS is still active.

RTS/CTS Off, RTS Inactive: RTS/CTS is turned off so no data flow control is used and RTS is inactive.

Flow Control, No Timeout: The scanner asserts RTS when it has data to send, and will wait indefinitely for CTS to be asserted by the host.

Character-Based Flow Control, No Timeout: The scanner asserts RTS when it has a character to send, and will wait indefinitely for CTS to be asserted by the host

Two-Direction Flow Control: The scanner asserts RTS when it is OK for the host to transmit. The host asserts CTS when it is OK for the device to transmit.

Flow Control with Timeout: The scanner asserts RTS when it has data to send and waits for a delay (see [RS232 Timeout](#) on page 2-27) for CTS to be asserted by the host. If the delay time expires and CTS is not asserted, the device transmit buffer is cleared and scanning may resume.

Character-Based Flow Control with Timeout: The scanner asserts RTS when it has a character to send and waits for a delay (see [RS232 Timeout](#) on page 2-27) for CTS to be asserted by the host. If the delay time expires and CTS is not asserted, the device transmit buffer is cleared and scanning may resume.

CTS-Based Flow Control, No Timeout: When the host asserts CTS, scanning is enabled. When CTS is not asserted, scanning is disabled.

RTS On: RTS only is on during transmission. CTS is ignored.

Default = RTS/CTS Off.



232CTS0.

* **RTS/CTS Off**



232CTS10.

RTS/CTS Off, RTS Inactive



232CTS1.

Flow Control, No Timeout



232CTS2.

**Two-Direction Flow
Control**



232CTS4.

**Character-Based Flow
Control with Timeout**



232CTS8.

RTS On



232CTS7.

**Character-Based Flow
Control, No Timeout**



232CTS3.

**Flow Control with
Timeout**



232CTS5.

**CTS-Based Flow Control,
No Timeout**



232CTS9.

No RTS if CTS is On

RS232 Timeout

When using Flow Control with Timeout, you must program the length of the delay you want to wait for CTS from the host. Set the length (in milliseconds) for a timeout by scanning the bar code below, then setting the timeout (from 1-65535 milliseconds) by scanning digits from the inside back cover, then scanning **Save**. *Default = 1000.*



232DEL.

RS232 Timeout

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**

Scanner to Bioptic Communication

The following settings are used to set up communication between Honeywell scanners and bioptic scanners.

Note: The scanner's baud rate must be set to 38400 and the RS232 timeout must be set to 3000 in order to communicate with a bioptic scanner. See "RS232 Modifiers" on page 2-22, and [RS232 Timeout](#) on page 2-27 for further information.

Scanner-Bioptic Packet Mode

Packet Mode On must be scanned to set the scanner's format so it is compatible with a bioptic scanner. *Default = Packet Mode Off.*



232PKT0.
*** Packet Mode Off**



232PKT2.
Packet Mode On

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 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).



TRGMOD0.

* 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.*



TRGSTO.

Read Time-Out

Automatic Trigger

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



TRGMOD1.

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 (Manual Trigger only)

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.*



TRGPT0.

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.

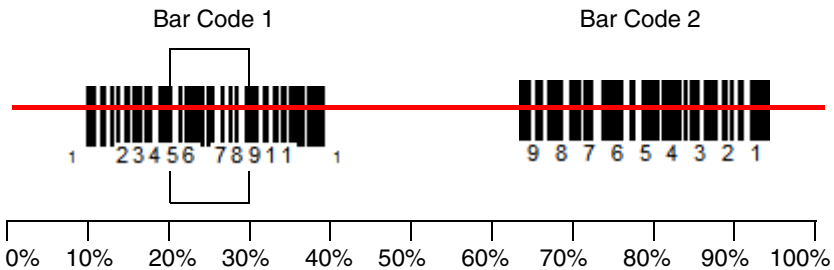
User-Specified Reread Delay

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

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 3-13).
2. **Code I.D.**
On the [Symbology Charts](#) 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-3, 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

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 3-11, 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_END.

*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



SHOTGND.

*** 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 5-14). 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.

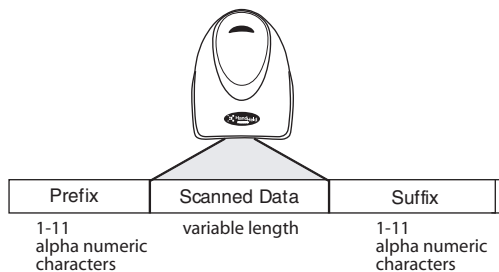
*** Off**



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.

Note: Plug and Play bar codes for interface selections (see [Programming the Interface - Plug and Play](#) on page 2-1) automatically program a CR/LF suffix.

- A prefix or suffix may be added or cleared from one symbology or all symbologies.
- You can add any prefix or suffix from the [ASCII Conversion Chart \(Code Page 1252\)](#), page A-3, 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 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 \(Code Page 1252\)](#), page A-3, for the prefix or suffix you wish to enter.
- Step 5.** Scan the 2 digit hex value from the 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 Tab Suffix to All Symbologies

- Step 1.** Scan **Add Suffix**.
- Step 2.** Scan **9, 9** from the [Programming Chart](#) inside the back cover of this manual to apply this suffix to all symbologies.
- Step 3.** Scan **0, 9** from the [Programming Chart](#) inside the back cover of this manual. This corresponds with the hex value for a horizontal tab, shown in the [ASCII Conversion Chart \(Code Page 1252\)](#), beginning on page A-3.
- Step 4.** 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 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

Transmit Alternate Extended ASCII Characters

You may need to emulate special keyboard functions, such as up or down arrows, Alt/Make or Alt/Break commands, that are not supported in the Extended ASCII Character table. Refer to [Alternate Extended ASCII Characters](#) (page 4-5) for a range of keyboard function keys and corresponding decimal and hex characters. If you scan the **Transmit Alternate Extended ASCII** code, any hex entries in a prefix or suffix will result in the corresponding Keyboard Function output.

Example: **Transmit Alternate Extended ASCII** is enabled, and you scan **Add Suffix**, then scan **9 9 8 9**. All symbologies (99) would have a suffix of a Page Down (hex 89) added to them.

When **Transmit Normal Extended ASCII** is selected, the normal extended ASCII character is transmitted (see [ASCII Conversion Chart \(Code Page 1252\)](#) on page A-3).

Example: **Transmit Normal Extended ASCII** is enabled, and you scan **Add Suffix**, then scan **9 9 8 9**. All symbologies (99) would have a suffix of a % character added to them.

Default = Transmit Alternate Extended ASCII.



KBDEXT0.

**Transmit Alternate Extended
ASCII**



KBDEXT1.

*** Transmit Normal Extended
ASCII**

| Alternate Extended ASCII Characters | | | | | |
|-------------------------------------|-----|----------------------|-----|-----|--------------------------------|
| DEC | HEX | Keyboard Function | DEC | HEX | Keyboard Function |
| 128 | 80 | up arrow ↑ | 152 | 98 | F9 |
| 129 | 81 | down arrow ↓ | 153 | 99 | F10 |
| 130 | 82 | right arrow → | 154 | 9A | F11 |
| 131 | 83 | left arrow ← | 155 | 9B | F12 |
| 132 | 84 | Insert | 156 | 9C | Numeric Keypad + |
| 133 | 85 | Delete | 157 | 9D | Numeric Keypad - |
| 134 | 86 | Home | 158 | 9E | Numeric Keypad * |
| 135 | 87 | End | 159 | 9F | Caps Lock |
| 136 | 88 | Page Up | 160 | A0 | Num Lock |
| 137 | 89 | Page Down | 161 | A1 | Left Alt |
| 138 | 8A | Right ALT | 162 | A2 | Left Ctrl |
| 139 | 8B | Right CTRL | 163 | A3 | Left Shift |
| 140 | 8C | Reserved | 164 | A4 | Right Shift |
| 141 | 8D | Reserved | 165 | A5 | Print Screen |
| 142 | 8E | Numeric Keypad Enter | 166 | A6 | Tab |
| 143 | 8F | Numeric Keypad / | 167 | A7 | Shift Tab |
| 144 | 90 | F1 | 168 | A8 | Enter |
| 145 | 91 | F2 | 169 | A9 | Esc |
| 146 | 92 | F3 | 170 | AA | Alt Make |
| 147 | 93 | F4 | 171 | AB | Alt Break |
| 148 | 94 | F5 | 172 | AC | Control Make |
| 149 | 95 | F6 | 173 | AD | Control Break |
| 150 | 96 | F7 | 174 | AE | Alt Sequence with 1 Character |
| 151 | 97 | F8 | 175 | AF | Ctrl Sequence with 1 Character |

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 7-2](#). 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

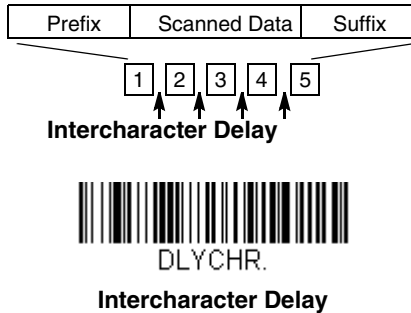
Intercharacter, Interfunction, and Intermassage Delays

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 steps in 5 millisecond increments and the **Save** bar code using the inside the back cover of this manual.



