Honeywell

3800i/3800r

Industrial/Retail/Commercial
Handheld Linear Imager

User's Guide

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Web Address: www.honeywellaidc.com

Product Agency Compliance

USA

FCC Part 15 Subpart B Class B

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

1. This device may not cause harmful interference.

2. This device must accept any interference received, including interference that may cause undesired operation.

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

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

If necessary, the user should consult the dealer or an experienced radio/ television technician for additional suggestions. The user may find the following booklet helpful: “Something About Interference.” This is available at FCC local regional offices. Honeywell is not responsible for any radio or television interference caused by unauthorized modifications of this equipment or the substitution or attachment of connecting cables and equipment other than those specified by Honeywell. The correction is the responsibility of the user.

Use only shielded data cables with this system.

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

UL Statement

UL listed: UL60950-1.

Canada

Industry Canada ICES-003

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

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

Conformité à la règlementation canadienne

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

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

C-UL Statement

C-UL listed: CSA C22.2 No.60950-1-03.

Europe

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

Honeywell Imaging & Mobility Europe BV
Nijverheidsweg 9-13
5627 BT Eindhoven
The Netherlands

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

Waste Electrical and Electronic Equipment Information

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

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

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

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

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

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

Germany

 GS marked to EN60950-1 and EN60825-1.

Australia/NZ

C-Tick Statement

 Conforms to AS/NZS 3548.

Mexico

 Conforms to NOM-019.

South Korea

This product meets Korean agency approval.

International

LED Safety Statement

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

Power Source

Use only a Listed Limited Power Source (LPS) or a Class 2 type power supply compatible with these models.

Patents

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

Solids and Water Protection

The 3800i has a rating of IP54, immunity of windblown dust penetration and splashing water.

The 3800r has a rating of IP41, immunity of foreign particles and dripping water.

Warning

To reduce the possibility of heat-related injuries, avoid touching sections of the scanner that feel warm.

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1 Getting Started

3800i/3800r

The 3800i and 3800r mark a new performance level for handheld scanners. Both the 3800i and 3800r are powered by Honeywell Adaptus™ Imaging Technology. The performance of Adaptus technology delivers aggressive read rates and depths of field on 1D, stacked linear, and matrix codes.

The 3800i handheld industrial image reader is the first industrial class reader to be powered by Honeywell Adaptus imaging technology. Adaptus technology allows you to read bar codes at ranges up to 82 inches on paper labels. In addition, this technology allows your 3800i to pick up and process your bar code image 270 times per second. Although the 3800i uses the same general ergonomic design as the 3800r, the 3800i is built to withstand your toughest industrial applications.

Designed for today's demanding retail and commercial environments, the 3800r offers a superior reading range, durability, and the ability to read poor quality bar codes. Linear imaging technology is defined by a bright and sharply focused aiming line, high resolution imaging, and fast reading speed. The 3800r is comfortable to hold, easy to use, rugged, and excellent for retail applications, as well as for all general scanning applications.

About This Manual

This User's Guide provides installation and programming instructions for the 3800i/3800r. 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 imager, take the following steps:

- Check to make sure everything you ordered is present.
- Save the shipping container for later storage or shipping.
- Check for damage during shipment. Report damage immediately to the carrier who delivered the carton.

3800i Models

Note: The Honeywell 3800i imager may be used with many interfaces, which are described in this User's Guide. Refer to the chart below to determine the models that can be used with the interface you are using. Refer to Chapter 6 for programming information regarding Secondary Interfaces.

The chart below lists the 3800i scanner models. "SR" indicates "Standard Range" linear optics.

Note: Model 3800iSR000E requires 35122063.bin software. Contact Technical Support to obtain this software (see Technical Assistance on page 14-1).

Models	Primary Interfaces	Secondary Interfaces
3800iSR00XE	TTL Level 232	Laser Emulation
3800iSR03XE	True RS-232, True RS-232 serial wedge	True RS-232
3800iSRO5XE	Keyboard wedge, TTL level 232, TTL level 232 serial wedge, IBM 4683, wand emulation, USB keyboard, USB HID, USB retail (IBM SurePOS)	Wand Emulation, TTL level 232

3800r Models

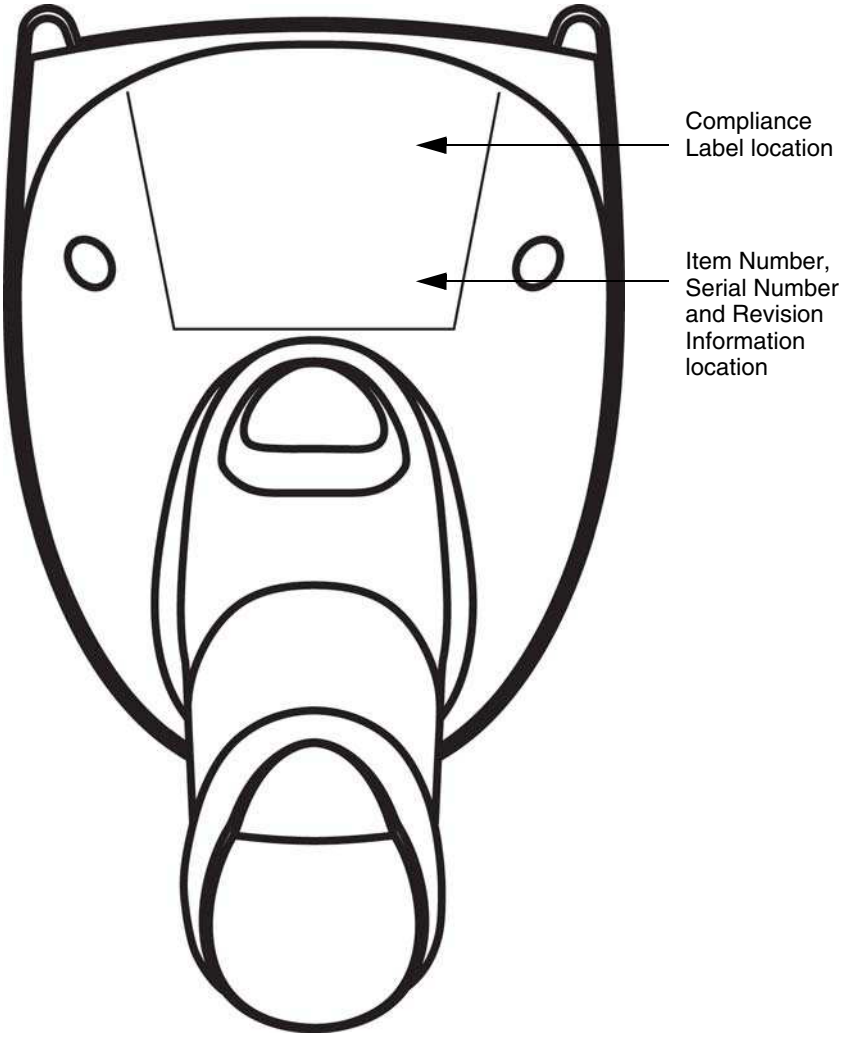
Note: The Honeywell 3800r scanner may be used with many interfaces, which are described in this user's guide. Refer to the chart below to determine the models that can be used with the interface you are using. Refer to Chapter 6 for programming information regarding Secondary Interfaces.

The chart below lists the 3800r scanner models. "SR" indicates "Standard Range" linear optics.

Note: Model 3800rSR000E requires 35122063.bin software. Contact Technical Support to obtain this software (see Technical Assistance on page 14-1).

Models	Primary Interfaces	Secondary Interfaces
3800rSR000E	TTL Level 232	Laser Emulation
3800rSR030E	True RS-232, True RS-232 serial wedge	True RS-232
3800rSR050E	Keyboard wedge, TTL level 232, TTL level 232 serial wedge, IBM 4683, wand emulation, USB keyboard, USB HID, USB retail (IBM SurePOS)	Wand Emulation, TTL level 232

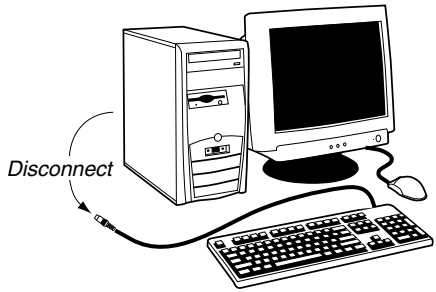
3800i/3800r Scanner Identification



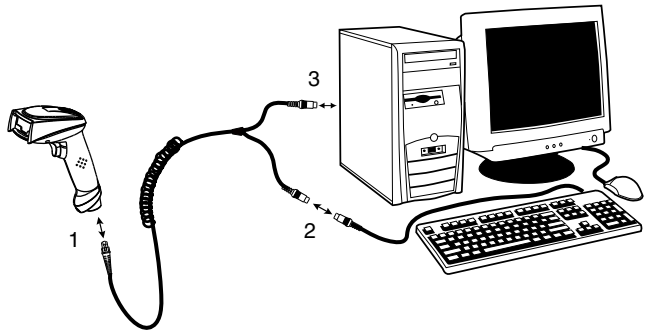
Connecting the Scanner When Powered by Host (Keyboard Wedge)

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

1. Turn off power to the terminal/computer.
2. Disconnect the keyboard cable from the back of the terminal/ computer.



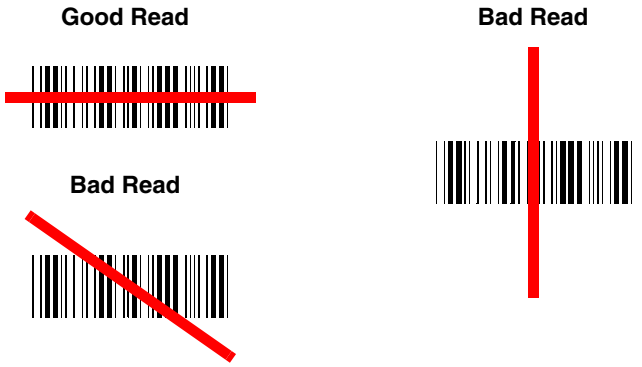
3. Connect the appropriate interface cable to the scanner and to the terminal/ computer.



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

Reading Techniques

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



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

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.

Standard Product Default Settings

The Menu Commands starting on page 11-5 lists the factory default settings for each of the commands (indicated by an asterisk (*) on the programming pages).

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 Connection

3800r scanners are factory programmed for a keyboard wedge interface to an IBM PC AT with a USA keyboard. If this is your interface and you do not need to modify the settings, skip to Chapter 3 - Output.

If you programmed the scanner for a different terminal interface and you want to change to an IBM PC AT and compatibles keyboard wedge interface, scan the bar code below.

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

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 2-5).

Laptop Direct Connect
with CR suffix

RS-232

The **RS-232** Interface bar code is used when connecting to the serial port of a PC or terminal. The following RS-232 Interface bar code also programs a carriage return (CR) and a line feed (LF) suffix, baud rate, and data format as indicated below. It also changes the trigger mode to manual.

Option	Setting
Baud Rate	38400 bps
Data Format	8 data bits, no parity bit, 1 stop bit

RS-232 Interface

Wand Emulation Plug & Play

In Wand Emulation mode, the imager decodes the bar code then sends data in the same format as a wand imager. The Code 39 Format converts all symbologies to Code 39.

The Same Code Format transmits U.P.C., EAN, Code 128 and Interleaved 2 of 5 without any changes, but converts all other symbologies to Code 39.

The ***Wand Emulation Plug & Play Code 39 Format*** bar code below sets the terminal ID to 61. The ***Wand Emulation Plug & Play Same Code Format*** bar code sets the terminal ID to 64. These Plug & Play bar codes also set the Transmission Rate to 25 inches per second, Output Polarity to black high, and Idle State to high. (If you want to change the terminal ID *only*, without changing any other imager settings, please refer to Wand Emulation Connection on page 2-11.)

Wand Emulation (Code 39 Format)

Wand Emulation Same Code

IBM 4683 Ports 5B, 9B, and 17 Interface

Scan one of the following “Plug and Play” codes to program the imager for IBM 4683 Port 5B, 9B, or 17.

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

IBM 4683 Port 5B Interface

IBM 4683 Port 9B HHBCR-1 Interface

IBM 4683 Port 9B HHBCR-2 Interface

IBM 4683 Port 17 Interface

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

Symbology	**Suffix**
EAN 8	0C
EAN 13	16
UPC-A	0D

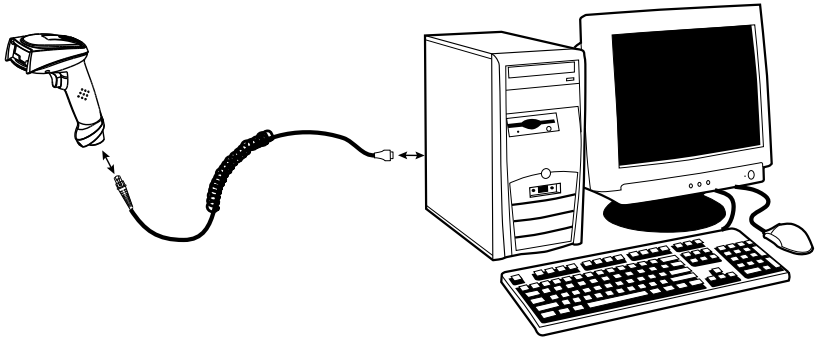
Symbology	Suffix
UPC-E	0A
Code 39	00 0A 0B
Interleaved 2 of 5	00 0D 0B
Code 128 *	00 0A 0B
Code 128 **	00 18 0B

* 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

Connecting the Scanner with USB

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

1. Connect the appropriate interface cable to the scanner and 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.

Note: The following USB "Plug and Play" codes are supported on specific models. Refer to 3800r Models on page 1-3 to determine if this interface applies to your scanner.

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

IBM SurePos

Scan one of the following "Plug and Play" codes to program the imager for IBM SurePos (USB Handheld scanner) or IBM SurePos (USB Tabletop scanner).

