

**Honeywell**

# **Xenon™ 1500**

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Area-Imaging Scanner

## **User's Guide**

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# **Product Agency Compliance**

## **USA**

### **FCC Part 15 Subpart B Class B**

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

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

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

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

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. This unit has been tested with cables less than 3 meters. Cables greater than 3 meters may not meet class B performance.

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, 2nd Edition.

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## 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 réglementation canadienne**

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

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



**C-UL Statement**

C-UL listed: CSA C22.2 No.60950-1-07, 2nd Edition.

## Europe



The CE marking indicates compliance to 2004/108/EC EMC Directive with Standards EN55022 CLASS B, EN55024, EN61000-3-2, EN61000-3-3.

For further information please contact:

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

Honeywell International Inc. 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.

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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**



If your product is marked with the GS symbol, then the product has been issued a GS certificate showing compliance to EN 60950-1, Second Edition.

This device is not intended for use in direct field of view at visual display workplaces. To avoid distracting reflections at visual display workplaces, this device should not be placed in direct field of view.

## **Australia/NZ**

### **C-Tick Statement**



Conforms to AS/NZS 3548 EMC requirement

## **Japan**



VCCI: V-3, Technical Requirements, Class B ITE.

## **Russia**



Gost-R certificate

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## ***South Korea***



This product meets Korean agency approval.

## ***Taiwan***

If the following label is attached to your product, the product meets Taiwan agency approval:



BSMI Standard: CNS13438, CNS14336

依據標準 : CNS13438, CNS14336

## ***International***

### ***LED Safety Statement***

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

### ***CB Scheme***

Certified to CB Scheme IEC 60950-1, Second Edition.

## ***Patents***

For patent information, please refer to [www.honeywellaidc.com/patents](http://www.honeywellaidc.com/patents).

## ***Solids and Water Protection***

The Xenon 1500 has a rating of IP41, immunity of foreign particles and dripping water.

## ***Warning***

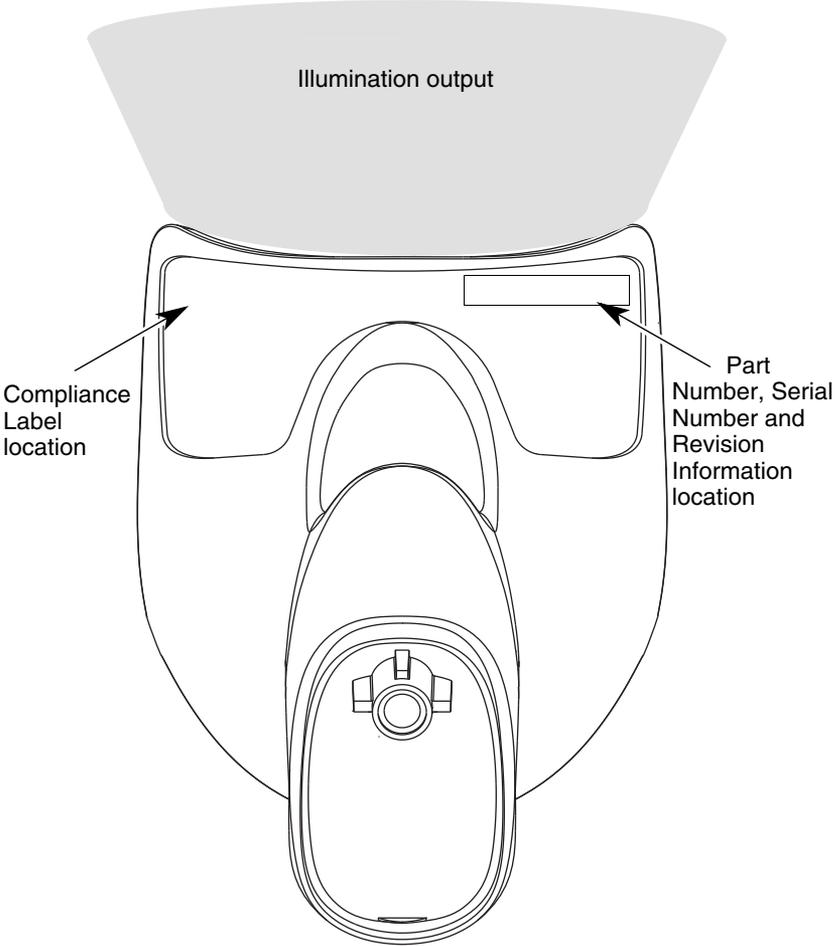


To reduce the possibility of heat-related injuries, avoid touching sections of the scanner that feel warm.

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# ***Required Safety Labels***

## ***Scanner***



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# Getting Started

## ***About This Manual***

This User's Guide provides installation and programming instructions for the Xenon™ 1500 area-imaging scanner. 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 Your Device***

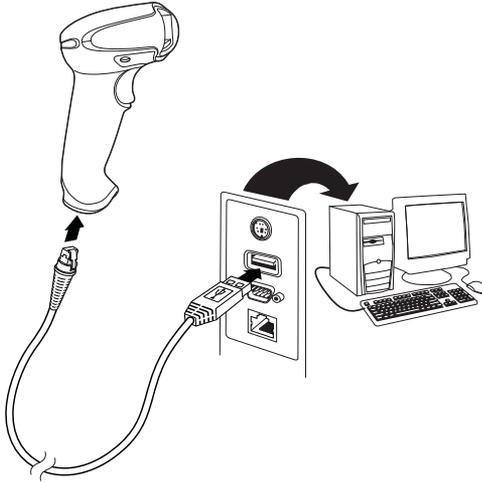
After you open the shipping carton containing the product, take the following steps:

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

---

## ***Connecting the Device with USB***

The scanner can be connected to the USB port of a computer. Connect the appropriate interface cable to the device first, then to the computer.

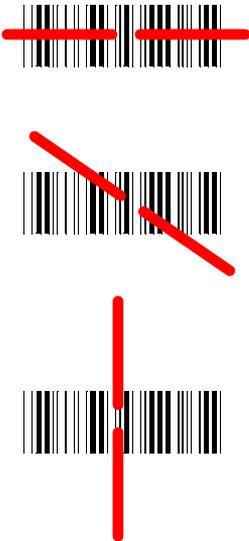


## ***Reading Techniques***

The scanner has a view finder that projects a bright red aiming beam that corresponds to the scanner's horizontal field of view. The aiming beam should be centered over the bar code, but it can be positioned in any direction for a good read.