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 inside the back cover of this manual.

Note: Intercharacter delays are not supported in USB serial.

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 steps in 5 millisecond increments and the **Save** bar code using the inside the back cover of this manual.

Next, scan the **Character to Trigger Delay** bar code, then the 2-digit hex value for a printable character to trigger the delay (see [Lower ASCII Reference Table](#) on page A-5). The range is 00-FF.



Delay Length

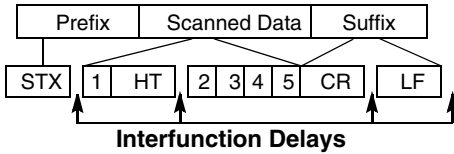


Character to Trigger Delay

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 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 control character in the message string. Scan the **Interfunction Delay** bar code below, then scan the number of steps in 5 millisecond increments and the **Save** bar code using the inside the back cover of this manual.



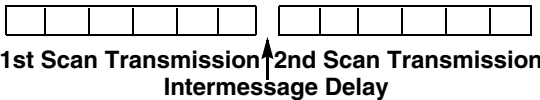
DLYFNC.

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 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 steps in 5 millisecond increments and the **Save** bar code using the 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 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 a bar code is read that fails the first data format, the next data format, if there is one, will be used on the bar code data. If there is no other data format, the raw data is output.

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 5-14](#)).

Step 2. Select **Primary Format**

Scan **0** using the inside the back cover of this manual to indicate that this is your primary format.

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 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 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.

Step 7. Scan Save from the 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. Scan **0** from the inside the back cover of this manual to indicate you are clearing your primary format. Scan the Terminal Type (refer to the Supported Terminals Chart on [page 5-4](#)), Code I.D. (refer to the [Symbology Charts](#) 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 inside the back cover of this manual
This exits, saving any Data Format changes.
- **Discard** from the 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

Interface / Terminal ID Table

| Interface | Terminal ID | |
|-----------|------------------------------|-----|
| USB | PC keyboard (HID) | 124 |
| | Mac Keyboard | 125 |
| | PC Keyboard (Japanese) | 134 |
| | Serial (COM driver required) | 130 |
| | HID POS | 131 |
| | USB SurePOS Handheld | 128 |
| | USB SurePOS Tabletop | 129 |
| Serial | RS232 TTL | 000 |
| | RS232 True | 000 |
| | RS485 (IBM-HHBCR 1+2, 46xx) | 051 |
| Keyboard | PS2 compatibles | 003 |
| | AT compatibles | 002 |

Data Format Editor Commands

When working with the Data Format Editor, a virtual cursor is moved along your input data string. The following commands are used to both move this cursor to different positions, and to select, replace, and insert data into the final output.

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 the CP1252 character. Refer to the [ASCII Conversion Chart \(Code Page 1252\)](#), page A-3 for decimal, hex and character codes.

Send a number of characters

- F2 Include in the output message a number of characters followed by an insert character. Start from the current cursor position and continue for "nn" characters or through the last character in the input message, followed by character "xx." *Syntax = F2nnxx* where nn stands for the numeric value (00-99) for the number of characters, and xx stands for the the insert character's hex value for the CP1252 character. Refer to the [ASCII Conversion Chart \(Code Page 1252\)](#), page A-3 for decimal, hex and character codes.

F2 Example: Send a number of characters



1234567890ABCDEFGHIJ

Send the first 10 characters from the bar code above, followed by a carriage return. Command string: **F2100D**

F2 is the "Send a number of characters" command

10 is the number of characters to send

0D is the hex value for a CR

The data is output as: **1234567890**

F2 and F1 Example: Split characters into 2 lines

Send the first 10 characters from the bar code above, followed by a carriage return, followed by the rest of the characters.

Command string: **F2100DF10D**

F2 is the "Send a number of characters" command

10 is the number of characters to send for the first line

0D is the hex value for a CR

F1 is the "Send all characters" command

0D is the hex value for a CR

The data is output as: **1234567890
ABCDEFGHIJ
<CR>**

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 the CP1252 character, and xx stands for the insert character's hex value for the CP1252 character.

Refer to the [ASCII Conversion Chart \(Code Page 1252\)](#), page A-3 for decimal, hex and character codes.

F3 Example: Send all characters up to a particular character



1234567890ABCDEFGHIJ

Using the bar code above, send all characters up to but not including "D," followed by a carriage return.

Command string: **F3440D**

F3 is the "Send all characters up to a particular character" command

44 is the hex value for a 'D'
0D is the hex value for a CR
The data is output as: **1234567890ABC**
<CR>

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 the CP1252 character, and nn is the numeric value (00-99) for the number of times it should be sent. Refer to the [ASCII Conversion Chart \(Code Page 1252\)](#), page A-3 for decimal, hex and character codes.

E9 and F4 Example: Send all but the last characters, followed by 2 tabs



Send all characters except for the last 8 from the bar code above, followed by 2 tabs.

Command string: **E908F40902**

E9 is the “Send all but the last characters” command

08 is the number of characters at the end to ignore

F4 is the “Insert a character multiple times” command

09 is the hex value for a horizontal tab

02 is the number of time the tab character is sent

The data is output as: **1234567890AB <tab><tab>**

Insert symbology name

- B3 Insert the name of the bar code’s symbology in the output message, without moving the cursor. Only symbologies with a Honeywell ID are included (see [Symbology Charts](#) on page A-1). Refer to the [ASCII Conversion Chart \(Code Page 1252\)](#), page A-3 for decimal, hex and character codes.

Insert bar code length

- B4 Insert the bar code's length in the output message, without moving the cursor. The length is expressed as a numeric string and does not include leading zeroes.

B3 and B4 Example: Insert the symbology name and length



Send the symbology name and length before the bar code data from the bar code above. Break up these insertions with spaces. End with a carriage return.

Command string: **B3F42001B4F42001F10D**

B3 is the "Insert symbology name" command

F4 is the "Insert a character multiple times" command

20 is the hex value for a space

01 is the number of time the space character is sent

B4 is the "Insert bar code length" command

F4 is the "Insert a character multiple times" command

20 is the hex value for a space

01 is the number of time the space character is sent

F1 is the "Send all characters" command

0D is the hex value for a CR

The data is output as: **Code128 20 1234567890ABCDEFGHIJ
<CR>**

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.

F5 Example: Move the cursor forward and send the data



Move the cursor forward 3 characters, then send the rest of the bar code data from the bar code above. End with a carriage return.

Command string: **F503F10D**

F5 is the "Move the cursor forward a number of characters" command

03 is the number of characters to move the cursor

F1 is the "Send all characters" command

0D is the hex value for a CR

The data is output as: **4567890ABCDEFGHJ**
<CR>

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 the CP1252 character.
Refer to the [ASCII Conversion Chart \(Code Page 1252\)](#), page A-3 for decimal, hex and character codes.

F8 Example: Send bar code data that starts after a particular character



Search for the letter "D" in bar codes and send all the data that follows, including the "D." Using the bar code above:

Command string: **F844F10D**

F8 is the "Search forward for a character" command

44 is the hex value for "D"

F1 is the "Send all characters" command

0D is the hex value for a CR

The data is output as: **DEFGHIJ**
<CR>

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 the CP1252 character. Refer to the [ASCII Conversion Chart \(Code Page 1252\)](#), page A-3 for decimal, hex and character codes.

Search forward for a string

- B0 Search forward for “s” string from the current cursor position, leaving cursor pointing to “s” string. *Syntax* = B0nnnnS where nnnn is the string length (up to 9999), and S consists of the ASCII hex value of each character in the match string. For example, B0000454657374 will search forward for the first occurrence of the 4 character string “Test.” Refer to the [ASCII Conversion Chart \(Code Page 1252\)](#), page A-3 for decimal, hex and character codes.

B0 Example: Send bar code data that starts after a string of characters



Search for the letters “FGH” in bar codes and send all the data that follows, including “FGH.” Using the bar code above:

Command string: **B00003464748F10D**

B0 is the “Search forward for a string” command

0003 is the string length (3 characters)

46 is the hex value for “F”

47 is the hex value for “G”

48 is the hex value for “H”

F1 is the “Send all characters” command

0D is the hex value for a CR

The data is output as: **FGHIJ
<CR>**

Search backward for a string

- B1 Search backward for “s” string from the current cursor position, leaving cursor pointing to “s” string. *Syntax* = B1nnnnS where nnnn is the string length (up to 9999), and S consists of the ASCII hex value of each character in the match string. For example, B1000454657374 will search backward for the first occurrence of the 4 character string “Test.” Refer to the [ASCII Conversion Chart \(Code Page 1252\)](#), page A-3 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 the CP1252 character. Refer to the [ASCII Conversion Chart \(Code Page 1252\)](#), page A-3 for decimal, hex and character codes.