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

IBM SurePos (USB Handheld Scanner) Interface

IBM SurePos (USB Tabletop Scanner) Interface

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

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

USB PC or Macintosh Keyboard

Scan one of the following codes to program the imager for USB PC Keyboard or USB Macintosh Keyboard. Scanning these codes adds a CR and selects the terminal ID (USB PC Keyboard - 124, USB Macintosh Keyboard - 125, USB PC Japanese Keyboard - 134).


USB Keyboard (PC)


USB Keyboard (Mac)


USB Japanese Keyboard (PC)

USB HID

Scan the following code to program the imager for USB HID bar code scanners. Scanning this code changes the terminal ID to 131.


USB HID Bar Code Scanner

USB Com Port Emulation

Scan the following code to program the imager to emulate a regular RS-232-based Com Port. If you are using a Microsoft® Windows® PC, you will need to download a driver from the Honeywell website www.honeywell.com/aidc). The driver will use the next available Com Port number. Apple® Macintosh computers recognize the imager as a USB CDC class device and automatically uses a class driver. Scanning the code below changes the terminal ID to 130.

USB Com Port Emulation

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

CTS/RTS Emulation

On

* Off

ACK/NAK Mode

On

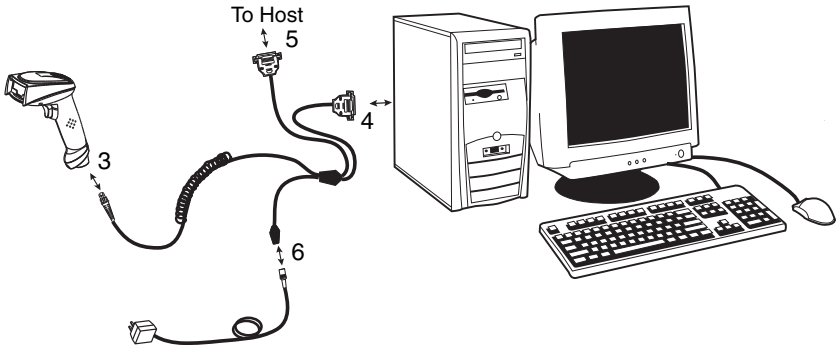
* Off

Connecting the Scanner with Serial Wedge

The imager uses True and TTL signal levels to wedge into an RS-232 serial network. Use only 3800i/3800r serial wedge cables to prevent damage to the scanner. Refer to Connecting the Scanner with RS-232 Serial Port on page 2-8 to set the baud rate and communications protocol.

1. Turn off power to the computer.
2. Disconnect the existing serial cable from the computer.
3. Connect the appropriate interface cable to the scanner.

Note: For the scanner to work properly, you must have the correct cable for your type of computer.



4. Plug the serial connector into the serial port on your computer. Tighten the two screws to secure the connector to the port.
5. Plug the other serial connector into the host connection and tighten the two screws.
6. Plug the power pack cable into the receptor on the scanner cable.
7. Plug the power pack into a power source.
8. Once the scanner has been fully connected, power up the computer.

To set up the serial wedge terminal ID, use the serial terminal ID 050 and follow the instructions on page 2-1. Set the port to which you want the scanned data to transmit. Port 1 corresponds to P1 on the output cable and Port 2 corresponds to P2 on the output cable. Choosing Both sends scanned data to P1 and P2. Default = P1.

* P1

P2

Both P1 and P2

2 Terminal Interfaces

Terminal ID

If your interface is not a standard PC AT, refer to "Supported Terminals" on page 2-2 through page 2-3, and locate the Terminal ID number for your PC. Scan the **Terminal ID** bar code below, then scan the numeric bar code(s) from the Programming Chart inside the back cover of this manual to program the scanner for your terminal ID. Scan **Save** to save your selection.

For example, an IBM AT terminal has a Terminal ID of 003. You would scan the **Terminal ID** bar code, then **0**, **0**, **3** from the Programming Chart inside the back cover of this manual, then **Save**. If you make an error while scanning the digits (before scanning Save), scan the **Discard** code on the Programming Chart, scan the **Terminal ID** bar code, scan the digits, and the **Save** code again.

Terminal ID

Save

Note: After scanning one of these codes, you must power cycle your computer.

Supported Terminals

Terminal	Model(s)	Terminal ID
DEC	VT510, 520, 525 (PC style)	005
DEC	VT510, 520, 525 (DEC style LK411)	104
Esprit	200, 400	005
Heath Zenith	PC, AT	003
HP	Vectra	003
IBM	XT	001
IBM	PS/2 25, 30, 77DX2	002
IBM	AT, PS/2 30–286, 50, 55SX, 60, 70, 70–061, 70–121, 80	003 *
IBM 102 key	3151, 3161, 3162, 3163, 3191, 3192, 3194, 3196, 3197, 3471, 3472, 3476, 3477	006
IBM 122 key	3191, 3192, 3471, 3472	007
IBM 122 key	3196, 3197, 3476, 3477, 3486, 3482, 3488	008
IBM 122 key	3180	024
IBM 122 key	3180 data entry keyboard	114
IBM DOS/V 106 key	PC & Workstation	102
IBM SurePOS	USB Handheld Scanner	128***
IBM SurePOS	USB Tabletop Scanner	129***
IBM Thinkpad	360 CSE, 340, 750	097
IBM Thinkpad		106
IBM Thinkpad	365, 755CV	003
I/O 122 key	2676D, 2677C, 2677D	008
ITT	9271	007
Lee Data	IIS	007
NEC	98XX Series	103
Olivetti	M19, M200	001
Olivetti	M240, M250, M290, M380, P500	003
RS-232 True		000**
RS-232 TTL		000
Serial Wedge		050
Silicon Graphics	Indy, Indigoll	005
Telex 88 key	078, 078A, 79, 80, 191, 196, 1191,1192, 1471, 1472, 1476, 1477, 1483	025
Telex 88 key	Data Entry Keyboard	112
Telex 102 key	078, 078A, 79, 80, 191, 196, 1191,1192, 1471, 1472, 1476, 1477, 1483	045

Supported Terminals (Continued)

Terminal	Model(s)	Terminal ID
Telex 122 key	078, 078A, 79, 80, 191, 196, 1191,1192, 1471, 1472, 1476, 1477, 1482, 1483	046
USB PC Keyboard		124***
USB Mac Keyboard		125***
USB Com Port		130
USB HIDPOS		131***
Wand Emulation (Code 39 Format)		061
Wand Emulation (Same Code Format)		064

* Default for 3800i/3800iSR050E models
** Default for 3800rSR030E model (applies to 3800rSR030E models only)
***Applies to 3800i/3800iSR050E model only. It is best to use the Plug and Play bar codes on page 1-10 to program these interfaces, rather than scanning the terminal ID listed in this table.

Keyboard Country

Scan the appropriate country code below to program the keyboard for your country. As a general rule, the following characters are supported, but need special care for countries other than the United States:
@ | $ # { } [ ] = / ‘ \ < > ~


* United States


Belgium


Denmark


Finland


France


Germany/Austria


Great Britain


Italy


Norway


Spain


Switzerland

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

Program Keyboard Country

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.

* Regular

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

Caps Lock

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

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.

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 Auotcaps, but uses the NumLock key to retrieve the current state of the Caps Lock.

Autocaps via NumLock

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

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 and Turbo Mode.

Control + ASCII Mode On: The imager 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 on page 8-1 for CTRL+ ASCII Values. *Default = Off*

Control + ASCII Mode On

* Control + ASCII Mode Off

Turbo Mode: The scanner sends characters to a terminal faster. If the terminal drops characters, do not use Turbo Mode. *Default = Off*

Turbo Mode On

* Turbo Mode Off

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

Numeric Keypad Mode On

* 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*

Automatic Direct
Connect Mode On

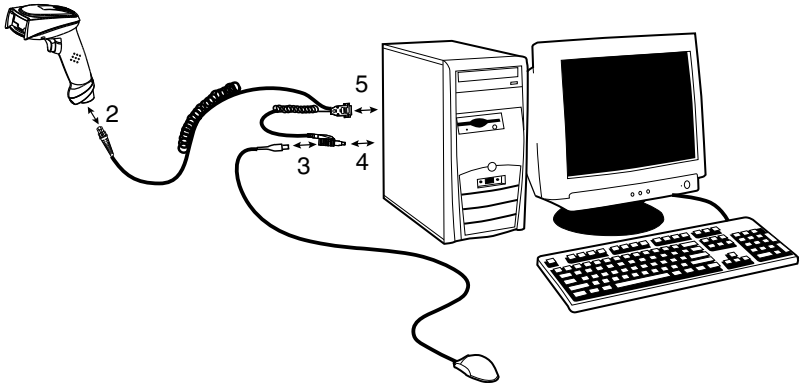
* Automatic Direct Connect
Mode Off

Connecting the Scanner with RS-232 Serial Port

Note: These instructions are for use with the RS-232 power stealer cable.

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

Note: For the scanner to work properly, you must have the correct cable for your type of terminal/computer.



3. Unplug the mouse or keyboard from the computer. Plug the mouse or keyboard into the power tap on the scanner cable.
4. Plug the power tap into the mouse or keyboard port.
5. Plug the serial connector into the serial port on your computer. Tighten the two screws to secure the connector to the port.
6. Once the scanner has been fully connected, power up the computer.

All communication parameters between the scanner and terminal must match for correct data transfer through the serial port using RS-232 protocol. Scanning the RS-232 interface bar code, programs the scanner for an RS-232 interface at 38,400 baud, parity–none, 8 data bits, 1 stop bit, and adds a suffix of a CR LF.

RS-232 Interface

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 = 115,200*.


300


1200


4800


19200


57,600


600


2400


9600


38400


* 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.


7 Data, 1 Stop, Parity Even


7 Data, 1 Stop, Parity Odd


7 Data, 2 Stop Parity None


8 Data, 1 Stop, Parity Even


8 Data, 1 Stop, Parity Odd


7 Data, 1 Stop, Parity None


7 Data, 2 Stop, Parity Even


7 Data, 2 Stop, Parity Odd


* 8 Data, 1 Stop, Parity None

RS-232 Handshaking

RS-232 handshaking is a set of rules concerning the exchange of data between serially communicating devices. *Default = RTS/CTS, XON/XOFF and ACK/NAK Off*

RTS/CTS On

* RTS/CTS Off

XON/XOFF On

* XON/OFF Off

ACK/NAK On

* ACK/NAK Off

Wand Emulation Connection

The Wand Emulation Connection bar codes should be used if you want to change the terminal ID *only*, without changing any other imager settings. We recommend using Wand Emulation Plug & Play bar codes to program your imager to emulate a wand reader. The Wand Emulation Plug & Play bar codes change other parameters, in addition to changing the terminal ID. Please refer to Wand Emulation Plug & Play on page 1-7 for further information.

In Wand Emulation mode, the imager decodes the bar code then sends data in the same format as a wand imager. The Code 39 Format converts all symbologies to Code 39.

The Same Code Format transmits U.P.C., EAN, Code 128 and Interleaved 2 of 5 without any changes, but converts all other symbologies to Code 39. 2D symbologies are converted to Code 128.

The ***Code 39 Format*** bar code below sets the terminal ID to 61, and the ***Same Code Format*** bar code sets the terminal ID to 64.

Code 39 Format

Same Code Format

Wand Emulation Transmission Rate

The transmission rate is limited by the terminal's ability to receive data without dropping characters. *Default = 25 inches/second.*

10

* 25

40

80

120

150

200

Wand Emulation Polarity

The Polarity can be sent as standard with black bars high, or reversed with white bars high. *Default = Black High.*

* Black High

White High

Wand Emulation Idle

The idle describes the state of the scanner when no data is being transmitted. When in Wand Emulation mode, you must set the scanner's idle state to match the idle state for the device to which the scanner is connected. *Default = Idle High*.

* Idle High

Idle Low

Wand Emulation

Note: Changing primary wand emulation settings also changes the secondary wand emulation settings (see Secondary Code 39 Wand Emulation on page 6-2).

Data Block Size

Note: This option is not applicable to Laser Emulation Raw Output (see Secondary Laser Emulation on page 6-3).

This transmits the data in smaller blocks to prevent buffer overflow. *Default = 40.*


20


* 40


60


80

Delay Between Blocks

Note: This option is not applicable to Laser Emulation Raw Output (see Secondary Laser Emulation on page 6-3).

This sets the delay time between data blocks. *Default = 50ms.*


5ms


* 50ms


150ms


500ms

Overall Checksum

Note: This option is not applicable to Laser Emulation Raw Output (see Secondary Laser Emulation on page 6-3).

When this option is turned on, a computed check character is added at the end of the entire message. The check character is the character which when Exclusive-OR'd with every preceding character of the message yields a result of 0x00 (00H). *Default = Off.*

On

* Off

3 Output

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.*

* On

Off

Beeper Volume – Good Read

The beeper volume codes modify the volume of the beep the scanner emits on a good read. *Default = High for the* 3800i*, Medium for the* 3800r*.*

Low

Medium

High

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.*

Low (1600 Hz)

* Medium (3250 Hz)

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.*

* Normal Beep

Short Beep

LED – Good Read

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

* On

Off

Number of Beeps – Good Read

The number of beeps of a good read can be programmed from 1 - 9. The same number of beeps will be applied to the beeper and LED in response to a good read. For example, if you program this option to have five beeps, there will be five beeps and five LED flashes in response to a good read. The beeps and LED flashes are in sync with one another. To change the number of beeps, scan the bar code below and then scan a digit (1-9) bar code and the **Save** bar code on the Programming Chart inside the back cover of this manual. *Default = One.*

Number of Pulses

Good Read Delay

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

* No Delay

Short Delay (500 ms)

Medium Delay (1000 ms)

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***.

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 11-4). When in manual trigger mode, the scanner scans until a bar code is read, or until the trigger is released.