---

Linear bar code



2D Matrix symbol



The aiming beam is smaller when the scanner is closer to the code and larger when it is farther from the code. Symbologies with smaller bars or elements (mil size) should be read closer to the unit. Symbologies with larger bars or elements (mil size) should be read farther from the unit. To read single or multiple symbols (on a page or on an object), hold the scanner at an appropriate distance from the target, pull the trigger, and center the aiming beam on the symbol. If the code being scanned is highly reflective (e.g., laminated), it may be necessary to tilt the code up 15° to 18° to prevent unwanted reflection.

## ***Setting Custom Defaults***

You have the ability to create a set of menu commands as your own, custom defaults. To do so, scan the **Set Custom Defaults** bar code below before scanning the menu commands for your custom defaults. If a menu command requires scanning numeric codes from the back cover, then a **Save** code, that

---

entire sequence will be saved to your custom defaults. When you have entered all the commands you want to save for your custom defaults, scan the **Save Custom Defaults** bar code.



MNUCDP.

**Set Custom Defaults**



MNUCDS.

**Save Custom Defaults**

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

## ***Resetting the Custom Defaults***

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



DEFAULT.

**Activate Custom Defaults**

---

## Resetting the Factory Defaults



*This selection erases all your settings and resets the scanner to the original factory defaults. It also disables all plugins.*

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



DEFOVR.

**Remove Custom Defaults**



DEFAULT.

**Activate Defaults**

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



## Introduction

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

## Programming the Interface - Plug and Play

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

### USB IBM SurePos

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

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



PAPSPH.

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



PAPSPT.

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

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

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

---

## **USB PC or Macintosh Keyboard**

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



PAPI24.

**USB Keyboard (PC)**



PAPI25.

**USB Keyboard (Mac)**



TRMUSB134.

**USB Japanese Keyboard (PC)**

## **USB HID**

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



PAPI31.

**USB HID Bar Code Scanner**

## **USB Serial**

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



TRMUSB130.

**USB Serial**

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

---

***CTS/RTS Emulation***



USBCTS1.  
**CTS/RTS Emulation On**



USBCTS0.  
**\* CTS/RTS Emulation Off**

***ACK/NAK Mode***



USBACK1.  
**ACK/NAK Mode On**



USBACK0.  
**\* ACK/NAK Mode Off**

---

## Keyboard Country Layout

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

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



KBDCTY0.  
**\* United States**



KBDCTY87.  
**United States (Dvorak)**



KBDCTY88.  
**United States (Dvorak left)**



KBDCTY89.  
**United States (Dvorak right)**



KBDCTY30.  
**United States (International)**



KBDCTY35.  
**Albania**



KBDCTY81.  
**Azeri (Cyrillic)**



KBDCTY80.  
**Azeri (Latin)**



KBDCTY82.  
**Belarus**



KBDCTY1.  
**Belgium**



KBDCTY33.  
**Bosnia**



KBDCTY16.  
**Brazil**

---

## Keyboard Country (continued)



KBDCTY52.  
Bulgaria (Cyrillic)



KBDCTY54.  
Canada (French legacy)



KBDCTY55.  
Canada (Multilingual)



KBDCTY15.  
Czech



KBDCTY39.  
Czech (QWERTY)



KBDCTY8.  
Denmark



KBDCTY59.  
Brazil (MS)



KBDCTY53.  
Bulgaria (Latin)



KBDCTY18.  
Canada (French)



KBDCTY32.  
Croatia



KBDCTY40.  
Czech (Programmers)



KBDCTY38.  
Czech (QWERTZ)



KBDCTY11.  
Dutch (Netherlands)

---

## **Keyboard Country (continued)**



**KBDCTY83.  
Faeroese**



**KBDCTY3.  
France**



**KBDCTY4.  
Germany**



**KBDCTY64.  
Greek (220 Latin)**



**KBDCTY65.  
Greek (319 Latin)**



**KBDCTY63.  
Greek (Latin)**



**KBDCTY41.  
Estonia**



**KBDCTY2.  
Finland**



**KBDCTY84.  
Gaelic**



**KBDCTY17.  
Greek**



**KBDCTY61.  
Greek (220)**



**KBDCTY62.  
Greek (319)**



**KBDCTY66.  
Greek (MS)**

---

## Keyboard Country (continued)



KBDCTY12.  
Hebrew



KBDCTY19.  
Hungary



KBDCTY73.  
Irish



KBDCTY5.  
Italy



KBDCTY78.  
Kazakh



KBDCTY14.  
Latin America



KBDCTY60.  
Greek (Polytonic)



KBDCTY50.  
Hungarian (101 key)



KBDCTY75.  
Iceland



KBDCTY56.  
Italian (142)



KBDCTY28.  
Japan ASCII



KBDCTY79.  
Kyrgyz (Cyrillic)



KBDCTY42.  
Latvia

---

## Keyboard Country (continued)



KBDCTY44.  
Lithuania



KBDCTY34.  
Macedonia



KBDCTY86.  
Mongolian (Cyrillic)



KBDCTY20.  
Poland



KBDCTY58.  
Polish (Programmers)



KBDCTY25.  
Romania



KBDCTY43.  
Latvia (QWERTY)



KBDCTY45.  
Lithuania (IBM)



KBDCTY74.  
Malta



KBDCTY9.  
Norway



KBDCTY57.  
Polish (214)



KBDCTY13.  
Portugal



KBDCTY26.  
Russia

---

## Keyboard Country (continued)



KBDCTY68.  
Russian (Typewriter)



KBDCTY37.  
Serbia (Cyrillic)



KBDCTY22.  
Slovakia



KBDCTY48.  
Slovakia (QWERTZ)



KBDCTY10.  
Spain



KBDCTY23.  
Sweden



KBDCTY67.  
Russian (MS)



KBDCTY21.  
SCS



KBDCTY36.  
Serbia (Latin)



KBDCTY49.  
Slovakia (QWERTY)



KBDCTY31.  
Slovenia



KBDCTY51.  
Spanish variation



KBDCTY29.  
Switzerland (French)

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## Keyboard Country (continued)



KBDCTY85.  
Tatar



KBDCTY24.  
Turkey Q



KBDCTY7.  
United Kingdom



KBDCTY88.  
United States (Dvorak left)



KBDCTY30.  
United States (International)



KBDCTY6.  
Switzerland (German)



KBDCTY27.  
Turkey F



KBDCTY76.  
Ukrainian



KBDCTY89.  
United States (Dvorak right)



KBDCTY87.  
United States (Dvorak)



KBDCTY77.  
Uzbek (Cyrillic)

## Keyboard Style

This programs keyboard styles, such as Caps Lock and Shift Lock. If you have used [Keyboard Conversion](#) settings, they will override any of the following Keyboard Style settings. *Default = Regular.*

---

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



KBDSTY0.