E6 Example: Remove zeroes at the beginning of bar code data



This example shows a bar code that has been zero filled. You may want to ignore the zeroes and send all the data that follows. E6 searches forward for the first character that is not zero, then sends all the data after, followed by a carriage return. Using the bar code above:

Command string: **E630F10D**

E6 is the “Search forward for a non-matching character” command

30 is the hex value for 0

F1 is the “Send all characters” command

0D is the hex value for a CR

The data is output as: **37692**
<CR>

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 the CP1252 character. Refer to the [ASCII Conversion Chart \(Code Page 1252\)](#), page A-3 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.

FB Example: Remove spaces in bar code data



This example shows a bar code that has spaces in the data. You may want to remove the spaces before sending the data. Using the bar code above:

Command string: **FB0120F10D**

FB is the "Suppress characters" command

01 is the number of character types to be suppressed

20 is the hex value for a space

F1 is the "Send all characters" command

0D is the hex value for a CR

The data is output as: **34567890**
<CR>

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.

E4 Example: Replace zeroes with CRs in bar code data



If the bar code has characters that the host application does not want included, you can use the E4 command to replace those characters with something else. In this example, you will replace the zeroes in the bar code above with carriage returns.

Command string: **E402300DF10D**

E4 is the "Replace characters" command

02 is the total count of characters to be replaced, plus the replacement characters (0 is replaced by CR, so total characters = 2)

30 is the hex value for 0

0D is the hex value for a CR (the character that will replace the 0)

F1 is the "Send all characters" command

0D is the hex value for a CR

The data is output as: **1234**
5678
ABC
<CR>

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 the CP1252 character. Refer to the [ASCII Conversion Chart \(Code Page 1252\)](#), page A-3 for decimal, hex and character codes.

Compare string

B2 Compare the string in the input message to the string "s." If the strings are equal, move the cursor forward past the end of the string. *Syntax = B2nnnnS* where nnnn is the string length (up to 9999), and S consists of the ASCII hex value of each character in the match string. For example, B2000454657374 will compare the string at the current cursor position with the 4 character string "Test." Refer to the [ASCII Conversion Chart \(Code Page 1252\)](#), page A-3 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.

EC Example: Only output the data if the bar code begins with a number

If you want only data from bar codes that begin with a number, you can use EC to check for the number.

Command string: **ECF10D**

EC is the "Check for a number" command

F1 is the "Send all characters" command

0D is the hex value for a CR

If this bar code is read,



the next data format,

AB1234

if there is one, will be used on the data. If there is no other format, the format fails and the raw data is output as **AB1234**.

If this bar code is read:  the data is output as:
1234AB

1234AB
<CR>

Check for non-numeric character

ED Check to make sure there is a non-numeric ASCII character at the current cursor position. The format is aborted if the character is numeric.

ED Example: Only output the data if the bar code begins with a letter

If you want only data from bar codes that begin with a letter, you can use ED to check for the letter.

Command string: **EDF10D**

ED is the "Check for a non-numeric character" command

F1 is the "Send all characters" command

0D is the hex value for a CR

If this bar code is read,  the next data format, if
1234AB

there is one, will be used on this data. If there is no other format, the format fails and the raw data is output as **1234AB**.

If this bar code is read:  the data is output as:
AB1234

AB1234
<CR>

Insert a delay

EF Inserts a delay of up to 49,995 milliseconds (in multiples of 5), starting from the current cursor position. Syntax = EFnnnn where nnnn stands for the delay in 5ms increments, up to 9999. This command can only be used with keyboard emulation.

Data Format Editor



DFMBK3.

Enter Data Format



DFMDf3.

*** Default Data Format**



DFMCL3.

Clear One Data Format



DFMCa3.

Clear All Data Formats



MNUSAV.

Save



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 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>



CBRDFT.

Codabar



CBRENA1.

***On**



CBRENA0.

Off

Codabar Start/Stop Characters

Start/Stop characters identify the leading and trailing ends of the bar code. You may either transmit, or not transmit Start/Stop characters.

Default = Don't Transmit.



CBRSSX1.

Transmit



CBRSSX0.

*** Don't Transmit**

Codabar Check Character

Codabar check characters are created using different “modulos.” You can program 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.



On



*** Off**



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**



C39ENAO.

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,

ASCII Conversion Chart (Code Page 1252), page A-3, and scan the value and the **Save** bar code from the 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**



I25ENA0.

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.*



I25CK20.

*** No Check Digit**



I25CK21.

Validate, but Don't Transmit



I25CK22.

Validate and Transmit

Interleaved 2 of 5 Message Length

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



I25MIN.

Minimum Message Length



I25MAX.

Maximum Message Length

Code 93

< Default All Code 93 Settings >



C93DFT.

Code 93



C93ENA1.

* On



C93ENAO.

Off

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.



C93MIN.

Minimum Message Length



C93MAX.

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, [ASCII Conversion Chart \(Code Page 1252\)](#), page A-3, and scan the value and the **Save** bar code from the 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>



R25DFT.

Straight 2 of 5 Industrial



R25ENA1.

*** On**



R25ENAO.

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.



R25MIN.

Minimum Message Length



R25MAX.

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



A25ENA0.

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, [ASCII Conversion Chart \(Code Page 1252\)](#), page A-3, and scan the value and the **Save** bar code from the 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>



UPADFT.

UPC A



UPAENA1.

* On



UPAENAD.

Off

UPC A Check Digit

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



UPACKX1.

* On



UPACKXD.

Off

UPC A Number System

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



UPANSX1.

*** On**



UPANSX0.

Off

UPC A Addenda

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



UPAAD21.

2 Digit Addenda On



UPAAD20.

*** 2 Digit Addenda Off**



UPAAD51.

5 Digit Addenda On



UPAAD50.

*** 5 Digit Addenda Off**

UPC A Addenda Required

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



U PAARQ1.

Required



U PAARQ0.

*** 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.



U PAADS1.

*** On**



U PAADS0.

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



CPNENA0.

*** 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.



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.*



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**



E13ENA0.

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 6-27.

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



EA8ENA1.

*** On**



EA8ENA0.

Off

EAN/JAN 8 Check Digit

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



EA8CKX1.

*** On**



EA8CKX0.

Off

EAN/JAN 8 Addenda

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



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.



EABADS1.

*** On**



EABADSO.

Off

MSI

<Default All MSI Settings>



MSIDFT.

MSI



MSIENA1.

On



MSIENAD.

*** Off**

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



RSSENA1.

* On



RSSENA0.

Off

GS1 DataBar Limited

< Default All GS1 DataBar Limited Settings >



RSLDFT.

GS1 DataBar Limited



RSLENA1.

* On



RSLENA0.

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



CBFENAD.

*** 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



C49ENAD.

*** 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



TRIENA0.

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 "jC1". If GS1 DataBar Emulation is selected, the AIM Symbology Identifier will be reported as "je0." 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" + "CTRL"+ relationships apply to all terminals that can be used with the scanner. Refer to [Windows Mode Control + X Mode On](#) (page 2-20) to 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 | - |

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 Charts](#) (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

EZConfig-Scanning Introduction

EZConfig-Scanning provides a wide range of PC-based programming functions that can be performed on a scanner connected to your PC's COM port. EZConfig-Scanning allows you to download upgrades to the scanner's firmware,

change programmed parameters, and create and print programming bar codes. Using EZConfig-Scanning, 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-Scanning 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-Scanning Operations

The EZConfig-Scanning 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-Scanning from the Web

1. Access the Honeywell web site at www.honeywellaidc.com
2. Click on the **Resources** tab. Select **Download**.
3. Click on the dropdown for **Select Product Number** and select the number of your product.
4. Under **Tools and Utilities**, click on the listing for **EZConfig for Scanning**.

-
5. Follow the security directions as prompted on the screen and click on **Download**.
 6. When prompted, select **Save**, and save the file to your desktop.
 7. Double click on the **EZConfig-Scanning** zip file.
 8. Double click on the **EZConfig-Scanning Setup.exe** file. Select **Extract All**.
 9. Go to the **EZConfig-Scanning** folder that has been created on your desktop and double click on the **EZConfig-Scanning Setup.exe** file.
 10. Follow the screen prompts to install the EZConfig-Scanning program.
 11. If you've selected the defaults during installation, you can click on the shortcut on your desktop to start EZConfig for Scanning.
- Once the software is installed, you may delete the zip file and the EZConfig-Scanning folder from your desktop.

Resetting the Standard Product Defaults



This selection erases all your settings and resets the scanner to the original factory defaults.

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



DEFOVR.

Remove Custom Defaults



DEFAULT.

Activate Defaults

The [Serial Programming Commands](#), beginning on page 9-1 lists the standard product default settings for each of the commands (indicated by an asterisk (*) on the programming pages).



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 9-13](#)). 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 9-13](#)).