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

* Manual/Serial Trigger

Read Time-Out

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

Read Time-Out

Manual Trigger, Low Power

The scanner powers down until the trigger is pulled. When the trigger is pulled, the scanner powers up and operates until there is no triggering for the time set with the **Low Power Time-Out** bar code below. There is a delay of up to one second in operation when the scanner is first triggered, but there is no delay when operating in low power time-out mode.

Manual Trigger, Low Power

Note: Manual Trigger, Low Power cannot be used with keyboard wedge applications.

Low Power Time-Out Timer

Scan the Low Power Time-Out bar code to change the time-out duration (in seconds). Then scan the time-out duration (from 0-300 seconds) from the inside back cover, and **Save**. *Default = 120 seconds.*

If there are no trigger pulls during the "low power time-out timer" interval, the scanner goes in low power mode. Whenever the trigger is enabled, the "low power time-out timer" is reset.

Low Power Time-Out

Automatic Trigger

The scanner scans continuously at full power with illumination fully on.

Note: If the Automatic Trigger selection is enabled, the aimer beam option is disabled.

Automatic Trigger

Presentation Mode

Note: Presentation mode does not work when a scanner is programmed for the laser emulation interface.

Note: If the Presentation Mode selection is enabled, the aimer beam option is disabled.

The LEDs are off until a bar code is presented to the scanner. Then the LEDs turn on automatically to read the code. Presentation Mode uses ambient light to detect the bar codes. If the light level in the room is not high enough, Presentation Mode will not work properly.

Presentation Mode

Hands Free Time-Out

The Automatic Trigger and Presentation Modes are referred to as “hands free” modes. If the imager’s trigger is pulled when using a hands free mode, the imager changes to manual trigger mode. You can set the time the imager 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 imager 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.*

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 (see page 3-4).

Short (500 ms)

***** Medium (750 ms)

Long (1000 ms)

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***.

User-Specified Reread Delay

Aimer Beam Delay (Aimer Beam option only)

The Aimer Beam Delay allows a delay time for the operator to aim the reader before the standard illumination and decoding starts. The quickset codes sets the time between when the trigger is pulled and when the decode starts to either 1 or 2 seconds. During the delay time, the aiming beam appears, but the illumination LEDs won't turn on until the delay time is over.

* Off (no delay)

1 second

2 seconds

User-Specified Aimer Beam Delay

If you want to set your own length for the duration of the delay, scan the bar code below, then set the time-out by scanning digits (0 - 4000 ms) from the Programming Chart inside the back cover of this manual and then scan Sav**e**.

Delay Duration

Aimer Mode (Aimer Beam option only)

If you are reading codes in applications that exhibit high ambient light, you can turn on the aimer beam to assist you in reliably finding and scanning a code. Select ***Off*** if you don't want to use the aimer beam.

Off

* On

Aimer Beam Time-Out (Aimer Beam option only)

Aimer Beam Time-Out powers down the aimer beam after a time-out if the trigger is still pulled and there isn't a valid decode. Scan the bar code below, then set the time-out by scanning digits (from 0 - 240,000 ms) from the Programming Chart inside the back cover of this manual and then scan **Save**. *Default = 0 (no time-out)*

Time-Out Duration

Centering Window

Use the centering feature to narrow the scanner's field of view so the scanner reads only the bar code you want. When centering is turned on, the scanner only reads codes that intersect or are contained within the centering window you set up. At least part of a bar code must be within the window to be decoded or output by the scanner.

To change the left or right edge of the centering window, scan Centering On, then scan one of the following bar codes. 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.

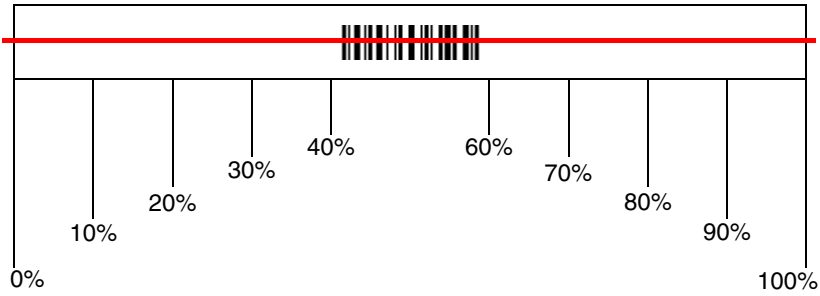
Centering On

***** Centering Off

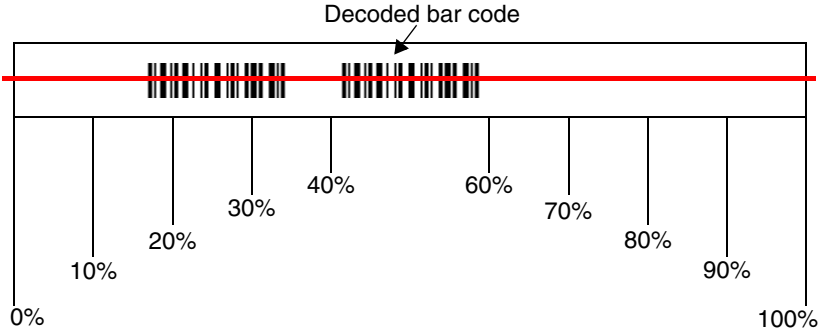
Left of Centering Window

Right of Centering Window

The figure below illustrates the percentage range from 1 to 100%.



Example: If you have two bar codes next to one another and the centering window is set to 40% left edge and 60% right edge, only the bar code that intersects that window will be decoded.



Output Sequence Overview

Require Output Sequence

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

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

Output Sequence Editor

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

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

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

To Add an Output Sequence

1. Scan the ***Enter Sequence*** symbol (see Require Output Sequence, page 3-11).
2. **Code I.D.**
   On the Symbology Chart on page A-1, find the symbology to which you want to apply the output sequence format. Locate the Hex value for that symbology and scan the 2 digit hex value from the Programming Chart (inside back cover).
3. **Length**
   Specify what length (up to 9999 characters) of data output will be acceptable for this symbology. Scan the four digit data length from the Programming Chart. (Note: 50 characters is entered as 0050. 9999 is a universal number, indicating all lengths.) When calculating the length, you must count any programmed prefixes, suffixes, or formatted characters as part of the length (unless using 9999).
4. **Character Match Sequences**
   On the ASCII Conversion Chart (Code Page 1252), page A-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 ***F F*** 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


Enter Sequence


Default Sequence

Require Output Sequence

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

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

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


Required

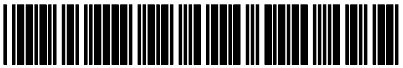

On/Not Required


* Off

Output Sequence Example

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

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



A - Code 39

B - Code 128

C - Code 93

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

SEQBLK62999941FF6A999942FF69999943FF

The breakdown of the command line is shown below:

SEQBLKsequence editor start command
62 code identifier for **Code 39**
9999 code length that must match for Code 39, 9999 = all lengths
41 start character match for Code 39, 41h = “A”
FF termination string for first code
6A code identifier for **Code 128**
9999 code length that must match for Code 128, 9999 = all lengths
42 start character match for Code 128, 42h = “B”
FF termination string for second code
69 code identifier for **Code 93**
9999 code length that must match for Code 93, 9999 = all lengths
43 start character match for Code 93, 43h = “C”
FF termination string for third code

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

SEQBLK62001141FF6A001242FF69001143FF

The breakdown of the command line is shown below:

SEQBLK	sequence editor start command
62	code identifier for **Code 39**
0011	Code 39 code length (9) plus CR suffix (2) = 11
41	start character match for Code 39, 41h = “A”
FF	termination string for first code
6A	code identifier for **Code 128**
0012	Code 128 code length (10) plus CR suffix (2) = 12
42	start character match for Code 128, 42h = “B”
FF	termination string for second code
69	code identifier for **Code 93**
0011	Code 93 code length (9) plus CR suffix (2) = 11
43	start character match for Code 93, 43h = “C”
FF	termination string for third code

Multiple Symbols

Note: This feature does not work when the scanner is in Low Power mode.

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.


On


* 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.

On

* 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 5-5). 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.

On

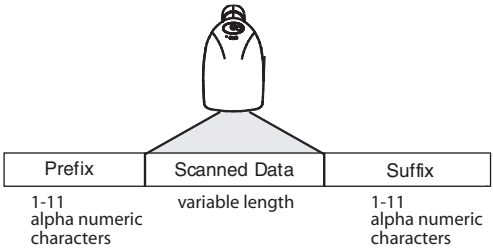
* Off

4 Data Editing

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 break-down of a message string:



Points to Keep In Mind

- It is not necessary to build a message string. The selections in this chapter are only used if you wish to alter the default settings. *Default prefix = None. Default suffix = None*.
- A prefix or suffix may be added or cleared from one symbology or all symbologies.
- You can add any prefix or suffix from the ASCII Conversion Chart (Code Page 1252) on page A-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.

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 the Appendix A) for the symbology to which you want to apply the prefix or suffix. For example, for Code 128, Code ID is "j" and Hex ID is "6A".

Step 3. Scan the 2 hex digits from the Programming Chart inside the back cover of this manual or scan **9**, **9** for all symbologies.

Step 4. Determine the hex value from the ASCII Conversion Chart (Code Page 1252) on page A-3, for the prefix or suffix you wish to enter.

Step 5. Scan the 2 digit hex value from the Programming Chart inside the back cover of this manual.

Step 6. Repeat Steps 4 and 5 for every prefix or suffix character.

Step 7. To add the Code I.D., scan **5**, **C**, **8**, **0**.
To add AIM I.D., scan **5**, **C**, **8**, **1**.
To add a backslash (\), scan **5**, **C**, **5**, **C**.

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

Step 8. Scan **Save** to exit and save, or scan **Discard** to exit without saving.

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

Example: Add a Suffix to a specific symbology

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

Step 1. Scan **Add Suffix**.

Step 2. Determine the 2 digit hex value from the Symbology Chart (included in the Appendix A) for U.P.C.

Step 3. Scan **6**, **3** from the Programming Chart inside the back cover of this manual.

Step 4. Determine the hex value from the ASCII Conversion Chart (Code Page 1252) on page A-3, for the CR (carriage return).

Step 5. Scan **0**, **D** from the Programming Chart inside the back cover of this manual.

Step 6. Scan **Save**, or scan **Discard** to exit without saving.

To Clear One or All Prefixes or Suffixes:

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

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

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

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

Your change is automatically saved.

To Add a Carriage Return Suffix to all Symbologies

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

Add CR Suffix
All Symbologies

Prefix Selections

Add Prefix

Clear One Prefix

Clear All Prefixes

Suffix Selections

Add Suffix

Clear One Suffix

Clear All Suffixes

Function Code Transmit

When this selection is enabled and function codes are contained within the scanned data, the scanner transmits the function code to the terminal. Charts of these function codes are provided in Supported Interface Keys starting on page 8-3. When the scanner is in keyboard wedge mode, the scan code is converted to a key code before it is transmitted. *Default = Enable.*

* Enable

Disable

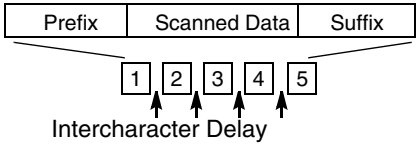
Intercharacter, Interfunction, and Intermessage Delays

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

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

Intercharacter Delay

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



Intercharacter Delay

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

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

User-Specified Intercharacter Delay

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

Next, scan the **Character to Trigger Delay** bar code, then the 2-digit hex value for the ASCII character that will trigger the delay ASCII Conversion Chart (Code Page 1252) on page A-3.

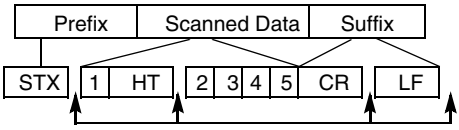
Delay Length

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 Programming Chart inside the back cover of this manual.

Interfunction Delay

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

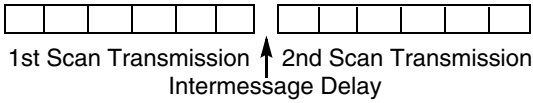


Interfunction Delay

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

Intermessage Delay

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



Intermessage Delay

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

5 Data Formatting

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 5-2) 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

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 on page 5-4.

To Add a Data Format

Step 1. Scan the **Enter Data Format** symbol (page 5-4).

Step 2. Primary/Alternate Format

Determine if this will be your primary data format, or one of 3 alternate formats. (Alternate formats allow you "single shot" capability to scan one bar code using a different data format. After the one bar code has been read, the scanner reverts to the primary data format. See page 5-5.) If you are programming the primary format, scan **0** using the Programming Chart inside the back cover of this manual. If you are programming an alternate format, scan **1**, **2**, or **3**, depending on the alternate format you are programming.

Step 3. Terminal Type

Refer to the Supported Terminals Chart (page 2-2) 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 the Appendix A, find the symbology to which you want to apply the data format. Locate the Hex value for that symbology and scan the 2 digit hex value from the Programming Chart inside the back cover of this manual.

Step 5. Length
Specify what length (up to 9999 characters) of data will be acceptable for this symbology. Scan the four digit data length from the Programming Chart inside the back cover of this manual. (Note: 50 characters is entered as 0050. 9999 is a universal number, indicating all lengths.)

Step 6. Editor Commands
Refer to the Format Editor Commands Chart (page 5-2). Scan the symbols that represent the command you want to enter. 94 alphanumeric characters may be entered for each symbology data format.

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

Other Programming Selections

- **Clear One Data Format**
  This deletes one data format for one symbology. If you are clearing the primary format, scan **0** from the Programming Chart inside the back cover of this manual. If you are clearing an alternate format, scan **1**, **2**, or **3**, depending on the alternate format you are clearing. Scan the Terminal Type (refer to the Supported Terminals Chart on page 2-2), Code I.D. (refer to the Symbology Chart on page A-1), and the bar code data length for the specific data format that you want to delete. All other formats remain unaffected.
- **Save** from the Programming Chart inside the back cover of this manual
  This exits, saving any Data Format changes.
- **Discard** from the Programming Chart inside the back cover of this manual
  This exits without saving any Data Format changes.