\* **Regular**

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



KBDSTY1.

**Caps Lock**

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



KBDSTY2.

**Shift Lock**

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



KBDSTY6.

**Automatic Caps Lock**

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



KBDSTY7.

**Autocaps via NumLock**

---

## Keyboard Conversion

Alphabetic keyboard characters can be forced to be all upper case or all lower-case. So if you have the following bar code: “abc569GK,” you can make the output “ABC569GK” by scanning **Convert All Characters to Upper Case**, or to “abc569gk” by scanning **Convert All Characters to Lower Case**.

These settings override [Keyboard Style](#) selections.

*Default = Keyboard Conversion Off.*



KBDCNV0.

\* **Keyboard Conversion Off**



KBDCNV1.

**Convert All Characters  
to Upper Case**



KBDCNV2.

**Convert All Characters  
to Lower Case**

## Control Character Output

This selection sends a text string instead of a control character. For example, when the control character for a carriage return is expected, the output would display [CR] instead of the ASCII code of 0D. Refer to [ASCII Conversion Chart \(Code Page 1252\)](#) on page A-4. Only codes 00 through 1F are converted (the first column of the chart).

*Note: Control + ASCII Mode overrides this mode.*

*Default = Off.*



KBDNPE1.

**Control Character Output On**



KBDNPE0.

\* **Control Character Output Off**

## Keyboard Modifiers

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

---

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

**Windows Mode Prefix/Suffix Off:** The scanner sends key combinations for ASCII control characters for values 00-1F, but it does not transmit any prefix or suffix information.

*Default = Control + ASCII Mode Off.*



KBDCAS2.

**Windows Mode Control + ASCII  
Mode On**



KBDCAS0.

**\* Control + ASCII Mode Off**



KBDCAS1.

**DOS Mode Control + ASCII Mode  
On**



KBDCAS3.

**Windows Mode Prefix/Suffix Off**

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



KBDTMD1.

**Turbo Mode On**



KBDTMD0.

**\* Turbo Mode Off**

---

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



KBDNPS1.

**Numeric Keypad Mode On**



KBDNPS0.

**\* Numeric Keypad Mode Off**

## Input/Output Settings

### Power Up Beeper

The scanner can be programmed to beep when it's powered up. Scan the **Off** bar code(s) if you don't want a power up beep. *Default = Power Up Beeper On - Scanner.*



BEPPWR0.

**Power Up Beeper Off**



BEPPWR1.

**\* Power Up Beeper On**

### Beep on BEL Character

You may wish to force the scanner to beep upon a command sent from the host. If you scan the **Beep on BEL On** bar code below, the scanner will beep every time a BEL character is received from the host. *Default = Beep on BEL Off.*



BELBEP0.

**\*Beep on BEL Off**



BELBEP1.

**Beep on BEL On**

### Trigger Click

To hear an audible click every time the scanner trigger is pressed, scan the **Trigger Click On** bar code below. Scan the **Trigger Click Off** code if you don't wish to hear the click. (This feature has no effect on serial or automatic triggering.) *Default = Trigger Click Off.*



BEPTRG0.

**\*Trigger Click Off**



BEPTRG1.

**Trigger Click On**

---

## Good Read and Error 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 = Beeper - Good Read On.*



BEPBEP0.

**Beeper - Good Read Off**



BEPBEP1.

**\* Beeper - Good Read On**

### Beeper Volume – Good Read

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



BEPLVL1.

**Low**



BEPLVL2.

**\* Medium**



BEPLVL3.

**High**



BEPLVL0.

**Off**

---

## ***Beeper Pitch – Good Read***

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



BEPFQ11600.  
Low (1600 Hz)



BEPFQ12700.  
\* Medium (2700 Hz)



BEPFQ14200.  
High (4200 Hz)

## ***Beeper Pitch – Error***

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



BEPFQ2250.  
\* Razz (250 Hz)



BEPFQ23250.  
Medium (3250 Hz)



BEPFQ24200.  
High (4200 Hz)

## ***Beeper Duration – Good Read***

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



BEPBIP0.  
\* Normal Beep



BEPBIP1.  
Short Beep

---

## **LED – Good Read**

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



BEPLED1.

\* LED - Good Read On



BEPLED0.

LED - Good Read 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 = 1.*



BEPRPT.

Number of Good Read Beeps/LED Flashes

## **Number of Beeps – Error**

The number of beeps and LED flashes emitted by the scanner for a bad read or error can be programmed from 1 - 9. For example, if you program this option to have five error beeps, there will be five error beeps and five LED flashes in response to an error. To change the number of error 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 = 1.*



BEPERR.

Number of Error Beeps/LED Flashes

---

## ***Good Read Delay***

This sets the minimum amount of time before the scanner can read another bar code. *Default = 0 ms (No Delay).*



DLYGRD0.

\* No Delay



DLYGRD500.

Short Delay (500 ms)



DLYGRD1000.

Medium Delay (1,000 ms)



DLYGRD1500.

Long Delay (1,500 ms)

## ***User-Specified Good Read Delay***

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



DLYGRD.

User-Specified Good Read Delay

## ***Manual Trigger Mode***

When in manual trigger mode, the scanner scans until a bar code is read, or until the trigger is released. *Default = Manual Trigger-Normal.*



PAPHHF.