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 |
|----------------------------------|--|--|---------------------|
| Product Default Settings | | | |
| Setting Custom Defaults | Set Custom Defaults | MNUCDF | 1-5 |
| Resetting the Custom Defaults | Activate Custom Defaults | DEFAULT | 1-5 |
| Programming the Interface | | | |
| Plug and Play Codes | Keyboard Wedge: IBM PC AT and Compatibles with CR suffix | PAP_AT | 2-1 |
| | Laptop Direct Connect | PAPLTD | 2-1 |
| | RS232 Serial Port | PAP232 | 2-2 |
| Plug and Play Codes: RS485 | IBM Port 5B Interface | PAPP5B | 2-2 |
| | IBM Port 9B HHBCR-1 Interface | PAP9B1 | 2-2 |
| | IBM Port 17 Interface | PAPP17 | 2-2 |
| | IBM Port 9B HHBCR-2 Interface | PAP9B2 | 2-2 |
| | OPOS Mode | PAPOPS | 2-2 |
| Plug and Play Codes: IBM SurePos | USB IBM SurePos Handheld | PAPSPH | 2-4 |
| | USB IBM SurePos Tabletop | PAPSPT | 2-4 |
| Plug and Play Codes: USB | USB Keyboard (PC) | PAP124 | 2-5 |
| | USB Keyboard (Mac) | PAP125 | 2-5 |
| | USB HID POS | PAP131 | 2-5 |

| Selection | Setting <i>* Indicates default</i> | Serial Command <i># Indicates a numeric entry</i> | Page |
|--|--|---|---------------------|
| USB Serial Commands | USB Serial Emulation | PAP130 | 2-5 |
| | CTS/RTS Emulation On | USBCTS1 | 2-6 |
| | *CTS/RTS Emulation Off | USBCTS0 | 2-6 |
| | ACK/NAK Mode On | USBACK1 | 2-6 |
| | *ACK/NAK Mode Off | USBACK0 | 2-6 |
| Plug and Play Codes: Program Keyboard Country | Honeywell Bioptic Aux Port | PAPBIO | 2-6 |
| | Datalogic Magellan Bioptic Aux Port | PAPMAG | 2-7 |
| | Wincor Mode A | PAPWMA | 2-7 |
| | *U.S.A. | KBDCTY0 | 2-8 |
| | Albania | KBDCTY35 | 2-8 |
| | Arabic | KBDCTY91 | 2-8 |
| | Azeri (Cyrillic) | KBDCTY81 | 2-8 |
| | Azeri (Latin) | KBDCTY80 | 2-8 |
| | Belarus | KBDCTY82 | 2-8 |
| | Belgium | KBDCTY1 | 2-8 |
| | Bosnia | KBDCTY33 | 2-8 |
| | Brazil | KBDCTY16 | 2-9 |
| | Brazil (MS) | KBDCTY59 | 2-9 |
| | Bulgaria (Cyrillic) | KBDCTY52 | 2-9 |
| | Bulgaria (Latin) | KBDCTY53 | 2-9 |
| | Canada (French legacy) | KBDCTY54 | 2-9 |
| | Canada (French) | KBDCTY18 | 2-9 |
| | Canada (Multilingual) | KBDCTY55 | 2-9 |
| | China | KBDCTY92 | 2-9 |
| | Croatia | KBDCTY32 | 2-9 |
| Czech | KBDCTY15 | 2-10 | |

| Selection | Setting <i>* Indicates default</i> | Serial Command <i># Indicates a numeric entry</i> | Page |
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| | Czech (Programmers) | KBDCTY40 | 2-10 |
| | Czech (QWERTY) | KBDCTY39 | 2-10 |
| | Czech (QWERTZ) | KBDCTY38 | 2-10 |
| | Denmark | KBDCTY8 | 2-10 |
| | Dutch (Netherlands) | KBDCTY11 | 2-10 |
| | Estonia | KBDCTY41 | 2-10 |
| | Faroese | KBDCTY83 | 2-10 |
| | Finland | KBDCTY2 | 2-10 |
| | France | KBDCTY3 | 2-11 |
| | Gaelic | KBDCTY84 | 2-11 |
| | Germany | KBDCTY4 | 2-11 |
| | Greek | KBDCTY17 | 2-11 |
| | Greek (220 Latin) | KBDCTY64 | 2-11 |
| | Greek (220) | KBDCTY61 | 2-11 |
| | Greek (319 Latin) | KBDCTY65 | 2-11 |
| | Greek (319) | KBDCTY62 | 2-11 |
| | Greek (Latin) | KBDCTY63 | 2-11 |
| | Greek (MS) | KBDCTY66 | 2-12 |
| | Greek (Polytonic) | KBDCTY60 | 2-12 |
| | Hebrew | KBDCTY12 | 2-12 |
| | Hungarian (101 key) | KBDCTY50 | 2-12 |
| | Hungary | KBDCTY19 | 2-12 |
| | Iceland | KBDCTY75 | 2-12 |
| | Ireland | KBDCTY73 | 2-12 |
| | Italian (142) | KBDCTY56 | 2-12 |
| | Italy | KBDCTY5 | 2-12 |
| | Japan ASCII | KBDCTY28 | 2-13 |
| | Kazakh | KBDCTY78 | 2-13 |
| | Korea | KBDCTY93 | 2-13 |
| | Kyrgyz (Cyrillic) | KBDCTY79 | 2-13 |
| | Latin America | KBDCTY14 | 2-13 |

| Selection | Setting <i>* Indicates default</i> | Serial Command <i># Indicates a numeric entry</i> | Page |
|-----------|---------------------------------------|---|----------------------|
| | Latvia | KBDCTY42 | 2-13 |
| | Latvia (QWERTY) | KBDCTY43 | 2-13 |
| | Lithuania | KBDCTY44 | 2-13 |
| | Lithuania (IBM) | KBDCTY45 | 2-13 |
| | Macedonia | KBDCTY34 | 2-14 |
| | Malta | KBDCTY74 | 2-14 |
| | Mongolian (Cyrillic) | KBDCTY86 | 2-14 |
| | Norway | KBDCTY9 | 2-14 |
| | Poland | KBDCTY20 | 2-14 |
| | Polish (214) | KBDCTY57 | 2-14 |
| | Polish (Programmers) | KBDCTY58 | 2-14 |
| | Portugal | KBDCTY13 | 2-14 |
| | Romania | KBDCTY25 | 2-14 |
| | Russia | KBDCTY26 | 2-15 |
| | Russian (MS) | KBDCTY67 | 2-15 |
| | Russian (Typewriter) | KBDCTY68 | 2-15 |
| | SCS | KBDCTY21 | 2-15 |
| | Serbia (Cyrillic) | KBDCTY37 | 2-15 |
| | Serbia (Latin) | KBDCTY36 | 2-15 |
| | Slovakia | KBDCTY22 | 2-15 |
| | Slovakia (QWERTY) | KBDCTY49 | 2-15 |
| | Slovakia (QWERTZ) | KBDCTY48 | 2-15 |
| | Slovenia | KBDCTY31 | 2-16 |
| | Spain | KBDCTY10 | 2-16 |
| | Spanish variation | KBDCTY51 | 2-16 |
| | Sweden | KBDCTY23 | 2-16 |
| | Switzerland (French) | KBDCTY29 | 2-16 |
| | Switzerland (German) | KBDCTY6 | 2-16 |
| | Tatar | KBDCTY85 | 2-16 |
| | Thailand | KBDCTY94 | 2-16 |
| | Turkey F | KBDCTY27 | 2-16 |

| Selection | Setting <i>* Indicates default</i> | Serial Command <i># Indicates a numeric entry</i> | Page |
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| | Turkey Q | KBDCTY24 | 2-17 |
| | Ukrainian | KBDCTY76 | 2-17 |
| | United Kingdom | KBDCTY7 | 2-17 |
| | United States (Dvorak right) | KBDCTY89 | 2-17 |
| | United States (Dvorak left) | KBDCTY88 | 2-17 |
| | United States (Dvorak) | KBDCTY87 | 2-17 |
| | United States (International) | KBDCTY30 | 2-17 |
| | Uzbek (Cyrillic) | KBDCTY77 | 2-17 |
| | Vietnam | KBDCTY95 | 2-17 |
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| | Automatic Caps Lock | KBDSTY6 | 2-19 |
| | Autocaps via NumLock | KBDSTY7 | 2-19 |
| | Emulate External Keyboard | KBDSTY5 | 2-19 |
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| | *Control + X Off | KBDCAS0 | 2-20 |
| | DOS Mode Control + X Mode On | KBDCAS1 | 2-20 |
| | Windows Mode Prefix/ Suffix Off | KBDCAS3 | 2-20 |

| Selection | Setting <i>* Indicates default</i> | Serial Command <i># Indicates a numeric entry</i> | Page |
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| | *Numeric Keypad Off | KBDNPS0 | 2-21 |
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| | *Auto Direct Conn. Off | KBDADC0 | 2-21 |
| | Auto Direct Conn. On | KBDADC1 | 2-21 |
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| | 1200 BPS | 232BAD2 | 2-22 |
| | 2400 BPS | 232BAD3 | 2-22 |
| | 4800 BPS | 232BAD4 | 2-22 |
| | 9600 BPS | 232BAD5 | 2-22 |
| | 19200 BPS | 232BAD6 | 2-22 |
| | *38400 BPS | 232BAD7 | 2-23 |
| | 57600 BPS | 232BAD8 | 2-23 |
| | 115200 BPS | 232BAD9 | 2-23 |
| Word Length: Data Bits, Stop Bits, and Parity | 7 Data, 1 Stop, Parity None | 232WRD0 | 2-23 |
| | 7 Data, 1 Stop, Parity Even | 232WRD3 | 2-23 |
| | 7 Data, 1 Stop, Parity Odd | 232WRD6 | 2-24 |
| | 7 Data, 2 Stop, Parity None | 232WRD1 | 2-24 |
| | 7 Data, 2 Stop, Parity Even | 232WRD4 | 2-24 |
| | 7 Data, 2 Stop, Parity Odd | 232WRD7 | 2-24 |
| | *8 Data, 1 Stop, Parity None | 232WRD2 | 2-24 |
| | 8 Data, 1 Stop, Parity Even | 232WRD5 | 2-24 |