Data Format Editor Commands

Send Commands

F1 Send all characters followed by “xx” key or function code, starting from current cursor position. ***Syntax = F1xx*** (xx stands for the hex value for an ASCII code, see ASCII Conversion Chart (Code Page 1252) on page A-3.)

F2 Send “nn” characters followed by “xx” key or function code, starting from current cursor position. ***Syntax = F2nnxx*** (nn stands for the numeric value

(00-99) for the number of characters and xx stands for the hex value for an ASCII code. See ASCII Conversion Chart (Code Page 1252) on page A-3.)

F3 Send up to but not including “ss” character (Search and Send) starting from current cursor position, leaving cursor pointing to “ss” character followed by “xx” key or function code. ***Syntax = F3ssxx*** (ss and xx both stand for the hex values for ASCII codes, see ASCII Conversion Chart (Code Page 1252) on page A-3.)

F4 Send “xx” character “nn” times (Insert) leaving cursor in current cursor position. ***Syntax = F4xxnn*** (xx stands for the hex value for an ASCII code, see ASCII Conversion Chart (Code Page 1252) on page A-3, and nn is the numeric value (00-99) for the number of times it should be sent.)

E9 Send all but the last “nn” characters, starting from the current cursor position. ***Syntax = E9nn*** (nn is the numeric value (00-99) for the number of characters that will not be sent at the end of the message.)

Move Commands

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

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

F7 Move the cursor to the beginning of the data string. ***Syntax = F7.***

EA Move the cursor to the end of the data string. ***Syntax = EA***

Search Commands

F8 Search ahead for “xx” character from current cursor position, leaving cursor pointing to “xx” character. ***Syntax = F8xx*** (xx stands for the hex value for an ASCII code, see ASCII Conversion Chart (Code Page 1252) on page A-3.)

F9 Search back for “xx” character from current cursor position, leaving cursor pointing to “xx” character. ***Syntax = F9xx*** (xx stands for the hex value for an ASCII code, see ASCII Conversion Chart (Code Page 1252) on page A-3.)

E6 Search ahead for the first non “xx” character from the current cursor position, leaving cursor pointing to non “xx” character. ***Syntax = E6xx*** (xx stands for the hex value for an ASCII code, see ASCII Conversion Chart (Code Page 1252) on page A-3.

E7 Search back for the first non “xx” character from the current cursor position, leaving cursor pointing to non “xx” character. ***Syntax = E7xx*** (xx stands for the hex value for an ASCII code, see ASCII Conversion Chart (Code Page 1252) on page A-3.)

Miscellaneous Commands

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. (xx stands for the hex value for an ASCII code, see ASCII Conversion Chart (Code Page 1252) on page A-3.)

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

E4 Replaces up to 15 characters in the data string with user-specified characters. Replacement continues until the E5 command is encountered. ***Syntax = E4nnxx$_1$xx$_2$yy$_1$yy$_2$...zz$_1$zz$_2$*** where nn is the total count of both characters to be replaced plus replacement characters; xx$_1$ defines characters to be replaced and xx$_2$ defines replacement characters, continuing through zz$_1$ and zz$_2$.

E5 Terminates character replacement. ***Syntax = E5***.

FE Compare character in current cursor position to the character "xx." If characters are equal, increment cursor. If characters are not equal, no format match. ***Syntax = FExx*** (xx stands for the hex value for an ASCII code, see ASCII Conversion Chart (Code Page 1252) on page A-3.)

EC Check to make sure there is an ASCII number at the current cursor position. If character is not numeric, format is aborted. ***Syntax = EC***.

ED Check to make sure there is a non-numeric ASCII character at the current cursor position. If character is numeric, format is aborted. ***Syntax = ED***.

Data Format Editor

Enter Data Format

* Default Data Format

Clear One Data Format

Clear All Data Formats

Save

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.*

* Data Formatter On, but Not Required

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.

Data Format On, Format Required

Alternate Data Formats

Alternate formats allow you “single shot” capability to scan one bar code using a different data format than your primary format. When data formats are programmed (see page 5-1), you must input whether you are programming the primary format, or an alternate format numbered 1, 2, or 3.

An alternate format is initiated by scanning one of the 3 alternate format bar codes below. The scanner will scan the next bar code, formatting the data with the selected alternate format, then revert immediately to the primary format.

Alternate Data Format 1

Alternate Data Format 2

Alternate Data Format 3

6 Secondary Interface

By switching secondary interface cables, the 3800i/3800r scanner, for example, can communicate with a portable data terminal (secondary interface) in addition to the host terminal (primary interface). See the tables below for the secondary interfaces for each 3800i/3800r model.

3800i Models

The chart below lists the 3800i scanner models. "SR" indicates "Standard Range" linear optics.

Note: Model 3800iSR000E requires 35122063.bin software. Contact Technical Support to obtain this software (see Technical Assistance on page 14-1).

Models	Primary Interfaces	Secondary Interfaces
3800iSR00XE	TTL Level 232	Laser Emulation
3800iSR03XE	True RS-232, True RS-232 serial wedge	True RS-232
3800iSRO5XE	Keyboard wedge, TTL level 232, TTL level 232 serial wedge, IBM 4683, wand emulation, USB keyboard, USB HID, USB retail (IBM SurePOS)	Wand Emulation, TTL level 232

3800r Models

Note: Model 3800rSR000E requires 35122063.bin software. Contact Technical Support to obtain this software (see Technical Assistance on page 14-1).

Models	Primary Interfaces	Secondary Interfaces
3800rSR000E	TTL Level 232	Laser Emulation
3800rSR030E	True RS-232, True RS-232 serial wedge	True RS-232
3800rSR050E	Keyboard wedge, TTL level 232, TTL level 232 serial wedge, IBM 4683, wand emulation, USB keyboard, USB HID, USB retail (IBM SurePOS)	Wand Emulation, TTL level 232

Enabling the Secondary Interface

The secondary interface can be programmed at any time.

You can temporarily disable the secondary interface, but still retain the secondary interface settings in the imager's memory by scanning the **Disable** bar code below. To re-enable the secondary interface, scan the Enable bar code. *Default =Disable*.

* Disable

Enable

Secondary RS-232 Connection

All communication parameters between the scanner and terminal must match for correct data transfer through the serial port using RS-232 protocol.

RS-232 programmable selections are used by both the primary and secondary interfaces. Changing an RS-232 parameter (e.g., baud rate or parity), while in primary *or* secondary mode will affect both interfaces. If you want to change the RS-232 settings, refer to the Connecting the Scanner with RS-232 Serial Port section on pages 2-8 to 2-11.

RS-232 Interface

Secondary Code 39 Wand Emulation

In Wand Emulation mode, the scanner decodes the bar code then sends data in the same format as a wand scanner. The Code 39 Format converts all symbologies to Code 39. The Same Code Format transmits U.P.C., EAN, Code 128 and Interleaved 2 of 5 without any changes, but converts all other symbologies to Code 39. These codes set the transmission rate to 25 inches per second and the output polarity to black, high.

The ***Code 39 Format*** bar code below sets the terminal ID to 61, and the ***Same Code Format*** bar code sets the terminal ID to 64.

Wand Emulation
Code 39 Format

Wand Emulation
Same Code Format

Secondary Laser Emulation

Note: Models 3800iSR000E and 3800rSR000E require 35122063.bin software. Contact Technical Support to obtain this software (see Technical Assistance on page 14-1).

Use this selection when connecting to a secondary terminal with integral decoding. This also sets the transmission rate to 36 scans per second, the polarity to white high, and deletes all prefixes and suffixes.

* Laser Emulation
Same Code Output

When you scan the following bar code, the imager sends the raw data edges to the host for host decoding. This also sets the transmission rate to 36 scans per second and the polarity to white high.

Laser Emulation
Raw Output

When you scan the following bar code, the scanner decodes and re-encodes the data and sends the data to the host as Code 39.

Laser Emulation
Code 39 Output

Laser Emulation Transmission Rate

The transmission rate is limited by the terminal's ability to receive data without dropping characters. *Default = 36 scans/second.*

* 36

100

Laser Emulation Polarity

The Polarity can be sent as standard with white bars high, or reversed with black bars high. *Default = White High.*

* White High

Black High

Laser Emulation Idle

The idle describes the state of the scanner when no data is being transmitted. When in Non Decoded mode, you must set the scanner's idle state to match the idle state for the device to which the scanner is connected. *Default = Idle High.*

Idle Low

* Idle High

Secondary Trigger Mode

Manual Trigger: You must press the scanner trigger to scan. When not scanning, idle power is maintained. *Default = Manual Trigger.*

* Manual Trigger

Automatic Trigger: The scanner scans continuously at full power.

Automatic Trigger

Presentation Mode: The LEDs are off until a bar code is presented to the scanner. Then the LEDs turn on automatically to read the code. Presentation Mode uses ambient light to detect the bar codes.

Presentation Mode

Manual Trigger, Low Power: Scan the Manual Trigger, Low Power bar code below and the scanner "sleeps" until the trigger is pulled. When the trigger is pulled, the scanner wakes up and operates at normal power until there is no triggering for the time set with the Low Power Time-Out bar code. Then, the scanner goes to "sleep" again.

Manual Trigger, Low Power

Low Power Time-Out: Scan the Low Power Time-Out bar code to change the time-out duration. Then scan the time-out duration (from 0-300 seconds) from the inside back cover and **Save**. *Default = 120 seconds.*

Low Power Time-Out

Hands Free Time-Out

The Automatic Trigger and Presentation Modes are referred to as "hands free" modes. If the imager's trigger is pulled when using a hands free mode, the imager changes to manual trigger mode. You can set the time the imager 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 imager reverts to the original hands free mode.

Note: If you change the time-out duration for the secondary interface, the duration of the primary interface will also be changed.

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.*

Hands Free Time-Out

7 Symbologies

Introduction

This programming section contains the following menu selections. Refer to Chapter 11 for settings and defaults.

- All Symbologies
- China Post
- Codabar
- Codablock F
- Code 11
- Code 16K
- Code 39
- Code 32 Pharmaceutical (PARAF)
- Code 49
- Code 93
- Code 128
- EAN/JAN 8
- EAN/JAN 13
- GS1 DataBar Expanded
- GS1 DataBar Limited
- GS1 DataBar Omnidirectional
- Interleaved 2 of 5
- Korea Post
- Matrix 2 of 5
- MSI
- Plessey Code
- PosiCode A and B
- Straight 2 of 5 IATA
- Straight 2 of 5 Industrial
- Telepen
- UPC-A
- UPC-A/EAN-13 with Extended Coupon Code
- UPC-E

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.

All Symbologies On

All Symbologies Off

Message Length

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

EXAMPLE: Decode only those bar codes with a count of 9-20 characters.
Min. length = 09 Max. length = 20

EXAMPLE: Decode only those bar codes with a count of 15 characters.
Min. length = 15 Max. length = 15

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

Codabar

<Default All Codabar Settings>

Codabar

* On

Off

Codabar Start/Stop Characters

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

Transmit

* Don't Transmit

Codabar Check Character

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

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

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

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

* No Check Character

Validate Modulo 16, but Don't Transmit

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 7-2 for additional information. Minimum and Maximum lengths = 2-60. Minimum Default = 4, Maximum Default = 60.

Minimum Message Length

Maximum Message Length

Code 39

< Default All Code 39 Settings >

Code 39

* On

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.*

Transmit

* 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 7-2 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.*

On

* 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.

On

* 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.

* Full ASCII On

Full ASCII Off

Code 39 Code Page

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

Code 39 Code Page

Interleaved 2 of 5

< Default All Interleaved 2 of 5 Settings >

Interleaved 2 of 5

* On

Off

Check Digit

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

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

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

* No Check Digit

Validate, but Don't Transmit

Validate and Transmit

Interleaved 2 of 5 Message Length

Scan the bar codes below to change the message length. Refer to Message Length on page 7-2 for additional information. Minimum and Maximum lengths = 2-80. Minimum Default = 4, Maximum Default = 80.

Minimum Message Length

Maximum Message Length

Code 93

< Default All Code 93 Settings >

Code 93

* On

Off

Code 93 Message Length

Scan the bar codes below to change the message length. Refer to Message Length on page 7-2 for additional information. Minimum and Maximum lengths = 0-80. Minimum Default = 0, Maximum Default = 80.

Minimum Message Length

Maximum Message Length

Code 93 Code Page

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

Code 93 Code Page

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

<Default All Straight 2 of 5 Settings>

Straight 2 of 5 Industrial

On

* Off

Straight 2 of 5 Industrial Message Length

Scan the bar codes below to change the message length. Refer to Message Length on page 7-2 for additional information. Minimum and Maximum lengths = 1-48. Minimum Default = 4, Maximum Default = 48.

Minimum Message Length

Maximum Message Length

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

<Default All Straight 2 of 5 IATA Settings>

Straight 2 of 5 IATA

On

* Off

Straight 2 of 5 IATA Message Length

Scan the bar codes below to change the message length. Refer to Message Length on page 7-2 for additional information. Minimum and Maximum lengths = 1-48. Minimum Default = 4, Maximum Default = 48.

Minimum Message Length

Maximum Message Length

Matrix 2 of 5

<Default All Matrix 2 of 5 Settings>

Matrix 2 of 5

On

* Off

Matrix 2 of 5 Message Length

Scan the bar codes below to change the message length. Refer to Message Length on page 7-2 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>

Code 11

On

* Off

Check Digits Required

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

One Check Digit

* Two Check Digits

Code 11 Message Length

Scan the bar codes below to change the message length. Refer to Message Length on page 7-2 for additional information. Minimum and Maximum lengths = 1-80. Minimum Default = 4, Maximum Default = 80.

Minimum Message Length

Maximum Message Length

Code 128

<Default All Code 128 Settings>

Code 128

* On

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.*

On

* Off

Code 128 Message Length

Scan the bar codes below to change the message length. Refer to Message Length on page 7-2 for additional information. Minimum and Maximum lengths = 0-80. Minimum Default = 0, Maximum Default = 80.