\* Manual Trigger - Normal

## ***Serial Trigger Mode***

You can activate the scanner either by pressing the trigger, or using a serial trigger command (see [Trigger Commands](#) on page 9-4). When in serial mode, the scanner scans until a bar code has been read or until the deactivate command is sent. The scanner can also be set to turn itself off after a specified time has elapsed (see [Read Time-Out](#), which follows).

---

## ***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 on the [Programming Chart](#) inside the back cover, then scanning **Save**. *Default = 30,000 ms.*



TRGSTO.  
**Read Time-Out**

## ***Presentation Mode***

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



TRGMOD3.  
**Presentation Mode**

## ***Presentation LED Behavior after Decode***

When a scanner is in presentation mode, the LEDs dim 30 seconds after a bar code is decoded. If you wish to dim the LEDs immediately after a bar code is decoded, scan the **LEDs Off** bar code, below. *Default = LEDs On.*



TRGPCK1.  
**\* LEDs On**



TRGPCKD.  
**LEDs Off**

---

## **Presentation Sensitivity**

Presentation Sensitivity is a numeric range that increases or decreases the scanner's reaction time to bar code presentation. To set the sensitivity, scan the **Sensitivity** bar code, then scan the degree of sensitivity (from 0-20) from the inside back cover, and **Save**. 0 is the most sensitive setting, and 20 is the least sensitive. *Default = 1.*



TRGPMS.  
**Sensitivity**

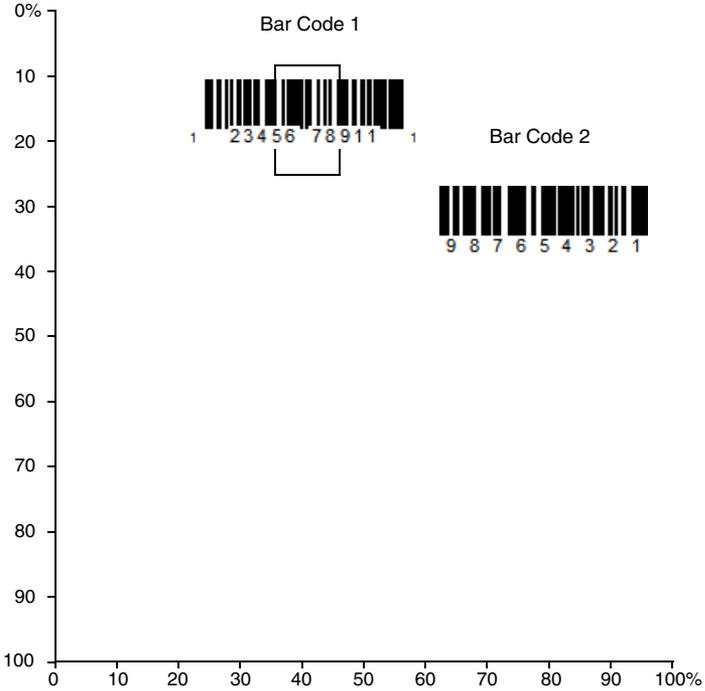
## **Presentation Centering**

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

*Note: To adjust centering when the scanner is hand-held, see [Centering](#) (page 3-12).*

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

In the example below, the white box is the centering window. The centering window has been set to 20% left, 30% right, 8% top, and 25% bottom. Since Bar Code 1 passes through the centering window, it will be read. Bar Code 2 does not pass through the centering window, so it will not be read.



*Note: A bar code needs only to be touched by the centering window in order to be read. It does not need to pass completely through the centering window.*

---

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



PDCWIN1.

**Presentation Centering On**



PDCTOP.

**Top of Presentation Centering Window**



PDCLFT.

**Left of Presentation Centering Window**



PDCWIND.

**\* Presentation Centering Off**



PDCBOT.

**Bottom of Presentation Centering Window**



PDCRGT.

**Right of Presentation Centering Window**

## ***Mobile Phone Read Mode***

When this mode is selected, your scanner is optimized to read bar codes from mobile phone or other LED displays. However, the speed of scanning printed bar codes may be slightly lower when this mode is enabled. You can enable Mobile Phone Reading for either a hand held device, or for a hands-free (presentation) application.



PAPHHC.

**Hand Held Scanning - Mobile Phone**

*Note: To turn off Mobil Phone Read Mode, scan a Manual or Serial Trigger Mode bar code (see page 3-5).*

---

## Hands Free Time-Out

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

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



TRGPTO.

Hands Free Time-Out

## Reread Delay

This sets the time period before the scanner can read the *same* bar code a second time. Setting a reread delay protects against accidental rereads of the same bar code. Longer delays are effective in minimizing accidental rereads. Use shorter delays in applications where repetitive bar code scanning is required. Reread Delay only works when in [Presentation Mode](#) (see page 3-6). *Default = Medium.*



DLYRRD500.

Short (500 ms)



DLYRRD750.

\* Medium (750 ms)



DLYRRD1000.

Long (1000 ms)



DLYRRD2000.

Extra Long (2000 ms)

---

## User-Specified Reread Delay

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



DLYRRD.

User-Specified Reread Delay

## Illumination Lights

If you want the illumination lights on while reading a bar code, scan the **Lights On** bar code, below. However, if you want to turn just the lights off, scan the **Lights Off** bar code. *Default = Lights On.*

*Note: This setting does not affect the aimer light. The aiming light can be set using [Aimer Mode](#) (page 3-12).*



SCNLED1.

\* Lights On



SCNLEDO.

Lights Off

## Aimer Delay

The aimer delay allows a delay time for the operator to aim the scanner before the picture is taken. Use these codes to set the time between when the trigger is pulled and when the picture is taken. During the delay time, the aiming light will appear, but the LEDs won't turn on until the delay time is over. *Default = Off.*



SCNDLY200.

200 milliseconds



SCNDLY400.

400 milliseconds



SCNDLY0.

\* Off (no delay)

---

## User-Specified Aimer 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 - 4,000 ms) from the [Programming Chart](#) inside the back cover of this manual, then scan **Save**.



SCNDLY.