| Selection | Setting <i>* Indicates default</i> | Serial Command <i># Indicates a numeric entry</i> | Page |
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| | 8 Data, 1 Stop, Parity Odd | 232WRD8 | 2-24 |
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| | RTS/CTS Off, RTS Inactive | 232CTS10 | 2-25 |
| | Flow Control, No Timeout | 232CTS1 | 2-25 |
| | Character-Based Flow Control, No Timeout | 232CTS7 | 2-26 |
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| | *XON/XOFF Off | 232XON0 | 2-27 |
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| | *On | BEPBEP1 | 3-1 |

| Selection | Setting <i>* Indicates default</i> | Serial Command <i># Indicates a numeric entry</i> | Page |
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| 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 |
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| | High (4200 Hz) | BEPFQ24200 | 3-3 |
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| | *On | BEPLED1 | 3-3 |
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| Selection | Setting <i>* Indicates default</i> | Serial Command <i># Indicates a numeric entry</i> | Page |
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| | Read Time-Out (0 - 300,000 ms) *30,000 | TRGSTO#### | 3-5 |
| | Automatic Trigger | TRGMOD1 | 3-5 |
| | Presentation Mode | TRGMOD3 | 3-6 |
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| | *Continuous Illumination Off | ILLAON0 | 3-6 |
| | Hands Free Time-Out (0-300,000 seconds) *5000 | TRGPTO#### ## | 3-7 |
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| | *Medium (750 ms) | DLYRRD750 | 3-7 |
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| | Extra Long (2000 ms) | DLYRRD3000 | 3-7 |
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| | *Off | SHWNRD0 | 3-14 |
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| | Clear One Prefix | PRECL2 | 4-3 |
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| Selection | Setting <i>* Indicates default</i> | Serial Command <i># Indicates a numeric entry</i> | Page |
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| | Validate, But Don't Transmit | CBRCK21 | 6-4 |
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| Codabar Concatenation | *Off | CBRCCT0 | 6-5 |
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| Code 39 | Default All Code 39 Settings | C39DFT | 6-7 |
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| Selection | Setting <i>* Indicates default</i> | Serial Command <i># Indicates a numeric entry</i> | Page |
|---|--|---|----------------------|
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| Code 93 | Default All Code 93 Settings | C93DFT | 6-13 |
| Code 93 | Off | C93ENA0 | 6-13 |
| | *On | C93ENA1 | 6-13 |
| Code 93 Message Length | Minimum (0 - 80) *0 | C93MIN## | 6-13 |
| | Maximum (0 - 80) *80 | C93MAX## | 6-13 |
| Straight 2 of 5 Industrial | Default All Straight 2 of 5 Settings | R25DFT | 6-15 |
| Straight 2 of 5 Industrial | Off | R25ENA0 | 6-15 |
| | *On | R25ENA1 | 6-15 |
| Straight 2 of 5 Industrial Message Length | Minimum (1 - 48) *4 | R25MIN## | 6-15 |
| | Maximum (1 - 48) *48 | R25MAX## | 6-15 |

| Selection | Setting <i>* Indicates default</i> | Serial Command <i># Indicates a numeric entry</i> | Page |
|-------------------------------------|--|---|----------------------|
| Straight 2 of 5 IATA | Default All Straight 2 of 5 IATA Settings | A25DFT | 6-16 |
| Straight 2 of 5 IATA | *Off | A25ENA0 | 6-16 |
| | On | A25ENA1 | 6-16 |
| Straight 2 of 5 IATA Message Length | Minimum (1 - 48) *4 | A25MIN## | 6-16 |
| | Maximum (1 - 48) *48 | A25MAX## | 6-16 |
| Matrix 2 of 5 | Default All Matrix 2 of 5 Settings | X25DFT | 6-17 |
| Matrix 2 of 5 | *Off | X25ENA0 | 6-17 |
| | On | X25ENA1 | 6-17 |
| Matrix 2 of 5 Message Length | Minimum (1 - 80) *4 | X25MIN## | 6-17 |
| | Maximum (1 - 80) *80 | X25MAX## | 6-17 |
| Code 11 | Default All Code 11 Settings | C11DFT | 6-18 |
| Code 11 | *Off | C11ENA0 | 6-18 |
| | On | C11ENA1 | 6-18 |
| Code 11 Check Digits Required | 1 Check Digit | C11CK20 | 6-18 |
| | *2 Check Digits | C11CK21 | 6-18 |
| Code 11 Message Length | Minimum (1 - 80) *4 | C11MIN## | 6-19 |
| | Maximum (1 - 80) *80 | C11MAX## | 6-19 |
| Code 128 | Default All Code 128 Settings | 128DFT | 6-19 |
| Code 128 | Off | 128ENA0 | 6-20 |
| | *On | 128ENA1 | 6-19 |
| ISBT Concatenation | On | ISBENA1 | 6-20 |
| | *Off | ISBENA0 | 6-20 |
| Code 128 Message Length | Minimum (0 - 80) *0 | 128MIN## | 6-20 |
| | Maximum (0 - 80) *80 | 128MAX## | 6-20 |
| Code 128 Code Page | Code 128 Code Page | 128DCP | 6-21 |

| Selection | Setting <i>* Indicates default</i> | Serial Command <i># Indicates a numeric entry</i> | Page |
|--|--|---|----------------------|
| Code 128 Function Code Transmit | *Off | 128FNX0 | 6-21 |
| | On | 128FNX1 | 6-21 |
| Telepen | Default All Telepen Settings | TELDFT | 6-22 |
| Telepen | *Off | TELENA0 | 6-22 |
| | On | TELENA1 | 6-22 |
| Telepen Output | *AIM Telepen Output | TELOLD0 | 6-22 |
| | Original Telepen Output | TELOLD1 | 6-22 |
| Telepen Message Length | Minimum (1 - 60) *1 | TELMIN## | 6-23 |
| | Maximum (1 - 60) *60 | TELMAX## | 6-23 |
| UPC A | Default All UPC A Settings | UPADFT | 6-24 |
| UPC A | Off | UPAENA0 | 6-24 |
| | *On | UPAENA1 | 6-24 |
| UPC A Check Digit | Off | UPACKX0 | 6-24 |
| | *On | UPACKX1 | 6-24 |
| UPC A Number System | Off | UPANSX0 | 6-25 |
| | *On | UPANSX1 | 6-25 |
| UPC A 2 Digit Addenda | *Off | UPAAD20 | 6-25 |
| | On | UPAAD21 | 6-25 |
| UPC A 5 Digit Addenda | *Off | UPAAD50 | 6-25 |
| | On | UPAAD51 | 6-25 |
| UPC A Addenda Required | *Not Required | UPAARQ0 | 6-26 |
| | Required | UPAARQ1 | 6-26 |
| UPC A Addenda Separator | Off | UPAADS0 | 6-26 |
| | *On | UPAADS1 | 6-26 |
| UPC-A/EAN-13 with Extended Coupon Code | *Off | CPNENA0 | 6-27 |
| | On | CPNENA1 | 6-27 |

| Selection | Setting <i>* Indicates default</i> | Serial Command <i># Indicates a numeric entry</i> | Page |
|----------------------------|--|---|----------------------|
| UPC E | Default All UPC E Settings | UPEDFT | 6-28 |
| UPC E0 | Off | UPEEN00 | 6-28 |
| | *On | UPEEN01 | 6-28 |
| UPC E1 | *Off | UPEEN10 | 6-28 |
| | On | UPEEN11 | 6-28 |
| UPC E Expand | *Off | UPEEXP0 | 6-29 |
| | On | UPEEXP1 | 6-29 |
| UPC E Check Digit | Off | UPECKX0 | 6-30 |
| | *On | UPECKX1 | 6-30 |
| UPC E Number System | Off | UPENSX0 | 6-31 |
| | *On | UPENSX1 | 6-31 |
| UPC E 2 Digit Addenda | *Off | UPEAD20 | 6-31 |
| | On | UPEAD21 | 6-31 |
| UPC E 5 Digit Addenda | *Off | UPEAD50 | 6-31 |
| | On | UPEAD51 | 6-31 |
| UPC E Addenda Required | *Not Required | UPEARQ0 | 6-29 |
| | Required | UPEARQ1 | 6-29 |
| UPC E Addenda Separator | Off | UPEADS0 | 6-30 |
| | *On | UPEADS1 | 6-30 |
| EAN/JAN 13 | Default All EAN/JAN 13 Settings | E13DFT | 6-32 |
| EAN/JAN 13 | Off | E13ENA0 | 6-32 |
| | *On | E13ENA1 | 6-32 |
| EAN/JAN 13 Check Digit | Off | E13CKX0 | 6-32 |
| | *On | E13CKX1 | 6-32 |
| EAN/JAN 13 2 Digit Addenda | *Off | E13AD20 | 6-33 |
| | On | E13AD21 | 6-33 |
| EAN/JAN 13 5 Digit Addenda | *Off | E13AD50 | 6-33 |
| | On | E13AD51 | 6-33 |