Minimum Message Length

Maximum Message Length

Code 128 Code Page

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

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.

* Function Codes Off

Function Codes On

Telepen

<Default All Telepen Settings>

Telepen

On

* 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.*

* AIM Telepen Output

Original Telepen Output

Telepen Message Length

Scan the bar codes below to change the message length. Refer to Message Length on page 7-2 for additional information. Minimum and Maximum lengths = 1-60. Minimum Default = 1, Maximum Default = 60.

Minimum Message Length

Maximum Message Length

UPC-A

<Default All UPC-A Settings>

UPC-A

* On

Off

UPC-A Check Digit

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

* On

Off

UPC-A Number System

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

* On

Off

UPC-A Addenda

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

2 Digit Addenda On

* 2 Digit Addenda Off

5 Digit Addenda On

* 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.*

Required

* 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.*

* On

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.*

* On

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 = Off (UPC-E0) and Off (UPC-E1).*

UPC-E0 On

* UPC-E0 Off

UPC-E1 On

* UPC-E1 Off

UPC-E0 and UPC-E1 Expand

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

On

* 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.*

Required

* 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.*

* On

Off

UPC-E0 Check Digit

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

* On

Off

UPC-E0 Number System

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

* On

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.*

2 Digit Addenda On

* 2 Digit Addenda Off

5 Digit Addenda On

* 5 Digit Addenda Off

EAN/JAN 13

<Default All EAN/JAN Settings>

EAN/JAN 13

* On

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.*

* On

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.*

2 Digit Addenda On

* 2 Digit Addenda Off

5 Digit Addenda On

* 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.*

Required

* 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.*

* On

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 7-18.

ISBN Translate

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

On

* Off

ISBN

<Default All EAN/JAN 8 Settings>

EAN/JAN 8

* On

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.*

* On

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.*

2 Digit Addenda On

* 2 Digit Addenda Off

5 Digit Addenda On

* 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.*

Required

* 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.*

* On

Off

MSI

<Default All MSI Settings>

MSI

On

* 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 7-2 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

On

* Off

Plessey Message Length

Scan the bar codes below to change the message length. Refer to Message Length on page 7-2 for additional information. Minimum and Maximum lengths = 4-48. Minimum Default = 4, Maximum Default = 48.

Minimum Message Length

Maximum Message Length

GS1 DataBar Omnidirectional

< Default All GS1 DataBar Omnidirectional Settings >

GS1 DataBar Omnidirectional

* On

Off

GS1 DataBar Limited

< Default All GS1 DataBar Limited Settings >

GS1 DataBar Limited

* On

Off

GS1 DataBar Expanded

< Default All GS1 DataBar Expanded Settings >

GS1 DataBar Expanded

* On

Off

GS1 DataBar Expanded Message Length

Scan the bar codes below to change the message length. Refer to Message Length on page 7-2 for additional information. Minimum and Maximum lengths = 4-74. Minimum Default = 4, Maximum Default = 74.

Minimum Message Length

Maximum Message Length

GS1 Emulation

The imager can automatically format the output from any GS1 data carrier to emulate what would be encoded in an equivalent GS1-128 or GS1 DataBar symbol. GS1 data carriers include UPC-A and UPC-E, EAN-13 and EAN-8, ITF-14, GS1-128, and GS1-128 DataBar and GS1 Composites. (Any application that accepts GS1 data can be simplified since it only needs to recognize one data carrier type.)

If **GS1-128 Emulation** is scanned, all retail codes (UPC, UPC-E, EAN8, EAN13) are expanded out to 16 digits. If the AIM ID is enabled, the value will be the GS1-128 AIM ID,]C1 (see Symbology Chart on page A-1).

If **GS1 DataBar Emulation** is scanned, all retail codes (UPC, UPC-E, EAN8, EAN13) are expanded out to 16 digits. If the AIM ID is enabled, the value will be the GS1-DataBar AIM ID,]e*m* (see Symbology Chart on page A-1).

Default = GS1 Emulation Off.

GS1 Emulation

GS1-128 Emulation

* GS1 Emulation Off

China Post

<Default All China Post Settings>

China Post

On

* Off

China Post Message Length

Scan the bar codes below to change the message length. Refer to Message Length on page 7-2 for additional information. Minimum and Maximum lengths = 2-80. Minimum Default = 4, Maximum Default = 80.

Minimum Message Length

Maximum Message Length

Korea Post

<Default All Korea Post Settings>

Korea Post

On

* Off

Korea Post Message Length

Scan the bar codes below to change the message length. Refer to Message Length on page 7-2 for additional information. Minimum and Maximum lengths = 2-80. Minimum Default = 4, Maximum Default = 48.

Minimum Message Length

Maximum Message Length

PosiCode

<Default All PosiCode Settings>

PosiCode A and B

* On

Off

You have to have PosiCode A and B on to read any of the PosiCode symbologies.

A and B On
(No Limited)

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

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

PosiCode Message Length

Scan the bar codes below to change the message length. Refer to Message Length on page 7-2 for additional information. Minimum and Maximum lengths = 2-80. Minimum Default = 4, Maximum Default = 48.

Minimum Message Length

Maximum Message Length

Codablock F

<Default All Codablock F Settings>

Codablock F

On

* Off

Codablock F Message Length

Scan the bar codes below to change the message length. Refer to Message Length on page 7-2 for additional information. Minimum and Maximum lengths = 1-2048. Minimum Default = 1, Maximum Default = 2048.

Minimum Message Length

Maximum Message Length

Code 16K

<Default All Code 16K Settings>

Code 16K

On

* Off

Code 16K Message Length

Scan the bar codes below to change the message length. Refer to Message Length on page 7-2 for additional information. Minimum and Maximum lengths = 0-160. Minimum Default = 1, Maximum Default = 160.

Minimum Message Length

Maximum Message Length

Code 49

<Default All Code 49 Settings>

Code 49

* On

Off

Code 49 Message Length

Scan the bar codes below to change the message length. Refer to Message Length on page 7-2 for additional information. Minimum and Maximum lengths = 1-81. Minimum Default = 1, Maximum Default = 81.

Minimum Message Length

Maximum Message Length

8 Interface Keys

Keyboard Function Relationships

The following Keyboard Function Code, Hex/ASCII Value, and Full ASCII "CTRL"+ relationships apply to all terminals that can be used with the scanner. Refer to page 2-6 enable Control + ASCII mode.

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

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

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

Supported Interface Keys

ASCII	HEX	IBM AT/XT and PS/2 Compatibles, WYSE PC/AT Supported Keys	IBM XTs and Compatibles Supported Keys	IBM, DDC, Memorex Telex, Harris* Supported Keys
NUL	00	Reserved	Reserved	Reserved
SOH	01	Enter (KP)	CR/Enter	Enter
STX	02	Cap Lock	Caps Lock	F11
ETX	03	ALT make	Reserved	F12
EOT	04	ALT break	Reserved	F13
ENQ	05	CTRL make	Reserved	F14
ACK	06	CTRL break	Reserved	F15
BEL	07	CR/Enter	CR/Enter	New Line
BS	08	Reserved	Reserved	F16
HT	09	Tab	Tab	F17
LF	0A	Reserved	Reserved	F18
VT	0B	Tab	Tab	Tab/Field Forward
FF	0C	Delete	Delete	Delete
CR	0D	CR/Enter	CR/Enter	Field Exit/New Line
SO	0E	Insert	Insert	Insert
SI	0F	Escape	Escape	F19
DLE	10	F11	Reserved	Error Reset
DC1	11	Home	Home	Home
DC2	12	Print	Print	F20
DC3	13	Back Space	Back Space	Back Space
DC4	14	Back Tab	Back Tab	Backfield/Back Tab
NAK	15	F12	Reserved	F21
SYN	16	F1	F1	F1
ETB	17	F2	F2	F2
CAN	18	F3	F3	F3
EM	19	F4	F4	F4
SUB	1A	F5	F5	F5
ESC	1B	F6	F6	F6
FS	1C	F7	F7	F7
GS	1D	F8	F8	F8
RS	1E	F9	F9	F9
US	1F	F10	F10	F10

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

Supported Interface Keys

ASCII	HEX	IBM, Memorex Telex (102)* Supported Keys	Memorex Telex (88)** Supported Keys
NUL	00	Reserved	Reserved
SOH	01	Enter	Enter
STX	02	F11	PF10
ETX	03	F12	PF11
EOT	04	F13	PF12
ENQ	05	F14	Reserved
ACK	06	F15	Reserved
BEL	07	New Line	New Line
BS	08	F16	Field Forward
HT	09	F17	Field Forward
LF	0A	F18	Reserved
VT	0B	Tab/Field Forward	Field Forward
FF	0C	Delete	Delete
CR	0D	Field Exit	New Line
SO	0E	Insert	Insert
SI	0F	Clear	Erase
DLE	10	Error Reset	Error Reset
DC1	11	Home	Reserved
DC2	12	Print	Print
DC3	13	Back Space	Back Space
DC4	14	Back Tab	Back Field
NAK	15	F19	Reserved
SYN	16	F1	PF1
ETB	17	F2	PF2
CAN	18	F3	PF3
EM	19	F4	PF4
SUB	1A	F5	PF5
ESC	1B	F6	PF6
FS	1C	F7	PF7
GS	1D	F8	PF8
RS	1E	F9	PF9
US	1F	F10	Home

* IBM 3196/97, 3476/77, 3191/92, 3471/72, Memorex Telex (all models) with 102 key keyboards
** Memorex Telex with 88 key keyboards

Supported Interface Keys

ASCII	HEX	Esprit 200, 400 ANSI Supported Keys	Esprit 200, 400 ASCII Supported Keys	Esprit 200, 400 PC Supported Keys
NUL	00	Reserved	Reserved	Reserved
SOH	01	New Line	New Line	New Line
STX	02	N/A	N/A	N/A
ETX	03	N/A	N/A	N/A
EOT	04	N/A	N/A	N/A
ENQ	05	N/A	N/A	N/A
ACK	06	N/A	N/A	N/A
BEL	07	New Line	New Line	New Line
BS	08	N/A	N/A	N/A
HT	09	Tab	Tab	Tab
LF	0A	N/A	N/A	N/A
VT	0B	Tab	Tab	Tab
FF	0C	N/A	N/A	Delete
CR	0D	New Line	New Line	New Line
SO	0E	N/A	N/A	Insert
SI	0F	Escape	Escape	Escape
DLE	10	F11	F11	F11
DC1	11	Insert	Insert	Home
DC2	12	F13	F13	Print
DC3	13	Back Space	Back Space	Back Space
DC4	14	Back Tab	Back Tab	Back Tab
NAK	15	F12	F12	F12
SYN	16	F1	F1	F1
ETB	17	F2	F2	F2
CAN	18	F3	F3	F3
EM	19	F4	F4	F4
SUB	1A	F5	F5	F5
ESC	1B	F6	F6	F6
FS	1C	F7	F7	F7
GS	1D	F8	F8	F8
RS	1E	F9	F9	F9
US	1F	F10	F10	F10

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

9 Utilities

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

This selection allows you to turn on transmission of a Code I.D. before the decoded symbology. (See the Symbology Chart, included in the Appendix A) 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.

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.

Show Revision

Show Data Format

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

Data Format Settings

Resetting the Standard Product Defaults

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

Standard Product Default Settings

The Menu Commands starting on page 11-5 lists the standard product default settings for each of the commands (indicated by an asterisk (*) on the programming pages).

Temporary Visual Xpress Configuration

For quick download communication configuration, scan the **Visual Xpress** bar code to temporarily configure the imager for Visual Xpress settings. Refer to Visual Xpress on page 10-1 for additional information about Visual Xpress.

Note: Connect the imager using RS-232 cables. Scan the bar code below and the unit will communicate in RS-232 mode, allowing it to work with Visual Xpress. The imager reverts to the original or reprogrammed interface when the power is cycled.

Visual Xpress

If you download new software into a unit, the user-programmed parameters are retained. If you need to discard user-programmed settings, scan the Standard Product Default Settings bar code (see Resetting the Standard Product Defaults on page 9-1).

10 Visual Xpress

Visual Xpress Introduction

Visual Xpress provides a wide range of PC-based programming functions that can be performed on an imager connected to your PC's COM port. Visual Xpress allows you to download upgrades to the imager's firmware, change programmed parameters, and create and print programming bar codes. Using Visual Xpress, you can even save/open the programming parameters for an imager. 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 an imager, Visual Xpress 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 RS-232 cable, an external power supply is required. When using a USB serial port emulation, only a USB cable is required.

Visual Xpress Operations

The Visual Xpress 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 imager and receive imager 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 imager. The imager'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 an imager. You can set or modify these parameters as required. You can later write the modified settings to the imager, or save them to a dcf file.

Imaging

Imaging provides all the image-related functions that a 2D Imager can perform. You can capture an image using the current settings, and the image will be displayed in an image window. Images captured from the imager can be saved to files in different image formats. You can modify the image settings and save the image settings to an INI file, which can be loaded later to capture new images. Imaging also lets you preview the images continuously captured by the imager.

Installing Visual Xpress from the Web

1. Access the Honeywell web site at www.honeywellaidc.com.
2. Click on **Downloads**.
3. Click on **Software**.
4. Select your model number from the list of product numbers.
5. Click on the entry for **Visual Xpress**.
6. When prompted, select **Save File**, and save the files to the **c:\windows\temp** directory.
7. Once you have finished downloading the file, exit the web site.
8. Using Explorer, go to the **c:\windows\temp** file and unzip the file you saved.
9. Double click on **Setup.exe** and follow the screen prompts to install the Visual Xpress program.
10. If you've selected the defaults during installation, you can click on **Start Menu-Programs-Honeywell-Visual Xpress**.

11 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 3800i/3800r. 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 1-7). 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 SubTag.
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 (I) 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:

ACKIndicates a good command which has been processed.

ENQIndicates an invalid Tag or SubTag command.