**Delay Duration**

## Scanner Time-Out

Scanner Time-Out powers down the scanner after the unit has been idle for the specified time. To prevent the scanner from powering down, set this time-out to 0. Scan **Scanner Time-Out**, then set the time-out by scanning digits (from 0 - 999,999 ms) from the inside back cover, then scanning **Save**. *Default = 1 ms.*



SDRTIM.

**Scanner Time-Out**

## Aimer Mode

This feature allows you to turn the aimer on and off. When the Interlaced bar code is scanned, the aimer is interlaced with the illumination LEDs. *Default = Interlaced.*



SCNAIM0.

**Off**



SCNAIM2.

**\* Interlaced**

## Centering

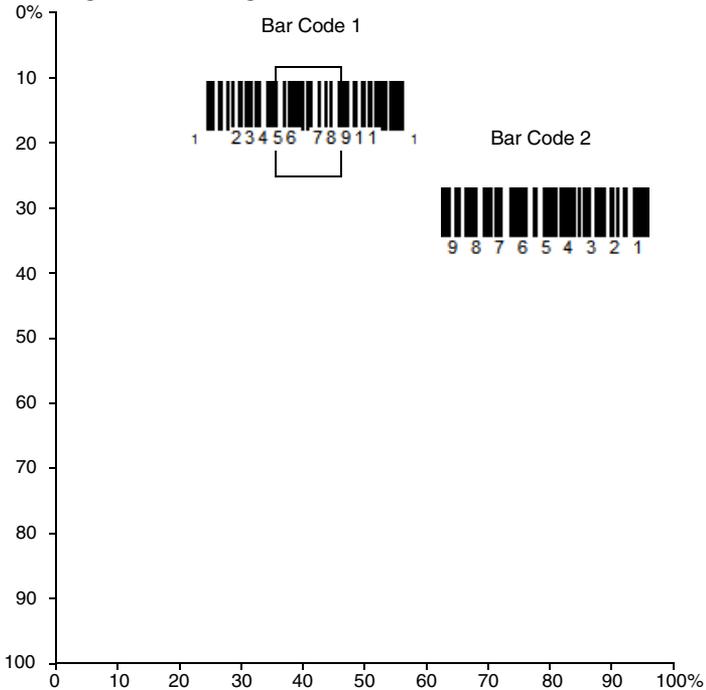
Use Centering to narrow the scanner's field of view to make sure that when the scanner is hand-held, it reads only those bar codes intended by the user. For instance, if multiple codes are placed closely together, centering will insure that only the desired codes are read. (Centering can be used in conjunction with [Aimer Delay](#), page 3-11, for the most error-free operation in applications where

multiple codes are spaced closely together. Using the Aimer Delay and Centering features, the scanner can emulate the operation of older systems, such as linear laser bar code scanners.)

*Note: To adjust centering when the scanner is in the stand, see [Presentation Centering](#) (page 3-7).*

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

In the example below, the white box is the centering window. The centering window has been set to 20% left, 30% right, 8% top, and 25% bottom. Since Bar Code 1 passes through the centering window, it will be read. Bar Code 2 does not pass through the centering window, so it will not be read.



*Note: A bar code needs only to be touched by the centering window in order to be read. It does not need to pass completely through the centering window.*

---

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



DECWIN1.  
**Centering On**



DECTOP.  
**Top of Centering Window**



DECLFT.  
**Left of Centering Window**



DECWIND.  
**\* Centering Off**



DECBOT.  
**Bottom of Centering Window**



DECRGT.  
**Right of Centering Window**

## No Read

With No Read turned **On**, the scanner notifies you if a code cannot be read. If using an EZConfig-Scanning Tool Scan Data Window (see page 8-3), an “NR” appears when a code cannot be read. If No Read is turned **Off**, the “NR” will not appear. *Default = Off.*



SHWNRD1.  
**On**



SHWNRD0.  
**\* Off**

If you want a different notation than “NR,” for example, “Error,” or “Bad Code,” you can edit the output message (see [Data Formatting](#) beginning on page 5-1). 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 **Video Reverse Off** bar code below is an example of this type of bar code. Scan **Video Reverse Only** to read *only* inverted bar codes. Scan **Video Reverse and Standard Bar Codes** to read both types of codes.

*Note: After scanning **Video Reverse Only**, menu bar codes cannot be read. You must scan **Video Reverse Off** or **Video Reverse and Standard Bar Codes** in order to read menu bar codes.*



VIDREV1.

**Video Reverse Only**



VIDREV2

**Video Reverse and Standard Bar Codes**



VIDREV0.

**\* Video Reverse Off**

## Working Orientation

Some bar codes are direction-sensitive. Use the working orientation settings if your direction-sensitive codes will not usually be presented upright to the scanner. *Default = Upright.*

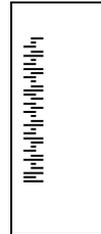
Upright:



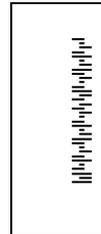
Upside Down:



Vertical, Top to Bottom:  
(Rotate CW 90°)



Vertical, Bottom to Top:  
(Rotate CCW 90°)



---

*Default = Upright.*



ROTATN0.

**\* Upright**



ROTATN2.

**Upside Down**



ROTATN1.

**Vertical, Bottom to Top**



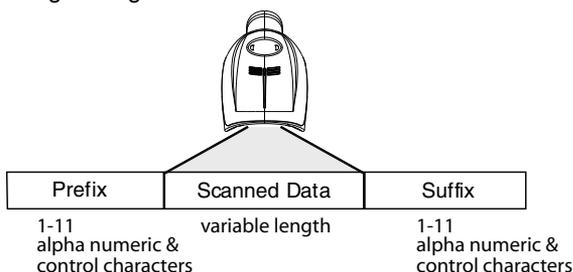
ROTATN3.

**Vertical, Top to Bottom**

## Prefix/Suffix Overview

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

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



## Points to Keep In Mind

- It is not necessary to build a message string. The selections in this chapter are only used if you wish to alter the default settings. *Default prefix = None. Default suffix = None.*
- A prefix or suffix may be added or cleared from one symbology or all symbologies.
- You can add any prefix or suffix from the [ASCII Conversion Chart \(Code Page 1252\)](#), beginning on page A-4, plus Code I.D. and AIM I.D.
- You can string together several entries for several symbologies at one time.
- Enter prefixes and suffixes in the order in which you want them to appear on the output.
- When setting up for specific symbologies (as opposed to all symbologies), the specific symbology ID value counts as an added prefix or suffix character.
- The maximum size of a prefix or suffix configuration is 200 characters, which includes header information.