| Selection | Setting <i>* Indicates default</i> | Serial Command <i># Indicates a numeric entry</i> | Page |
|------------------------------|--|---|----------------------|
| EAN/JAN 13 Addenda Required | *Not Required | E13ARQ0 | 6-33 |
| | Required | E13ARQ1 | 6-33 |
| EAN/JAN 13 Addenda Separator | Off | E13ADS0 | 6-34 |
| | *On | E13ADS1 | 6-34 |
| ISBN Translate | *Off | E13ISB0 | 6-34 |
| | On | E13ISB1 | 6-34 |
| EAN/JAN 8 | Default All EAN/ JAN 8 Settings | EA8DFT | 6-35 |
| EAN/JAN 8 | Off | EA8ENA0 | 6-35 |
| | *On | EA8ENA1 | 6-35 |
| EAN/JAN 8 Check Digit | Off | EA8CKX0 | 6-35 |
| | *On | EA8CKX1 | 6-35 |
| EAN/JAN 8 2 Digit Addenda | *Off | EA8AD20 | 6-36 |
| | On | EA8AD21 | 6-36 |
| EAN/JAN 8 5 Digit Addenda | *Off | EA8AD50 | 6-36 |
| | On | EA8AD51 | 6-36 |
| EAN/JAN 8 Addenda Required | *Not Required | EA8ARQ0 | 6-29 |
| | Required | EA8ARQ1 | 6-29 |
| EAN/JAN 8 Addenda Separator | Off | EA8ADS0 | 6-37 |
| | *On | EA8ADS1 | 6-37 |
| MSI | Default All MSI Settings | MSIDFT | 6-37 |
| MSI | *Off | MSIENA0 | 6-37 |
| | On | MSIENA1 | 6-37 |
| MSI Check Character | *Validate Type 10, but Don't Transmit | MSICHK0 | 6-38 |
| | Validate Type 10 and Transmit | MSICHK1 | 6-38 |
| MSI Message Length | Minimum (4 - 48) *4 | MSIMIN## | 6-38 |
| | Maximum (4 - 48) *48 | MSIMAX## | 6-38 |
| Plessey Code | Default All Plessey Settings | PLSDFT | 6-39 |

| Selection | Setting <i>* Indicates default</i> | Serial Command <i># Indicates a numeric entry</i> | Page |
|----------------------------------|--|---|-------------|
| Plessey Code | *Off | PLSENA0 | 6-39 |
| | On | PLSENA1 | 6-39 |
| Plessey Message Length | Minimum (4 - 48) *4 | PLSMIN## | 6-39 |
| | Maximum (4 - 48) *48 | PLSMAX## | 6-39 |
| GS1 DataBar Omnidirectional | Default All GS1 DataBar Omnidirectional Settings | RSSDFT | 6-40 |
| GS1 DataBar Omnidirectional | Off | RSSENA0 | 6-40 |
| | *On | RSSENA1 | 6-40 |
| GS1 DataBar Limited | Default All GS1 DataBar Limited Settings | RSLDFT | 6-40 |
| GS1 DataBar Limited | Off | RSLENA0 | 6-40 |
| | *On | RSLENA1 | 6-40 |
| GS1 DataBar Expanded | Default All GS1 DataBar Expanded Settings | RSEDFT | 6-41 |
| GS1 DataBar Expanded | Off | RSEENA0 | 6-41 |
| | *On | RSEENA1 | 6-41 |
| GS1 DataBar Expanded Msg. Length | Minimum (4 - 74) *4 | RSEMIN## | 6-41 |
| | Maximum (4 - 74) *74 | RSEMAX## | 6-41 |
| China Post Code | Default All China Post Code Settings | CPCDFT | 6-42 |
| China Post Code | *Off | CPCENA0 | 6-42 |
| | On | CPCENA1 | 6-42 |
| China Post Code Msg. Length | Minimum (2 - 80) *4 | CPCMIN## | 6-42 |
| | Maximum (2 - 80) *80 | CPCMAX## | 6-42 |
| Korea Post Code | Default All Korea Post Code Settings | CPCDFT | 6-43 |
| Korea Post Code | *Off | CPCENA0 | 6-43 |
| | On | CPCENA1 | 6-43 |

| Selection | Setting <i>* Indicates default</i> | Serial Command <i># Indicates a numeric entry</i> | Page |
|-----------------------------|--|---|----------------------|
| Korea Post Code Msg. Length | Minimum (2 - 80) *4 | CPCMIN## | 6-43 |
| | Maximum (2 - 80) *80 | CPCMAX## | 6-43 |
| Codablock F | Default All Codablock F Settings | CBFDFT | 6-44 |
| Codablock F | *Off | CBFENA0 | 6-44 |
| | On | CBFENA1 | 6-44 |
| Codablock F Msg. Length | Minimum (1 - 2048) *1 | CBFMIN#### | 6-44 |
| | Maximum (1 - 2048) *2048 | CBFMAX#### | 6-44 |
| Code 49 | Default All Code 49 Settings | C49DFT | 6-45 |
| Code 49 | * Off | C49ENA0 | 6-45 |
| | On | C49ENA1 | 6-45 |
| Code 49 | Minimum (1 - 81) *1 | C49MIN## | 6-45 |
| | Maximum (1 - 81) *81 | C49MAX## | 6-45 |
| GS1 Emulation | GS1 Emulation | EANEMU2 | 6-46 |
| | GS1-128 Emulation | EANEMU1 | 6-46 |
| | *GS1 Emulation Off | EANEMU0 | 6-46 |
| Label Code | *Off | LBLENA0 | 6-47 |
| | On | LBLENA1 | 6-47 |

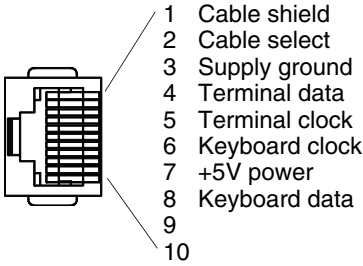
Hyperion 1300g Product Specifications

| 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 |
| Sealant Rating | IP41 |
| 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 Connector Pinouts

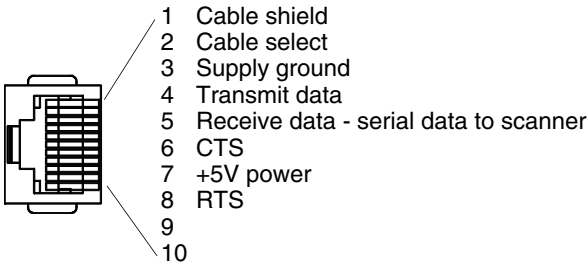
Keyboard Wedge

10 Pin RJ41 Modular Plug - connects to the scanner handle



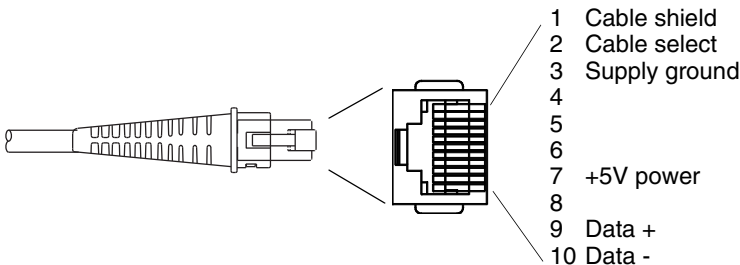
Serial Output

10 Pin RJ41 Modular Plug - connects to the scanner handle

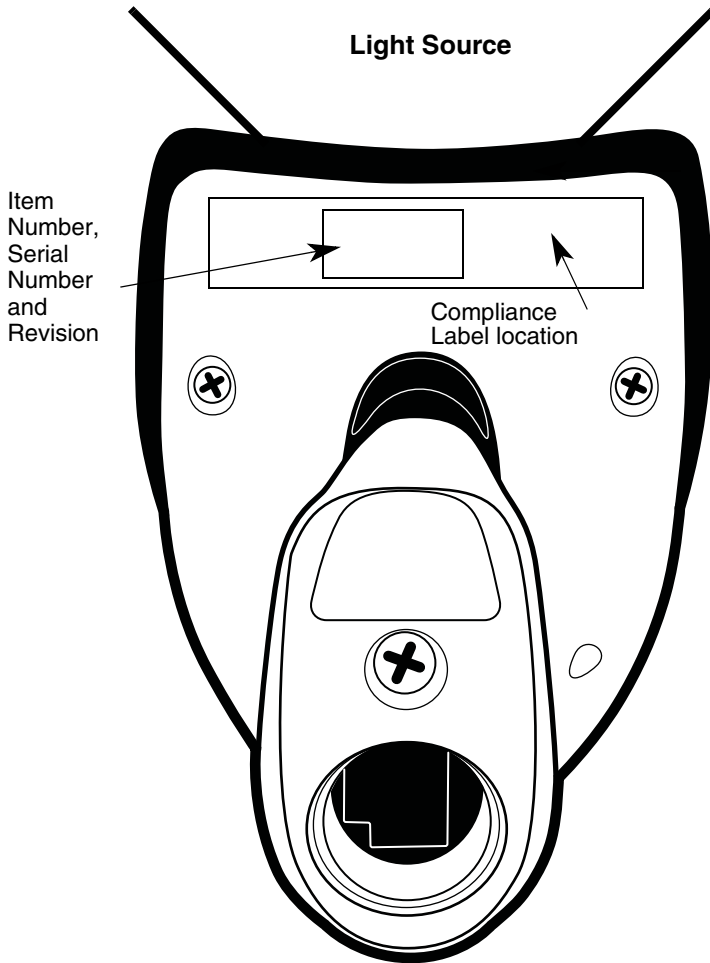


USB

10 Pin Modular Plug - connects to the scanner handle



Required Safety Label Locations





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. 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](#).