NAKIndicates 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 3-3), or by sending the Manual/Serial Menu Command (page 11-9). Once the scanner is in serial trigger mode, the trigger is activated and deactivated by sending the following commands:

Activate:**SYN T CR**

Deactivate:**SYN U CR**

The scanner scans until a bar code has been read, until the deactivate command is sent, or until the serial time-out has been reached (see Read Time-Out on page 3-4 for a description, and the serial command on page 11-9).

Resetting the Standard Product Defaults

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

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 ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Factory Default Settings	Default	DEFALT	
Terminal Interfaces			
Terminal ID	003 (3800i/3800rSR050E models) 000 (3800iSR030E and 3800iSR000E models)	TERMID###	2-2
Program Keyboard Country	*USA	KBDCTY0	2-4
	Belgium	KBDCTY1	2-4
	Denmark	KBDCTY8	2-4
	Finland	KBDCTY2	2-4
	France	KBDCTY3	2-4
	Germany/Austria	KBDCTY4	2-4
	Great Britain	KBDCTY7	2-4
	Italy	KBDCTY5	2-4
	Norway	KBDCTY9	2-4
	Spain	KBDCTY10	2-4
	Switzerland	KBDCTY6	2-4
Keyboard Style	*Regular	KBDSTY0	2-5
	Caps Lock	KBDSTY1	2-5
	Shift Lock	KBDSTY2	2-5
	Automatic Caps Lock	KBDSTY6	2-5
	Emulate External Keyboard	KBDSTY5	2-6

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Keyboard Modifiers	*Control + ASCII Off	KBDCAS0	2-6
	Control + ASCII On	KBDCAS1	2-6
	*Turbo Mode Off	KBDTMD0	2-6
	Turbo Mode On	KBDTMD1	2-6
	*Numeric Keypad Off	KBDNPS0	2-6
	Numeric Keypad On	KBDNPS1	2-6
	*Auto Direct Conn. Off	KBDADC0	2-7
	Auto Direct Conn. On	KBDADC1	2-7
Serial Port Connection	RS-232	PAP232	2-8
Baud Rate	300 BPS	232BAD0	2-9
	600 BPS	232BAD1	2-9
	1200 BPS	232BAD2	2-9
	2400 BPS	232BAD3	2-9
	4800 BPS	232BAD4	2-9
	9600 BPS	232BAD5	2-9
	19200 BPS	232BAD6	2-9
	38400 BPS	232BAD7	2-9
	57600 BPS	232BAD8	2-9
	*115200 BPS	232BAD9	2-9

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Word Length: Data Bits, Stop Bits, and Parity	7 Data, 1 Stop, Parity Even	232WRD3	2-10
	7 Data, 1 Stop, Parity None	232WRD0	2-10
	7 Data, 1 Stop, Parity Odd	232WRD6	2-10
	7 Data, 2 Stop, Parity Even	232WRD4	2-10
	7 Data, 2 Stop, Parity None	232WRD1	2-10
	7 Data, 2 Stop, Parity Odd	232WRD7	2-10
	8 Data, 1 Stop, Parity Even	232WRD5	2-10
	*8 Data, 1 Stop, Parity None	232WRD2	2-10
	8 Data, 1 Stop, Parity Odd	232WRD8	2-10
RS-232 Handshaking	*RTS/CTS Off	232CTS0	2-11
	RTS/CTS On	232CTS1	2-11
	*XON/XOFF Off	232XON0	2-11
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	Code 39 Format	TERMID61	2-11
Wand Emulation Transmission Rate	10	WNDSPD0	2-12
	*25	WNDSPD1	2-12
	40	WNDSPD2	2-12
	80	WNDSPD3	2-12
	120	WNDSPD4	2-12
	150	WNDSPD5	2-12
	200	WNDSPD6	2-12

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Wand Emulation Polarity	*Black High	WNDPOL0	2-12
	White High	WNDPOL1	2-12
Wand Emulation Idle	Idle Low	WNDIDL0	2-12
	*Idle High	WNDIDL1	2-12
Wand Emulation Data Block Size	20	WNDBLK0	2-13
	*40	WNDBLK1	2-13
	60	WNDBLK2	2-13
	80	WNDBLK3	2-13
Wand Emulation Delay Between Blocks	5ms	WNDDLY0	2-13
	*50ms	WNDDLY1	2-13
	150ms	WNDDLY2	2-13
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Wand Emulation Overall Checksum	*Off	WNDCHK0	2-14
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Output Selections			
Beeper - Good Read	Off	BEPBEP0	3-1
	*On	BEPBEP1	3-1
Beeper Volume - Good Read	Off	BEPLVL0	3-1
	Low	BEPLVL1	3-1
	Medium (Default for 3800r)	BEPLVL2	3-1
	High (Default for 3800i)	BEPLVL3	3-1
Beeper Pitch - Good Read (Frequency)	Low (1600) (min 400Hz)	BEPFQ11600	3-1
	*Medium (3250)	BEPFQ13250	3-1
	High (4200) (max 9000Hz)	BEPFQ14200	3-1
Beeper Duration - Good Read	*Normal Beep	BEPBIP0	3-2
	Short Beep	BEPBIP1	3-2

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
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	*On	BEPLED1	3-2
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Good Read Delay	*No Delay	DLYGRD0	3-3
	Short Delay (500 ms)	DLYGRD500	3-3
	Medium Delay (1000 ms)	DLYGRD1000	3-3
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Reread Delay	Short (500 ms)	DLYRRD500	3-6
	*Medium (750 ms)	DLYRRD750	3-6
	Long (1000 ms)	DLYRRD1000	3-6
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Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Aimer Delay	1 second	SCNDLY1000	3-7
	2 seconds	SCNDLY2000	3-7
	*Off (no delay)	SCNDLY0	3-7
	Delay Duration (0 - 4000ms)	SCNDLY####	3-7
Aimer Mode	Off	SCNAIM0	3-7
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Aimer Beam Time-Out	Time-Out Duration (0 - 240,000 ms) *0	SCNADR######	3-8
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Add CR Suffix to All Symbologies		VSUFCR	4-3
Prefix	Add Prefix	PREBK2##	4-3
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	Clear All Prefixes	PRECA2	4-3

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Suffix	Add Suffix	SUFBK2##	4-4
	Clear One Suffix	SUFCL2	4-4
	Clear All Suffixes	SUFCA2	4-4
Function Code Transmit	*Enable	RMVFNC0	4-4
	Disable	RMVFNC1	4-4
Intercharacter Delay		DLYCHR##	4-5
User-Specified Intercharacter Delay	Delay Length	DLYCRX##	4-5
	Character to Trigger Delay	DLY_XX###	4-5
Interfunction Delay		DLYFNC##	4-6
Intermessage Delay		DLYMSG##	4-6
Data Formatter Selections			
Data Format Editor	*Default Data Format (None)	DFMDF3	5-4
	Enter Data Format	DFMBK3##	5-4
	Clear One Data Format	DFMCL3	5-4
	Clear All Data Formats	DFMCA3	5-4
Data Formatter	Off	DFM_EN0	5-5
	*On, but Not Required	DFM_EN1	5-5
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	2	VSAF_2	5-5
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Enabling the Secondary Interface	*Disable	2IF_EN0	6-2
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Secondary RS-232 Connection	RS-232 Interface	2IFTYP0	6-2
Secondary Code 39 Wand Emulation	Same Code Format	2IFTYP64	6-2
	Code 39 Format	2IFTYP61	6-2

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Secondary Laser Emulation	*Laser Emulation Same Code Output	PAPHLC	6-3
	Laser Emulation Raw Output	PAP088	6-3
	Laser Emulation Code 39 Output	PAP087	6-3
Laser Emulation Transmission Rate	*36	HLCSPD0	6-3
	100	HLCSPD1	6-3
Laser Emulation Polarity	Black High	HLCPOL0	6-4
	*White High	HLCPOL1	6-4
Laser Emulation Idle	Low	HLCIDL0	6-4
	*High	HLCIDL1	6-4
Secondary Trigger Mode	*Manual Trigger	2IFTRG0	6-4
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Codabar	Default All Codabar Settings	CBRDFT	7-2
Codabar	Off	CBRENA0	7-2
	*On	CBRENA1	7-2
Codabar Start/Stop Char.	*Don't Transmit	CBRSSX0	7-3
	Transmit	CBRSSX1	7-3
Codabar Check Char.	*No Check Char.	CBRCK20	7-3
	Validate, But Don't Transmit	CBRCK21	7-3
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Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Codabar Concatenation	*Off	CBRCCT0	7-4
	On	CBRCCT1	7-4
	Require	CBRCCT2	7-4
Codabar Message Length	Minimum (2 - 60) *4	CBRMIN##	7-4
	Maximum (2 - 60) *60	CBRMAX##	7-4
Code 39	Default All Code 39 Settings	C39DFT	7-5
Code 39	Off	C39ENA0	7-5
	*On	C39ENA1	7-5
Code 39 Start/Stop Char.	*Don't Transmit	C39SSX0	7-5
	Transmit	C39SSX1	7-5
Code 39 Check Char.	*No Check Char.	C39CK20	7-6
	Validate, But Don't Transmit	C39CK21	7-6
	Validate, and Transmit	C39CK22	7-6
Code 39 Message Length	Minimum (0 - 48) *0	C39MIN##	7-6
	Maximum (0 - 48) *48	C39MAX##	7-6
Code 39 Append	*Off	C39APP0	7-6
	On	C39APP1	7-6
Code 32 Pharmaceutical (PARAF)	*Off	C39B320	7-7
	On	C39B321	7-7
Code 39 Full ASCII	*Off	C39ASC0	7-7
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Interleaved 2 of 5	Default All Interleaved 2 of 5 Settings	I25DFT	7-8
Interleaved 2 of 5	Off	I25ENA0	7-8
	*On	I25ENA1	7-8
Interleaved 2 of 5 Check Digit	*No Check Char.	I25CK20	7-9
	Validate, But Don't Transmit	I25CK21	7-9
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Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Interleaved 2 of 5 Message Length	Minimum (2 - 80) *4	I25MIN##	7-9
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Code 93	Default All Code 93 Settings	C93DFT	7-9
Code 93	Off	C93ENA0	7-9
	*On	C93ENA1	7-9
Code 93 Message Length	Minimum (0 - 80) *0	C93MIN##	7-10
	Maximum (0 - 80) *80	C93MAX##	7-10
Straight 2 of 5 Industrial	Default All Straight 2 of 5 Industrial Settings	R25DFT	7-11
Straight 2 of 5 Industrial	*Off	R25ENA0	7-11
	On	R25ENA1	7-11
Straight 2 of 5 Industrial Message Length	Minimum (1 - 48) *4	R25MIN##	7-11
	Maximum (1 - 48) *48	R25MAX##	7-11
Straight 2 of 5 IATA	Default All Straight 2 of 5 IATA Settings	A25DFT	7-11
Straight 2 of 5 IATA	*Off	A25ENA0	7-11
	On	A25ENA1	7-11
Straight 2 of 5 IATA Message Length	Minimum (1 - 48) *4	A25MIN##	7-12
	Maximum (1 - 48) *48	A25MAX##	7-12
Matrix 2 of 5	Default All Matrix 2 of 5 Settings	X25DFT	7-12
Matrix 2 of 5	*Off	X25ENA0	7-12
	On	X25ENA1	7-12
Matrix 2 of 5 Message Length	Minimum (1 - 80) *4	X25MIN##	7-12
	Maximum (1 - 80) *80	X25MAX##	7-12
Code 11	Default All Code 11 Settings	C11DFT	7-13
Code 11	*Off	C11ENA0	7-13
	On	C11ENA1	7-13

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Code 11 Check Digits Required	1 Check Digit	C11CK20	7-13
	*2 Check Digits	C11CK21	7-13
Code 11 Message Length	Minimum (1 - 80) *4	C11MIN##	7-13
	Maximum (1 - 80) *80	C11MAX##	7-13
Code 128	Default All Code 128 Settings	128DFT	7-14
Code 128	Off	128ENA0	7-14
	*On	128ENA1	7-14
ISBT Concatenation	On	ISBENA1	7-14
	*Off	ISBENA0	7-14
Code 128 Message Length	Minimum (0 - 80) *0	128MIN##	7-14
	Maximum (0 - 80) *80	128MAX##	7-14
Code 128 Code Page	Code 128 Code Page	128DCP	7-15
Code 128 Function Code Transmit	*Off	128FNX0	7-15
	On	128FNX1	7-15
ISBT Concatenation	*Off	ISBENA0	7-14
	On	ISBENA1	7-14
Telepen	Default All Telepen Settings	TELDFT	7-15
Telepen	*Off	TELENA0	7-15
	On	TELENA1	7-15
Telepen Output	*AIM Telepen Output	TELOLD0	7-16
	Original Telepen Output	TELOLD1	7-16
Telepen Message Length	Minimum (1 - 60) *1	TELMIN##	7-16
	Maximum (1 - 60) *60	TELMAX##	7-16
UPC-A	Default All UPC-A Settings	UPADFT	7-16
UPC-A	Off	UPAENA0	7-17
	*On	UPAENA1	7-17
UPC-A Check Digit	Off	UPACKX0	7-16
	*On	UPACKX1	7-17

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
UPC-A Number System	Off	UPANSX0	7-17
	*On	UPANSX1	7-17
UPC-A 2 Digit Addenda	*Off	UPAAD20	7-17
	On	UPAAD21	7-17
UPC-A 5 Digit Addenda	*Off	UPAAD50	7-17
	On	UPAAD51	7-17
UPC-A Addenda Required	*Not Required	UPAARQ0	7-18
	Required	UPAARQ1	7-18
UPC-A Addenda Separator	Off	UPAADS0	7-18
	*On	UPAADS1	7-18
UPC-E	Default All UPC-E Settings	UPEDFT	7-19
UPC-E0	*Off	UPEEN00	7-19
	On	UPEEN01	7-19
UPC-E1	*Off	UPEEN10	7-19
	On	UPEEN11	7-19
UPC-E Expand	*Off	UPEEXP0	7-19
	On	UPEEXP1	7-19
UPC-E Check Digit	Off	UPECKX0	7-20
	*On	UPECKX1	7-20
UPC-E Number System	Off	UPENSX0	7-20
	*On	UPENSX1	7-20
UPC-E 2 Digit Addenda	*Off	UPEAD20	7-21
	On	UPEAD21	7-21
UPC-E 5 Digit Addenda	*Off	UPEAD50	7-21
	On	UPEAD51	7-21
UPC-E Addenda Required	*Not Required	UPEARQ0	7-19
	Required	UPEARQ1	7-19
UPC-E Addenda Separator	Off	UPEADS0	7-20
	*On	UPEADS1	7-20