## To Add a Prefix or Suffix:

- Step 1.** Scan the **Add Prefix** or **Add Suffix** symbol ([page 4-3](#)).
- Step 2.** Determine the 2 digit Hex value from the Symbology Chart (included in the [Symbology Chart](#), beginning on page A-1) 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 \(Code Page 1252\)](#), beginning on page A-4, 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 [Symbology Chart](#), beginning on page A-1) 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 \(Code Page 1252\)](#), beginning on page A-4, 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. If you have been entering prefixes and suffixes for single symbologies, you can use **Clear One Prefix (Suffix)** to delete a specific character from a symbology. 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 [Symbology Chart](#), beginning on page A-1) 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.



VSUFCR.  
**Add CR Suffix  
All Symbologies**

### ***Prefix Selections***



PREBK2.  
**Add Prefix**



PRECL2.  
**Clear One Prefix**



PRECA2.  
**Clear All Prefixes**

---

## ***Suffix Selections***



SUFBK2.  
**Add Suffix**



SUFCL2.  
**Clear One Suffix**



SUFCA2.  
**Clear All Suffixes**

## ***Function Code Transmit***

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



RMVFNC0.  
**\* Enable**



RMVFNC1.  
**Disable**

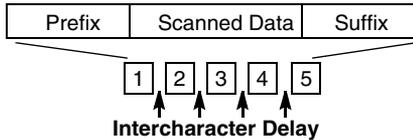
## ***Intercharacter, Interfunction, and Intermessage Delays***

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

---

## Intercharacter Delay

An intercharacter delay of up to 5000 milliseconds (in 5ms increments) may be placed between the transmission of each character of scanned data. Scan the **Intercharacter Delay** bar code below, then scan the number of 5ms delays, and the **Save** bar code using the [Programming Chart](#) inside the back cover of this manual.



DLYCHR.

Intercharacter Delay

To remove this delay, scan the **Intercharacter Delay** bar code, then set the number of delays 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 5000 milliseconds (in 5ms increments) 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 5ms delays, 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 \(Code Page 1252\)](#), beginning on page A-4.



DLYCRX.

Delay Length



DLY\_XX.

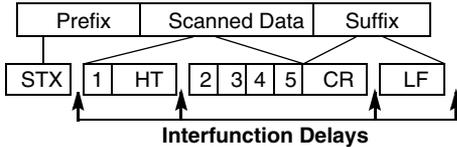
Character to Trigger Delay

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

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## Interfunction Delay

An interfunction delay of up to 5000 milliseconds (in 5ms increments) 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 5ms delays, and the **Save** bar code using the [Programming Chart](#) inside the back cover of this manual.



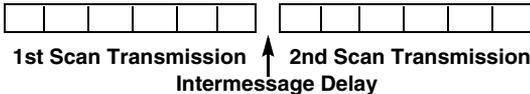
DLYFNC.

**Interfunction Delay**

To remove this delay, scan the **Interfunction Delay** bar code, then set the number of delays 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 5000 milliseconds (in 5ms increments) may be placed between each scan transmission. Scan the **Intermessage Delay** bar code below, then scan the number of 5ms delays, and the **Save** bar code using the [Programming Chart](#) inside the back cover of this manual.



DLYMSG.

**Intermessage Delay**

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

## Data Format Editor Introduction

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

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

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

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

The maximum size of a data format configuration is 2000 bytes, which includes header information.

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



DFMDF3.

\* Default Data Format

## Add a Data Format

**Step 1.** Scan the **Enter Data Format** symbol ([page 5-2](#)).

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

Determine if this will be your primary data format, or one of 3 alternate formats. This allows you to save a total of 4 different data formats. To program your primary format, scan **0** using the [Programming Chart](#) inside the back cover of this manual. If you are programming an alternate format, scan **1**, **2**, or **3**, depending on which alternate format

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you are programming. (See [Primary/Alternate Data Formats](#) on page 5-8 for further information.)

**Step 3. Terminal Type**

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

*Note: The wildcard for all terminal types is 099.*

**Step 4. Code I.D.**

In the [Symbology Chart](#), beginning on page A-1, 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 [Data Format Editor Commands](#) (page 5-4). Scan the symbols that represent the command you want to enter. 94 alphanumeric characters may be entered for each symbology data format.

**Step 7.** Scan **Save** to save your data format, or **Discard** to exit without saving your changes.



MNUSAV.

Save



DFMBK3.

Enter Data Format



MNUABT.

Discard

---

## Other Programming Selections

### Clear One Data Format

This deletes one data format for one symbology. If you are clearing the primary format, scan **0** from the [Programming Chart](#) inside the back cover of this manual. If you are clearing an alternate format, scan **1**, **2**, or **3**, depending on the format you are clearing. Scan the Terminal Type and Code I.D. (see [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.

### Clear all Data Formats

This clears all data formats.

**Save** to exit and save your data format changes.

**Discard** to exit without saving any data format changes.



DFMCL3.

**Clear One Data Format**



DFMCA3.

**Clear All Data Formats**



MNUSAV.

**Save**



MNUABT.

**Discard**

---

## Terminal ID Table

Terminal	Model(s)	Terminal ID
IBM	USB SurePOS Handheld Scanner	128
	USB SurePOS Tabletop Scanner	129
USB	Serial	130
	PC Keyboard	124
	Mac Keyboard	125
	Japanese Keyboard (PC)	134
	HID POS	131

## Data Format Editor Commands

### Send Commands

#### **Send all characters**

- F1 Include in the output message all of the characters from the input message, starting from current cursor position, followed by an insert character. *Syntax = F1xx* where xx stands for the insert character's hex value for its ASCII code.  
Refer to the [ASCII Conversion Chart \(Code Page 1252\)](#), beginning on page A-4 for decimal, hex and character codes.