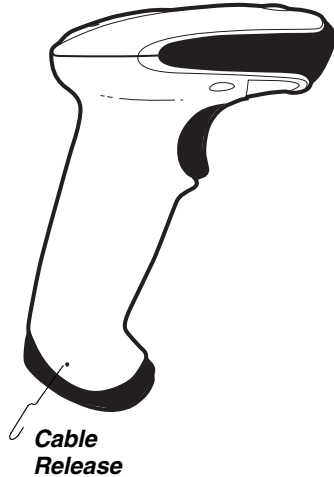
Replacing the Interface Cable

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 [Symbologies](#) beginning on page 6-1.

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 [Symbologies](#) beginning on page 6-1).
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 Custom Defaults](#) on page 1-5.

Technical Assistance

If you need assistance installing or troubleshooting your device, please contact us by using one of the methods below:

Knowledge Base: www.hsmknowledgebase.com

Our Knowledge Base provides thousands of immediate solutions. If the Knowledge Base cannot help, our Technical Support Portal (see below) provides an easy way to report your problem or ask your question.

Technical Support Portal: www.hsmsupportportal.com

The Technical Support Portal not only allows you to report your problem, but it also provides immediate solutions to your technical issues by searching our Knowledge Base. With the Portal, you can submit and track your questions online and send and receive attachments.

Web form: www.hsmcontactsupport.com

You can contact our technical support team directly by filling out our online support form. Enter your contact details and the description of the question/problem.

Telephone: www.honeywellaidc.com/locations

For our latest contact information, please check our website at the link above.

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 workman-

ship, 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 Charts

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

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

Refer to [Data Editing](#) beginning on page 4-1 and [Data Formatting](#) beginning on page 5-1 for information about using Code ID and AIM ID.

Linear Symbologies

| Symbology | AIM | | Honeywell | |
|------------------------------------|-----|------------------------|-----------|-----|
| | ID | Possible modifiers (m) | ID | Hex |
| <i>All Symbologies</i> | | | | 99 |
| Codabar |]Fm | 0-1 | a | 61 |
| Code 11 |]H3 | | h | 68 |
| Code 128 |]Cm | 0, 1, 2, 4 | j | 6A |
| Code 32 Pharmaceutical (PARAF) |]X0 | | < | 3C |
| Code 39 (supports Full ASCII mode) |]Am | 0, 1, 3, 4, 5, 7 | b | 62 |
| TCIF Linked Code 39 (TLC39) |]L2 | | T | 54 |
| Code 93 and 93i |]Gm | 0-9, A-Z, a-m | i | 69 |
| EAN |]Em | 0, 1, 3, 4 | d | 64 |
| EAN-13 (including Bookland EAN) |]E0 | | d | 64 |
| EAN-13 with Add-On |]E3 | | d | 64 |
| EAN-13 with Extended Coupon Code |]E3 | | d | 64 |
| EAN-8 |]E4 | | D | 44 |

| Symbology | AIM | | Honeywell | |
|---------------------------------|-----|---------------------------------|-----------|-----|
| | ID | Possible modifiers (<i>m</i>) | ID | Hex |
| EAN-8 with Add-On |]E3 | | D | 44 |
| GS1 | | | | |
| GS1 DataBar |]em | 0 | y | 79 |
| GS1 DataBar Limited |]em | | { | 7B |
| GS1 DataBar Expanded |]em | | } | 7D |
| GS1-128 |]C1 | | l | 49 |
| 2 of 5 | | | | |
| China Post (Hong Kong 2 of 5) |]X0 | | Q | 51 |
| Interleaved 2 of 5 |]lm | 0, 1, 3 | e | 65 |
| Matrix 2 of 5 |]X0 | | m | 6D |
| NEC 2 of 5 |]X0 | | Y | 59 |
| Straight 2 of 5 IATA |]Rm | 0, 1, 3 | f | 66 |
| Straight 2 of 5 Industrial |]S0 | | f | 66 |
| MSI |]Mm | 0, 1 | g | 67 |
| UPC | | 0, 1, 2, 3, 8, 9, A, B, C | | |
| UPC-A |]E0 | | c | 63 |
| UPC-A with Add-On |]E3 | | c | 63 |
| UPC-A with Extended Coupon Code |]E3 | | c | 63 |
| UPC-E |]E0 | | E | 45 |
| UPC-E with Add-On |]E3 | | E | 45 |
| UPC-E1 |]X0 | | E | 45 |

| | | | | |
|-----------------------|--|--|--|------|
| Add Honeywell Code ID | | | | 5C80 |
| Add AIM Code ID | | | | 5C81 |
| Add Backslash | | | | 5C5C |

Postal Symbologies

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

ASCII Conversion Chart (Code Page 1252)

In keyboard applications, ASCII Control Characters can be represented in 3 different ways, as shown below. The CTRL+X function is OS and application dependent. The following table lists some commonly used Microsoft functionality. This table applies to U.S. style keyboards. Certain characters may differ depending on your Country Code/PC regional settings..

| Non-printable ASCII control characters | | | Keyboard Control + ASCII (CTRL+X) mode | | | |
|--|-----|------|--|------------------|--|---------------------------------------|
| | | | ON (KBDCAS1) | | OFF (KBDCAS0) | |
| DEC | HEX | Char | CTRL+'X' | CTRL+ X function | Control Character Output Off (KBDNPE0) | Control Character Output On (KBDNPE1) |
| 0 | 00 | NUL | CTRL+ @ | | Reserved | Txt: [NUL] |
| 1 | 01 | SOH | CTRL+ A | Select all | NP Enter | Txt: [SOH] |

| | | | | | | |
|-----|----|-----|---------|---------------------|----------------------|------------|
| 2 | 02 | STX | CTRL+ B | Bold | Caps Lock | Txt: [STX] |
| 3 | 03 | ETX | CTRL+ C | Copy | ALT Make | Txt: [EXT] |
| 4 | 04 | EOT | CTRL+ D | Bookmark | ALT Break | Txt: [EOT] |
| 5 | 05 | ENQ | CTRL+ E | Center | CTRL Make | Txt: [ENQ] |
| 6 | 06 | ACK | CTRL+ F | Find | CTRL Break | Txt: [ACK] |
| 7 | 07 | BEL | CTRL+ G | | Enter / Ret | Txt: [BEL] |
| 8 | 08 | BS | CTRL+ H | History | <i>(Apple Make)</i> | Txt: [BS] |
| 9 | 09 | HT | CTRL+ I | Italic | Tab | Txt: [HT] |
| 10 | 0A | LF | CTRL+ J | Justify | <i>(Apple Break)</i> | Txt: [LF] |
| 11 | 0B | VT | CTRL+ K | hyperlink | Tab | Txt: [VT] |
| 12 | 0C | FF | CTRL+ L | list, left align | Delete | Txt: [FF] |
| 13 | 0D | CR | CTRL+ M | | Enter / Ret | Txt: [CR] |
| 14 | 0E | SO | CTRL+ N | New | Insert | Txt: [SO] |
| 15 | 0F | SI | CTRL+ O | Open | ESC | Txt: [SI] |
| 16 | 10 | DLE | CTRL+ P | Print | F11 | Txt: [DLE] |
| 17 | 11 | DC1 | CTRL+ Q | Quit | Home | Txt: [DC1] |
| 18 | 12 | DC2 | CTRL+ R | | PrtScn | Txt: [DC2] |
| 19 | 13 | DC3 | CTRL+ S | Save | Backspace | Txt: [DC3] |
| 20 | 14 | DC4 | CTRL+ T | | Back Tab | Txt: [DC4] |
| 21 | 15 | NAK | CTRL+ U | | F12 | Txt: [NAK] |
| 22 | 16 | SYN | CTRL+ V | Paste | F1 | Txt: [SYN] |
| 23 | 17 | ETB | CTRL+ W | | F2 | Txt: [ETB] |
| 24 | 18 | CAN | CTRL+ X | | F3 | Txt: [CAN] |
| 25 | 19 | EM | CTRL+ Y | | F4 | Txt: [EM] |
| 26 | 1A | SUB | CTRL+ Z | | F5 | Txt: [SUB] |
| 27 | 1B | ESC | CTRL+ [| | F6 | Txt: [ESC] |
| 28 | 1C | FS | CTRL+ \ | | F7 | Txt: [FS] |
| 29 | 1D | GS | CTRL+] | | F8 | Txt: [GS] |
| 30 | 1E | RS | CTRL+ ^ | | F9 | Txt: [RS] |
| 31 | 1F | US | CTRL+ - | | F10 | Txt: [US] |
| 127 | 7F | △ | | | NP Enter | n/a |