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
EAN/JAN 13	Default All EAN/ JAN 13 Settings	E13DFT	7-21
EAN/JAN 13	Off	E13ENA0	7-21
	*On	E13ENA1	7-21
EAN/JAN 13 Check Digit	Off	E13CKX0	7-21
	*On	E13CKX1	7-21
EAN/JAN 13 2 Digit Addenda	*Off	E13AD20	7-22
	On	E13AD21	7-22
EAN/JAN 13 5 Digit Addenda	*Off	E13AD50	7-22
	On	E13AD51	7-22
EAN/JAN 13 Addenda Required	*Not Required	E13ARQ0	7-22
	Required	E13ARQ1	7-22
EAN/JAN 13 Addenda Separator	Off	E13ADS0	7-22
	*On	E13ADS1	7-22
ISBN Translate	*Off	E13ISB0	7-23
	On	E13ISB1	7-23
EAN/JAN 8	Default All EAN/ JAN 8 Settings	EA8DFT	7-23
EAN/JAN 8	Off	EA8ENA0	7-23
	*On	EA8ENA1	7-23
EAN/JAN 8 Check Digit	Off	EA8CKX0	7-23
	*On	EA8CKX1	7-23
EAN/JAN 8 2 Digit Addenda	*Off	EA8AD20	7-24
	On	EA8AD21	7-24
EAN/JAN 8 5 Digit Addenda	*Off	EA8AD50	7-24
	On	EA8AD51	7-24
EAN/JAN 8 Addenda Required	*Not Required	EA8ARQ0	7-24
	Required	EA8ARQ1	7-24
EAN/JAN 8 Addenda Separator	Off	EA8ADS0	7-24
	*On	EA8ADS1	7-24

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Coupon Code	Off	CPNENA0	7-24
	*On	CPNENA1	7-18
MSI	Default All MSI Settings	MSIDFT	7-25
MSI	*Off	MSIENA0	7-25
	On	MSIENA1	7-25
MSI Check Character	*Validate Type 10, but Don't Transmit	MSICHK0	7-25
	Validate Type 10 and Transmit	MSICHK1	7-25
MSI Message Length	Minimum (4 - 48) *4	MSIMIN##	7-25
	Maximum (4 - 48) *48	MSIMAX##	7-25
Plessey Code	Default All Plessey Settings	PLSDFT	7-26
Plessey Code	*Off	PLSENA0	7-26
	On	PLSENA1	7-26
Plessey Message Length	Minimum (4 - 48) *4	PLSMIN##	7-26
	Maximum (4 - 48) *48	PLSMAX##	7-26
GS1 DataBar Omnidirectional	Default All GS1 DataBar Omnidirectional Settings	RSSDFT	7-26
GS1 DataBar Omnidirectional	Off	RSSENA0	7-26
	*On	RSSENA1	7-26
GS1 DataBar Limited	Default All GS1 DataBar Limited Settings	RSLDFT	7-27
GS1 DataBar Limited	Off	RSLENA0	7-27
	*On	RSLENA1	7-27
GS1 DataBar Expanded	Default All GS1 DataBar Expanded Settings	RSEDFT	7-27
GS1 DataBar Expanded	Off	RSEENA0	7-27
	*On	RSEENA1	7-27
GS1 DataBar Expanded Msg. Length	Minimum (4 - 74) *4	RSEMIN##	7-27
	Maximum (4 - 74) *74	RSEMAX##	7-27

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
GS1 Emulation	GS1 Emulation	EANEMU2	7-28
	GS1-128 Emulation	EANEMU1	7-28
	GS1 Emulation Off	EANEMU0	7-28
China Post	Default All China Pos Settings	CPCDFT	7-28
China Post	*Off	CPCENA0	7-28
	On	CPCENA1	7-28
China Post Msg. Length	Minimum (2 - 80) *4	CPCMIN##	7-29
	Maximum (2 - 80) *80	CPCMAX##	7-29
Korea Post	Default All Korea Post Settings	KPCDFT	7-29
Korea Post	*Off	KPCENA0	7-29
	On	KPCENA1	7-29
Korea Post Msg. Length	Minimum (2 - 80) *4	KPCMIN##	7-29
	Maximum (2 - 80) *48	KPCMAX##	7-29
PosiCode	Default All PosiCode Settings	POSDFT	7-30
PosiCode	Off	POSENA0	7-30
	*On	POSENA1	7-30
	A and B On	POSLIM0	7-30
	A and B and Limited A On	POSLIM1	7-30
	*A and B and Limited B On	POSLIM2	7-30
PosiCode Msg. Length	Minimum (2 - 80) *4	POSMIN##	7-30
	Maximum (2 - 80) *48	POSMAX##	7-30
Codablock F	Default All Codablock F Settings	CBFDFT	7-31
Codablock F	*Off	CBFENA0	7-31
	On	CBFENA1	7-31

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Codablock F Msg. Length	Minimum (1 - 2048) *1	CBF-MIN####	7-31
	Maximum (1 - 2048) *2048	CBF-MAX####	7-31
Code 16K	Default All Code 16K Settings	16KDFT	7-31
Code 16K	*Off	16KENA0	7-31
	On	16KENA1	7-31
Code 16K	Minimum (0 - 160) *1	16KMIN###	7-32
	Maximum (0 - 160) *160	16KMAX###	7-32
Code 49	Default All Code 49 Settings	C49DFT	7-32
Code 49	Off	C49ENA0	7-32
	*On	C49ENA1	7-32
Code 49	Minimum (1 - 81) *1	C49MIN##	7-32
	Maximum (1 - 81) *81	C49MAX##	7-32

12 Product Specifications

3800r Product Specifications

Parameter	Specification			
Dimensions (Typical):				
Height	6.2 inches (15.7 cm)			
Length	5.3 inches (13.5 cm)			
Width	3.2 inches (8.1 cm)			
Weight	6.5 ounces (185 g)			
Light Source	630 nM visible red LED			
Scan Rate	270 scans per second in most usages			
Skew Angle	±65 degrees			
Pitch Angle	±65 degrees			
Horizontal Velocity	2 inches (5 cm) per second			
Scan Contrast	20% minimum			
Voltage Requirements	4.5 to 12VDC at scanner			
Current Draw (Max):	Scanning	Standby	Inrush	Low Power
3800rSR000E Model @5Vdc	235mA	68mA	350mA	100µA
@12Vdc	142mA	48mA	-	-
3800rSR050E Model @5Vdc	235mA	68mA	350mA	100µA
@12Vdc	127mA	48mA	-	-
3800rSR030E Model @5Vdc	210mA	60mA	350mA	100µA
@12Vdc	120mA	49mA	-	-
Temperature Ranges:				
Operating	32° F to +122° F (0° C to +50° C)			
Storage	-40° F to +140° F (-40° C to +60° C)			
Humidity	0 to 95% non-condensing			
Mechanical Drop	Operational after 50 drops from 6 feet (1.8 m) to concrete			
Vibration	Withstands 5G peak from 22 to 300 Hz			
ESD Sensitivity	15 kV to any external surface			
Sealant Rating	IP41			

3800r Depth of Field

Minimum Bar Width	*Maximum Near Field*	*Minimum Far Field (no ambient lighting)*
13 mil 100% U.P.C.	1 in (2.5 cm)	24 in (61 cm)
7.5 mil Code 39	4 in (10 cm)	14 in (36 cm)
10 mil Code 39	2 in (5 cm)	18 in (46 cm)
13 mil Code 39	1 in (2.5 cm)	24 in (61 cm)
15 mil Code 39	1 in (2.5 cm)	28 in (71 cm)
20 mil Code 39	1 in (2.5 cm)	36 in (91 cm)
55 mil Code 39	4 in (10.2 cm)	44 in (112 cm)

3800i Product Specifications

Parameter	***Specification***			
Dimensions (Typical):	without aimer		with aimer	
Height	6.4 inches (16.3 cm)		6.5 inches (16.5 cm)	
Length	5.3 inches (13.5 cm)		5.3 inches (13.5 cm)	
Width	3.2 inches (8.1 cm)		3.2 inches (8.1 cm)	
Weight	7.5 ounces (213 g)		8.4 oz. (238 g)	
Light Source	630 nm visible red LED			
Aimer Beam Light Source	Class 2 Laser Product, 1.0 mW Max Output:650 nm			
Scan Rate	270 scans per second in most usages			
Skew Angle	±65 degrees			
Pitch Angle	±65 degrees			
Horizontal Velocity	2 inches (5 cm) per second			
Scan Contrast	20% minimum			
Voltage Requirements	4.5 to 12VDC at scanner			
Current Draw (Max):	Scanning	Standby	Inrush	Low Power
3800iSR00XE Model @5Vdc	235mA	68mA	350mA	100µA
@12Vdc	142mA	48mA	-	-
3800iSR05XE Model @5Vdc	235mA	68mA	350mA	100µA
@12Vdc	127mA	48mA	-	-
3800iSR03XE Model @5Vdc	210mA	60mA	350mA	100µA
@12Vdc	120mA	49mA	-	-
Temperature Ranges:				
Operating	-22° F to +122° F (-30° C to +50° C)			
Storage	-40° F to +140° F (-40° C to +60° C)			
Humidity	0 to 95% non-condensing			
Mechanical Drop	Operational after 50 drops from 6.5 feet (2 m) to concrete @ -22° F (-30° C)			
Vibration	Withstands 5G peak from 22 to 300 Hz			
ESD Sensitivity	15 kV to any external surface			
Sealant Rating	IP 54 (Water and Dust Resistant)			

3800i Depth of Field

Min. Bar Width	*Max. Near Field*	*Min. Far Field (25 Lux lighting)*	*Min. Far Field (300 Lux lighting)*
13 mil 100% U.P.C.	2.5 in (6.4 cm)	26 in (66 cm)	28 in (71 cm)
7.5 mil Code 39	6.5 in (16.5 cm)	14 in (36 cm)	15 in (38 cm)
15 mil Code 39	2.5 in (6.4 cm)	30 in (76.2 cm)	31 in (78.7 cm)
20 mil Code 39	1.5 in (3.8 cm)	39 in (99.1 cm)	42 in (107 cm)
55 mil Code 39	4 in (10.2 cm)	63 in (160 cm)	82 in (208 cm)

◆ *Pins 4 and 9 are populated depending on power supply voltage option.*

connects to your terminal
9 Pin Type D Female

connects to the scanner handle
10 Pin Modular Plug

Conventional laser data format is provided at the modular connector in the scanner handle. The interface cable is terminated with a 10 pin modular plug, and a 9 pin Type D (squeeze to release) connector that is compatible with all Honeywell terminals.

10 Pin RJ41 Modular Plug
connects to the scanner handle

1
2 Cord shield
3 Tied to supply power
4 Supply ground
5 Terminal clock
6 Terminal data
7 Supply power input (Refer to tables on page 12-1 and page 12-3)
8 Keyboard data
9 Keyboard clock
10

Wand Emulation

connects to your terminal

9 Pin Type D Female

connects to the scanner handle

10 Pin Modular Plug

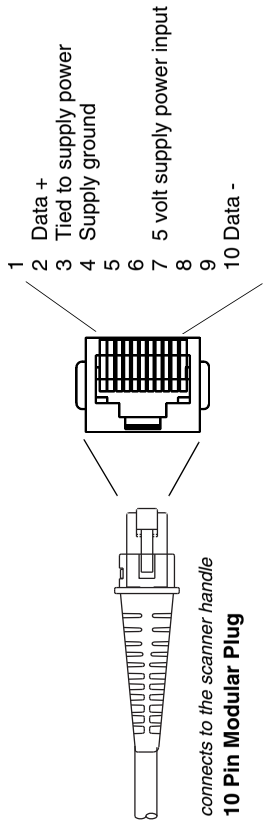
1
2 Cord shield
3 Prog 1 (Tied to supply power for primary cable)
4 Supply ground
5
6 Bar code data output
7 Supply power input (Refer to tables on page 12-1 and page 12-3)
8
9
10

10 Pin RJ41 Modular Plug

connects to the scanner handle

1
2 Cord shield
3 Prog 1 (Tied to supply power for primary cable)
4 Supply ground
5 Receive data - Serial data to scanner
6 Transmit data - Serial data from scanner
7 Supply power input (Refer to tables on page 12-1 and page 12-3)
8 Request to send data
9 Clear to send data
10

Standard Cable Pinouts
USB



13 Maintenance

Repairs

Repairs and/or upgrades are not to be performed on this product. These services are to be performed only by an authorized service center. Please see Customer Support on page 14-1 for further information.

Maintenance

The 3800i/3800r 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 Scanner's Window

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 detergent- water solution or alcohol). If a detergent 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 imager in water. Do not use abrasive wipes or tissues on the imager'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 13-2.

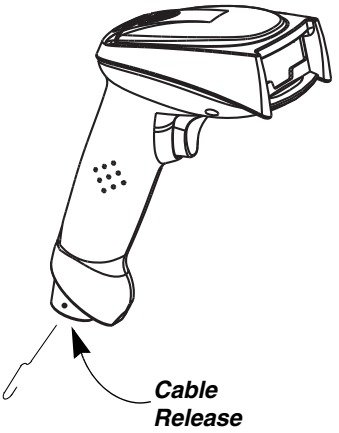
Replacing the Interface Cable

The standard interface cable is attached to the scanner with an 10-pin modular connector. When properly seated, the connector is held in the 3800i/3800r 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.