#### **Send a number of characters**

- F2 Include in the output message a number of characters followed by an insert character. Start from the current cursor position and continue for "nn" characters or through the last character in the input message, followed by character "xx." *Syntax = F2nnxx* where nn stands for the numeric value (00-99) for the number of characters, and xx stands for the the insert character's hex value for its ASCII code.  
Refer to the [ASCII Conversion Chart \(Code Page 1252\)](#), beginning on page A-4 for decimal, hex and character codes.

#### **Send all characters up to a particular character**

- F3 Include in the output message all characters from the input message, starting with the character at the current cursor position and continuing to, but not including, the search character "ss," followed by an insert character. The cursor is moved forward to the "ss" character. *Syntax = F3ssxx* where ss stands for the search character's hex value for its ASCII code, and xx stands for the insert character's hex value for its ASCII code.  
Refer to the [ASCII Conversion Chart \(Code Page 1252\)](#), beginning on page A-4 for decimal, hex and character codes.

---

## ***Send all but the last characters***

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

## ***Insert a character multiple times***

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

## ***Move Commands***

### ***Move the cursor forward a number of characters***

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

### ***Move the cursor backward a number of characters***

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

### ***Move the cursor to the beginning***

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

### ***Move the cursor to the end***

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

## ***Search Commands***

### ***Search forward for a character***

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

---

### ***Search backward for a character***

- F9 Search the input message backward for “xx” character from the current cursor position, leaving the cursor pointing to the “xx” character. *Syntax = F9xx* where xx stands for the search character’s hex value for its ASCII code.  
Refer to the [ASCII Conversion Chart \(Code Page 1252\)](#), beginning on page A-4 for decimal, hex and character codes.

### ***Search forward for a non-matching character***

- E6 Search the input message forward for the first non-“xx” character from the current cursor position, leaving the cursor pointing to the non-“xx” character. *Syntax = E6xx* where xx stands for the search character’s hex value for its ASCII code.  
Refer to the [ASCII Conversion Chart \(Code Page 1252\)](#), beginning on page A-4 for decimal, hex and character codes.

### ***Search backward for a non-matching character***

- E7 Search the input message backward for the first non-“xx” character from the current cursor position, leaving the cursor pointing to the non-“xx” character. *Syntax = E7xx* where xx stands for the search character’s hex value for its ASCII code.  
Refer to the [ASCII Conversion Chart \(Code Page 1252\)](#), beginning on page A-4 for decimal, hex and character codes.

## ***Miscellaneous Commands***

### ***Suppress characters***

- FB Suppress all occurrences of up to 15 different characters, starting at the current cursor position, as the cursor is advanced by other commands. When the FC command is encountered, the suppress function is terminated. The cursor is not moved by the FB command.  
*Syntax = FBnnxxyy . .zz* where nn is a count of the number of suppressed characters in the list, and xxyy . .zz is the list of characters to be suppressed.

### ***Stop suppressing characters***

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

### ***Replace characters***

- E4 Replaces up to 15 characters in the output message, without moving the cursor. Replacement continues until the E5 command is encountered. *Syntax = E4nnxx<sub>1</sub>xx<sub>2</sub>yy<sub>1</sub>yy<sub>2</sub>...zz<sub>1</sub>zz<sub>2</sub>* where nn is the total count of of the number of characters in the list (characters to be replaced plus replacement characters); xx<sub>1</sub> defines characters to be replaced and xx<sub>2</sub> defines replacement characters, continuing through zz<sub>1</sub> and zz<sub>2</sub>.

---

## ***Stop replacing characters***

E5 Terminates character replacement. *Syntax = E5.*

## ***Compare characters***

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

## ***Check for a number***

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

## ***Check for non-numeric character***

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

## ***Insert a delay***

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

## ***Data Formatter***

When Data Formatter is turned Off, the bar code data is output to the host as read, including prefixes and suffixes.



DFM\_END.

**Data Formatter Off**

You may wish to require the data to conform to a data format you have created and saved. The following settings can be applied to your data format:

### **Data Formatter On, Not Required**

Scanned data is modified according to your data format. (Prefixes and suffixes are transmitted.)

### **Data Format Required**

Scanned data is modified according to your data format. (Prefixes and suffixes are transmitted.) Any data that does not match your data format requirements generates an error tone and the data in that bar code is not transmitted.

---

*Default = Data Formatter On, Not Required.*



DFM\_EN1.  
**\* Data Formatter On,  
Not Required**



DFM\_EN2.  
**Data Format Required**

## ***Primary/Alternate Data Formats***

You can save up to four data formats, and switch between these formats. Your primary data format is saved under **0**. Your other three formats are saved under **1, 2, and 3**. To set your device to use one of these formats, scan one of the bar codes below.



ALTFNM0.  
**Primary Data Format**



ALTFNM1.  
**Data Format 1**



ALTFNM2.  
**Data Format 2**



ALTFNM3.  
**Data Format 3**

# Symbologies

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

- All Symbologies
- Aztec Code
- China Post (Hong Kong 2 of 5)
- Chinese Sensible (Han Xin) Code
- Codabar
- Codablock A
- Codablock F
- Code 128
- Code 39
- Code 93
- Data Matrix
- EAN/JAN-13
- EAN/JAN-8
- GS1 Composite Codes
- GS1 DataBar Expanded
- GS1 DataBar Limited
- GS1 DataBar Omnidirectional
- GS1 Emulation
- GS1-128
- Interleaved 2 of 5
- Korea Post
- Matrix 2 of 5
- MicroPDF417
- MSI
- NEC 2 of 5
- Postal Codes - Linear
- PDF417
- GS1 DataBar Omnidirectional
- QR Code
- Straight 2 of 5 IATA (two-bar start/stop)
- Straight 2 of 5 Industrial (three-bar start/stop)
- TCIF Linked Code 39 (TLC39)
- UPC-A
- UPC-A/EAN-13 with Extended Coupon Code
- UPC-E0
- UPC-E1

---

## All Symbologies

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



ALLEN#1.

All Symbologies On



ALLEN#0.

All Symbologies Off

*Note: When All Symbologies On is scanned, 2D Postal Codes are not enabled. 2D Postal Codes must be enabled separately.*

## Message Length Description

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 tone. 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 = 09Max. length = 20

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



### Codabar Check Character

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

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

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

---

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



CBRCK20.