Lower ASCII Reference Table

Note: Windows Code page 1252 and lower ASCII use the same characters.

| 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 | ␣ |

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

| Extended ASCII Characters (Continued) | | | | | |
|---------------------------------------|-----|---------|-------|--------------------------------|---------------|
| DEC | HEX | CP 1252 | ASCII | Alternate Extended | PS2 Scan Code |
| 165 | A5 | ¥ | Ñ | Print Screen | n/a |
| 166 | A6 | ¦ | ª | Tab | 0x0F |
| 167 | A7 | § | º | Shift Tab | 0x8F |
| 168 | A8 | ¨ | ¿ | Enter | 0x1C |
| 169 | A9 | © | ¸ | Esc | 0x01 |
| 170 | AA | ª | ¸ | Alt Make | 0x36 |
| 171 | AB | « | ½ | Alt Break | 0xB6 |
| 172 | AC | ¬ | ¼ | Control Make | 0x1D |
| 173 | AD | | ı | Control Break | 0x9D |
| 174 | AE | ® | « | Alt Sequence with 1 Character | 0x36 |
| 175 | AF | ¯ | » | Ctrl Sequence with 1 Character | 0x1D |
| 176 | B0 | ° | █ | | |
| 177 | B1 | ± | █ | | |
| 178 | B2 | ² | █ | | |
| 179 | B3 | ³ | | | |
| 180 | B4 | ´ | | | |
| 181 | B5 | µ | | | |
| 182 | B6 | ¶ | | | |
| 183 | B7 | · | | | |
| 184 | B8 | ¸ | | | |
| 185 | B9 | ¹ | | | |
| 186 | BA | º | | | |
| 187 | BB | » | | | |
| 188 | BC | ¼ | | | |
| 189 | BD | ½ | | | |
| 190 | BE | ¾ | | | |
| 191 | BF | ¿ | | | |
| 192 | C0 | À | | | |
| 193 | C1 | Á | | | |
| 194 | C2 | Â | | | |
| 195 | C3 | Ã | | | |
| 196 | C4 | Ä | | | |
| 197 | C5 | Å | | | |
| 198 | C6 | Æ | | | |
| 199 | C7 | Ç | | | |
| 200 | C8 | È | | | |
| 201 | C9 | É | | | |
| 202 | CA | Ê | | | |
| 203 | CB | Ë | | | |

Extended ASCII Characters (Continued)

| DEC | HEX | CP 1252 | ASCII | Alternate Extended | PS2 Scan Code |
|-----|-----|---------|-------|--------------------|---------------|
| 204 | CC | ì | ℓ | | |
| 205 | CD | í | = | | |
| 206 | CE | î | ℓ | | |
| 207 | CF | ï | ± | | |
| 208 | D0 | Ð | ℓ | | |
| 209 | D1 | Ñ | ± | | |
| 210 | D2 | Ò | ℓ | | |
| 211 | D3 | Ó | ℓ | | |
| 212 | D4 | Ô | ℓ | | |
| 213 | D5 | Õ | ± | | |
| 214 | D6 | Ö | ± | | |
| 215 | D7 | × | ± | | |
| 216 | D8 | Ø | ± | | |
| 217 | D9 | Ù | ⌋ | | |
| 218 | DA | Ú | ⌈ | | |
| 219 | DB | Û | ■ | | |
| 220 | DC | Ü | ■ | | |
| 221 | DD | Ý | ■ | | |
| 222 | DE | Þ | ■ | | |
| 223 | DF | ß | ■ | | |
| 224 | E0 | à | α | | |
| 225 | E1 | á | β | | |
| 226 | E2 | â | Γ | | |
| 227 | E3 | ã | π | | |
| 228 | E4 | ä | Σ | | |
| 229 | E5 | å | σ | | |
| 230 | E6 | æ | μ | | |
| 231 | E7 | ç | τ | | |
| 232 | E8 | è | Φ | | |
| 233 | E9 | é | Θ | | |
| 234 | EA | ê | Ω | | |
| 235 | EB | ë | δ | | |
| 236 | EC | ì | ∞ | | |
| 237 | ED | í | φ | | |
| 238 | EE | î | ε | | |
| 239 | EF | ï | ∩ | | |
| 240 | F0 | ð | ≡ | | |
| 241 | F1 | ñ | ± | | |
| 242 | F2 | ò | ≥ | | |

| Extended ASCII Characters (Continued) | | | | | |
|---------------------------------------|-----|---------|-------|--------------------|---------------|
| DEC | HEX | CP 1252 | ASCII | Alternate Extended | PS2 Scan Code |
| 243 | F3 | ó | ≤ | | |
| 244 | F4 | ô | ∫ | | |
| 245 | F5 | õ | ∫ | | |
| 246 | F6 | ö | ÷ | | |
| 247 | F7 | ÷ | ≈ | | |
| 248 | F8 | ø | ° | | |
| 249 | F9 | ù | · | | |
| 250 | FA | ú | · | | |
| 251 | FB | û | √ | | |
| 252 | FC | ü | ∞ | | |
| 253 | FD | ý | ² | | |
| 254 | FE | þ | ■ | | |
| 255 | FF | ÿ | | | |

ISO 2022/ISO 646 Character Replacements

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

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

| | | | |
|--|------------------|----|----|
| United States | ISO/IEC 646-06 | 0 | 1 |
| Canada | ISO /IEC 646-121 | 54 | 95 |
| Canada | ISO /IEC 646-122 | 18 | 96 |
| Japan | ISO/IEC 646-14 | 28 | 98 |
| China | ISO/IEC 646-57 | 92 | 99 |
| Great Britain (UK) | ISO /IEC 646-04 | 7 | 87 |
| France | ISO /IEC 646-69 | 3 | 83 |
| Germany | ISO/IEC646-21 | 4 | 84 |
| Switzerland | ISO /IEC 646-CH | 6 | 86 |
| Sweden / Finland (extended Annex C) | ISO/IEC 646-11 | 2 | 82 |
| Ireland | ISO /IEC 646-207 | 73 | 97 |
| Danmark | ISO/IEC 646-08 | 8 | 88 |
| Norway | ISO/IEC 646-60 | 9 | 94 |
| Italy | ISO/IEC 646-15 | 5 | 85 |
| Portugal | ISO/IEC 646-16 | 13 | 92 |
| Spain | ISO/IEC 646-17 | 10 | 90 |
| Spain | ISO/IEC 646-85 | 51 | 91 |

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

Unicode Key Maps

| | | | | | | | | | | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 6E | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 7A | 7B | 7C | 7D | 7E | | | | | |
| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 0A | 0B | 0C | 0D | 0F | 4B | 50 | 55 | 5A | 5F | 64 | 69 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 1A | 1B | 1C | 1D | 4C | 51 | 56 | 5B | 60 | 65 | 6A |
| 1E | 1F | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 2B | | | | 5C | 61 | 66 | | |
| 2C | 2E | 2F | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 39 | 53 | 5D | 62 | 67 | 6C | | | | |
| 3A | 3B | 3C | 3D | | | | 3E | 3F | 38 | 40 | 4F | 54 | 59 | 63 | 68 | | | | | |

104 Key U.S. Style Keyboard

| | | | | | | | | | | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 6E | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 7A | 7B | 7C | 7D | 7E | | | | | |
| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 0A | 0B | 0C | 0D | 0F | 4B | 50 | 55 | 5A | 5F | 64 | 69 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 1A | 1B | 1C | 2B | 4C | 51 | 56 | 5B | 60 | 65 | 6A |
| 1E | 1F | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 2A | | | | 5C | 61 | 66 | | |
| 2C | 2D | 2E | 2F | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 39 | 53 | 5D | 62 | 67 | 6C | | | |
| 3A | 3B | 3C | 3D | | | | 3E | 3F | 38 | 40 | 4F | 54 | 59 | 63 | 68 | | | | | |

105 Key European Style Keyboard

Sample Symbols

UPC A



0 123456 7890

Interleaved 2 of 5



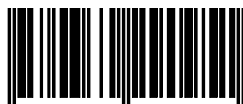
1234567890

Code 128



Code 128

EAN 13



9 780330 290951

EAN 8



654 3210 5

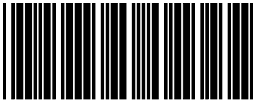
UPC-E



0 456123 8

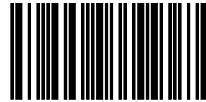
Sample Symbols

Code 39



BC321

Codabar



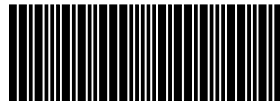
A13579B

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.*



Honeywell Scanning & Mobility

9680 Old Bailes Road
Fort Mill, SC 29707

www.honeywellaidc.com

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