To Replace the 3800r Interface Cable:

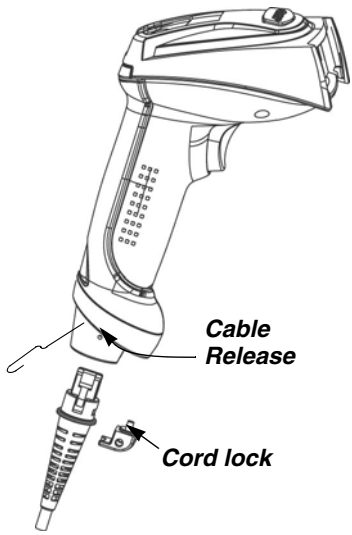
1. Turn the power to the host system OFF.
2. Disconnect the scanner's cable from the terminal or computer.
3. Locate the small hole on the side of the scanner's handle (3800i/3800r). This is the cable release.
4. Straighten one end of a paper clip.
5. Insert the end of the paper clip into the small hole 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.

To Replace the 3800i Interface Cable:

1. Turn the power to the host system OFF.
2. Disconnect the imager's cable from the terminal or computer.
3. Use a screwdriver to unscrew the cord lock from the base of the imager if in use.
4. Locate the small hole on the side of the imager's handle. This is the cable release.
5. Straighten one end of a paper clip.
6. 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.



7. 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.
8. If the cord lock is used, screw it back in place over the cord.

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 red aiming illumination line on?

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

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

Is the scanner having trouble reading your symbols?

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

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

Is the bar code displayed but not entered?

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

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

Does the scanner read the bar code incorrectly?

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

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

  Reprogram the scanner with the correct Plug and Play or Terminal selection bar code. See Chapter 1 and Chapter 2.
- The scanner may not be programmed to output your bar code data properly. For example, you scan "12345" and the host displays "A12345B."

  Reprogram the scanner with the proper symbology selections. See Chapter 7.

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

1. Scan the sample bar codes in the back of this manual. If the scanner reads the sample bar codes, check that your bar code is readable. Verify that your bar code symbology is enabled (see Chapter 7).

2. If the scanner still can't read the sample bar codes, scan All Symbologies on page 7-1.

If you aren't sure what programming options have been set in the scanner, or if you want the factory default settings restored, scan Resetting the Standard Product Defaults on page 11-4.

14 Customer Support

Technical Assistance

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

North America/Canada

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

Latin America

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

Brazil

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

Mexico

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

Europe, Middle East, and Africa

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

Hong Kong

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

Singapore

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

China

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

Japan

Telephone: +81-3-6730-7344
Fax: +81-3-6730-7222
E-mail: aptechsupport@honeywell.com

Online Technical Assistance

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

Product Service and Repair

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

North America

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

Latin America

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

Brazil

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

Mexico

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

Europe, Middle East, and Africa

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

Hong Kong

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

Singapore

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

China

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

Japan

Telephone: +81-3-6730-7344
Fax: +81-3-6730-7222
E-mail: apservice@honeywell.com

Online Product Service and Repair Assistance

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

Limited Warranty

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

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

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

HII'S RESPONSIBILITY AND PURCHASER'S EXCLUSIVE REMEDY UNDER THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT OF THE DEFECTIVE PRODUCT WITH NEW OR REFURBISHED PARTS. IN NO EVENT SHALL HII BE LIABLE FOR INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, AND, IN NO EVENT, SHALL ANY LIABILITY OF HII ARISING IN CONNECTION WITH ANY PRODUCT SOLD HEREUNDER (WHETHER SUCH LIABILITY ARISES FROM A CLAIM BASED ON CONTRACT, WARRANTY, TORT, OR OTHERWISE) EXCEED THE ACTUAL AMOUNT PAID TO HII FOR THE PRODUCT. THESE LIMITATIONS ON LIA-

BILITY 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 limited duration of the warranty for the 3800i is for three (3) years.

The limited duration of the warranty for the 3800r is for five (5) years.

A Reference Charts

Symbology Chart

Symbology	AIM ID	Possible AIM ID Modifiers (*m*)	Code ID (hex)
All Symbologies			(0x99)
Australian Post	]X0		A (0x41)
Aztec Code	]z*m*	0-9, A-C	z (0x7A)
British Post	]X0		B (0x42)
Canadian Post	]X0		C (0x43)
China Post	]X0		Q (0x51)
Chinese Sensible Code (Han Xin Code)	]X0		H (0x48)
Codabar	]F*m*	0-1	a (0x61)
Codablock F	]O*m*	0, 1, 4, 5, 6	q (0x71)
Code 11	]H3		h (0x68)
Code 128	]C*m*	0, 1, 2, 4	j (0x6A)
Code 16K	]K*m*	0, 1, 2, 4	o (0x6F)
Code 32 Pharmaceutical (PARAF)	]X0		< (0x3C)
Code 39 (supports Full ASCII mode)	]A*m*	0, 1, 3, 4, 5, 7	b (0x62)
Code 49	]T*m*	0, 1, 2, 4	l (0x6C)
Code 93 and 93i	]G*m*	0-9, A-Z, a-m	i (0x69)
Data Matrix	]d*m*	0-6	w (0x77)
EAN-13 (including Bookland EAN)	]E0		d (0x64)
EAN-13 with Add-On	]E3		d (0x64)
EAN-13 with Extended Coupon Code	]E3		d (0x64)
EAN-8	]E4		D (0x44)
EAN-8 with Add-On	]E3		D (0x44)
GS1 Composite	]e*m*	0-3	y (0x79)
GS1 DataBar	]e*m*	0	y (0x79)
GS1-128	]C1		I (0x49)
Intelligent Mail Barcode	]X0		M (0x4D)
Interleaved 2 of 5	]I*m*	0, 1, 3	e (0x65)

Symbology	AIM ID	Possible AIM ID Modifiers (*m*)	Code ID (hex)
Japanese Post	]X0		J (0x4A)
KIX (Netherlands) Post	]X0		K (0x4B)
Korea Post	]X0		? (0x3F)
Matrix 2 of 5	]X0		m (0x6D)
MaxiCode	]U*m*	0-3	x (0x7 8)
MicroPDF417	]L*m*	3-5	R (0x52)
MSI	]M*m*	0	g (0x67)
OCR MICR (E 13 B)	]o3		O (0x4F)
OCR SEMI Font	]o3		O (0x4F)
OCR US Money Font	]o3		O (0x4F)
OCR-A	]o1		O (0x4F)
OCR-B	]o2		O (0x4F)
PDF417	]L*m*	0-2	r (0x72)
Planet Code	]X0		L (0x4C)
Plessey Code	]P0		n (0x6E)
PosiCode	]p*m*		W (0x57)
Postal-4i (UPU 4-State)	]X0		N (0x4E)
Postnet	]X0		P (0x50)
QR Code and Micro QR Code	]Q*m*	0-6	s (0x73)
Straight 2 of 5 IATA	]R*m*	0, 1, 3	f (0x66)
Straight 2 of 5 Industrial	]S0		f (0x66)
TCIF Linked Code 39 (TLC39)	]L2		T (0x54)
UPC-A	]E0		c (0x63)
UPC-A with Add-On	]E3		c (0x63)
UPC-A with Extended Coupon Code	]E3		c (0x63)
UPC-E	]E0		E (0x45)
UPC-E with Add-On	]E3		E (0x45)
UPC-E1 (obsolete)	]X0		E (0x45)

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

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

ASCII Conversion Chart (Code Page 1252)

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

Dec	Hex	Char	Dec	Hex	Char	Dec	Hex	Char	Dec	Hex	Char
0	00	NUL	32	20		64	40	@	96	60	‘
1	01	SOH	33	21	!	65	41	A	97	61	a
2	02	STX	34	22	“	66	42	B	98	62	b
3	03	ETX	35	23	#	67	43	C	99	63	c
4	04	EOT	36	24	$	68	44	D	100	64	d
5	05	ENQ	37	25	%	69	45	E	101	65	e
6	06	ACK	38	26	&	70	46	F	102	66	f
7	07	BEL	39	27	‘	71	47	G	103	67	g
8	08	BS	40	28	(	72	48	H	104	68	h
9	09	HT	41	29	)	73	49	I	105	69	i
10	0A	LF	42	2A	*	74	4A	J	106	6A	j
11	0B	VT	43	2B	+	75	4B	K	107	6B	k
12	0C	FF	44	2C	,	76	4C	L	108	6C	l
13	0D	CR	45	2D	-	77	4D	M	109	6D	m
14	0E	SO	46	2E	.	78	4E	N	110	6E	n
15	0F	SI	47	2F	/	79	4F	O	111	6F	o
16	10	DLE	48	30	0	80	50	P	112	70	p
17	11	DC1	49	31	1	81	51	Q	113	71	q
18	12	DC2	50	32	2	82	52	R	114	72	r
19	13	DC3	51	33	3	83	53	S	115	73	s
20	14	DC4	52	34	4	84	54	T	116	74	t
21	15	NAK	53	35	5	85	55	U	117	75	u
22	16	SYN	54	36	6	86	56	V	118	76	v
23	17	ETB	55	37	7	87	57	W	119	77	w
24	18	CAN	56	38	8	88	58	X	120	78	x
25	19	EM	57	39	9	89	59	Y	121	79	y
26	1A	SUB	58	3A	:	90	5A	Z	122	7A	z
27	1B	ESC	59	3B	;	91	5B	[	123	7B	{
28	1C	FS	60	3C	<	92	5C	\	124	7C	|
29	1D	GS	61	3D	=	93	5D	]	125	7D	}
30	1E	RS	62	3E	>	94	5E	^	126	7E	~
31	1F	US	63	3F	?	95	5F	_	127	7F	

Dec	Hex	Char	Dec	Hex	Char	Dec	Hex	Char	Dec	Hex	Char
128	80	€	160	A0		192	C0	À	224	E0	à
129	81	□	161	A1	¡	193	C1	Á	225	E1	á
130	82	‚	162	A2	¢	194	C2	Â	226	E2	â
131	83	*ƒ*	163	A3	£	195	C3	Ã	227	E3	ã
132	84	„	164	A4	¤	196	C4	Ä	228	E4	ä
133	85	…	165	A5	¥	197	C5	Å	229	E5	å
134	86	†	166	A6	¦	198	C6	Æ	230	E6	æ
135	87	‡	167	A7	§	199	C7	Ç	231	E7	ç
136	88	ˆ	168	A8	¨	200	C8	È	232	E8	è
137	89	‰	169	A9	©	201	C9	É	233	E9	é
138	8A	Š	170	AA	ª	202	CA	Ê	234	EA	ê
139	8B	‹	171	AB	«	203	CB	Ë	235	EB	ë
140	8C	Œ	172	AC	¬	204	CC	Ì	236	EC	ì
141	8D	□	173	AD	-	205	CD	Í	237	ED	í
142	8E	Ž	174	AE	®	206	CE	Î	238	EE	î
143	8F	□	175	AF	¯	207	CF	Ï	239	EF	ï
144	90	□	176	B0	°	208	D0	Ð	240	F0	ð
145	91	‘	177	B1	±	209	D1	Ñ	241	F1	ñ
146	92	’	178	B2	²	210	D2	Ò	242	F2	ò
147	93	“	179	B3	³	211	D3	Ó	243	F3	ó
148	94	”	180	B4	´	212	D4	Ô	244	F4	ô
149	95	•	181	B5	µ	213	D5	Õ	245	F5	õ
150	96	–	182	B6	¶	214	D6	Ö	246	F6	ö
151	97	—	183	B7	·	215	D7	×	247	F7	÷
152	98	˜	184	B8	¸	216	D8	Ø	248	F8	ø
153	99	™	185	B9	¹	217	D9	Ù	249	F9	ù
154	9A	š	186	BA	º	218	DA	Ú	250	FA	ú
155	9B	›	187	BB	»	219	DB	Û	251	FB	û
156	9C	œ	188	BC	¼	220	DC	Ü	252	FC	ü
157	9D	□	189	BD	½	221	DD	Ý	253	FD	ý
158	9E	ž	190	BE	¾	222	DE	Þ	254	FE	þ
159	9F	Ÿ	191	BF	¿	223	DF	ß	255	FF	ÿ

Code Page Mapping of Printed Bar Codes

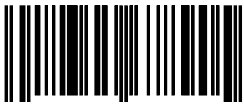
Code pages define the mapping of character codes to characters. If the data received does not display with the proper characters, it may be because the bar code being scanned was created using a code page that is different from the one the host program is expecting. If this is the case, select the code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

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

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

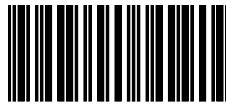
Sample Symbols

UPC-A



0 123456 7890

Interleaved 2 of 5

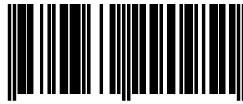


1234567890

Code 128

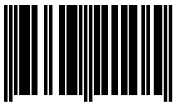
Code 128

EAN 13



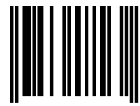
9 780330 290951

EAN 8



654 3210 5

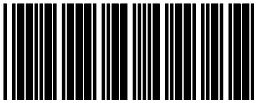
UPC-E



0 456123 8

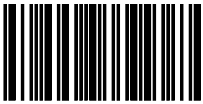
Sample Symbols

Code 39



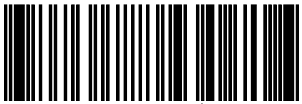
BC321

Codabar



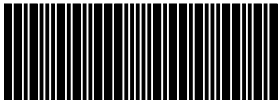
A13579B

Code 93



123456-9$

Straight 2 of 5 Industrial



123456

Matrix 2 of 5

6543210

RSS-14

(01)00123456789012

Programming Chart


0


1


2


3


4


5


6


7


8


9


A


B


C


D


E


F


Discard


Save

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**.

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