\* No Check Character



CBRCK21.

Validate Modulo 16, but  
Don't Transmit

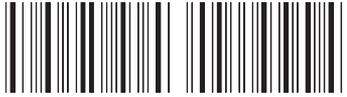


CBRCK22.

Validate Modulo 16  
and Transmit

### Codabar Concatenation

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



A 1 2 3 4 D D 5 6 7 8 A

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.



CBRCC1.

On



CBRCC0.

\* Off



CBRCC2.

Require

---

## ***Codabar Message Length***

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



CBRMIN.

**Minimum Message Length**



CBRMAX.

**Maximum Message Length**

---

## Code 39

< Default All Code 39 Settings >



### 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.*



### 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.*



C39CK20.

\* No Check Character



C39CK21.

Validate, but Don't Transmit



C39CK22.

Validate and Transmit

### Code 39 Message Length

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



C39MIN.

Minimum Message Length



C39MAX.

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 the scanner encounters a Code 39 bar code with the append trigger char-

acter(s), it buffers Code 39 bar codes until it reads a Code 39 bar code that does not have the append trigger. The data is then transmitted in the order in which the bar codes were read (FIFO). *Default = Off.*



C39APP1.  
On



C39APP0.  
\* 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.



C39ASCII.  
Full ASCII On



C39ASCII.  
\* 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 (see [Code Page Mapping of Printed Bar Codes](#) on page A-6), and scan the value and the **Save** bar code from the [Programming Chart](#) on the inside the back cover of this manual. The data characters should then appear properly.



C39DCP.  
Code 39 Code Page

---

## Interleaved 2 of 5

< Default All Interleaved 2 of 5 Settings >



### 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.*



---

## ***Interleaved 2 of 5 Message Length***

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



I25MIN.

**Minimum Message Length**



I25MAX.

**Maximum Message Length**

## ***NEC 2 of 5***

*< Default All NEC 2 of 5 Settings >*



N25DFT.

## ***NEC 2 of 5 On/Off***



N25ENA1.

\* On



N25ENA0.

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 NEC 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 NEC 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.*



N25CK20.

\* No Check Digit



N25CK21.

Validate, but Don't Transmit



N25CK22.

Validate and Transmit

## **NEC 2 of 5 Message Length**

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



N25MIN.

Minimum Message Length



N25MAX.

Maximum Message Length

---

## Code 93

< Default All Code 93 Settings >



C93DFT.

### Code 93 On/Off



C93ENA1.

\* On



C93ENAO.

Off

### Code 93 Message Length

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



C93MIN.

Minimum Message Length



C93MAX.

Maximum Message Length

### Code 93 Append

This function allows the scanner to append the data from several Code 93 bar codes together before transmitting them to the host computer. When this function is enabled, the scanner stores those Code 93 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 93 bar code that starts with a character other than a space. *Default = Off.*



C93APP1.  
On



C93APP0.  
\* Off

### **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 (see [Code Page Mapping of Printed Bar Codes](#) on page A-6), and scan the value and the **Save** bar code from the [Programming Chart](#) on the inside the back cover of this manual. The data characters should then appear properly.



C93DCP.  
Code 93 Code Page

---

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

*<Default All Straight 2 of 5 Industrial Settings>*



R25DFT.

### ***Straight 2 of 5 Industrial On/Off***



R25ENA1.

**On**



R25ENA0.

**\* Off**

### ***Straight 2 of 5 Industrial Message Length***

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



R25MIN.

**Minimum Message Length**



R25MAX.

**Maximum Message Length**

---

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

<Default All 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 Description](#) (page 6-2) for additional information. Minimum and Maximum lengths = 1-48. Minimum Default = 4, Maximum Default = 48.



---

## Matrix 2 of 5

<Default All Matrix 2 of 5 Settings>



X25DFT.

### Matrix 2 of 5 On/Off



X25ENA1.

On



X25ENA0.

\* Off

### Matrix 2 of 5 Message Length

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



X25MIN.

Minimum Message Length



X25MAX.

Maximum Message Length

---

## Code 128

<Default All Code 128 Settings>



128DFT.

### Code 128 On/Off



128ENA1.

\* On



128ENA0.

Off

### ISBT 128 Concatenation

In 1994 the International Society of Blood Transfusion (ISBT) ratified a standard for communicating critical blood information in a uniform manner. The use of ISBT formats requires a paid license. The ISBT 128 Application Specification describes 1) the critical data elements for labeling blood products, 2) the current recommendation to use Code 128 due to its high degree of security and its space-efficient design, 3) a variation of Code 128 that supports concatenation of neighboring symbols, and 4) the standard layout for bar codes on a blood product label. Use the bar codes below to turn concatenation on or off. *Default = Off.*



ISBENA1.

On



ISBENA0.

\* Off

---

## Code 128 Message Length

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



128MIN.

Minimum Message Length



128MAX.

Maximum Message Length

## Code 128 Append

This function allows the scanner to append the data from several Code 128 bar codes together before transmitting them to the host computer. When the scanner encounters a Code 128 bar code with the append trigger character(s), it buffers Code 128 bar codes until it reads a Code 128 bar code that does not have the append trigger. The data is then transmitted in the order in which the bar codes were read (FIFO). *Default = Off.*



128APP1.

On



128APP0.

\* Off

## 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 (see [Code Page Mapping of Printed Bar Codes](#) on page A-6), and scan the value and the **Save** bar code from the [Programming Chart](#) on the inside the back cover of this manual. The data characters should then appear properly.



128DCP.

Code 128 Code Page

---

## GS1-128

<Default All GS1-128 Settings>



GS1DFT.

### GS1-128 On/Off



GS1ENA1.

\* On



GS1ENA0.

Off

### GS1-128 Message Length

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



GS1MIN.

Minimum Message Length



GS1MAX.

Maximum Message Length

---

## UPC-A

<Default All UPC-A Settings>



UPAEFT.

### UPC-A On/Off



UPAENA1.

\* On



UPAENAO.

Off

### UPC-A Check Digit

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



UPACKX1.

\* On



UPACKXD.

Off

### UPC-A Number System

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



UPANSX1.

\* On



UPANSXD.

Off

---

## UPC-A Addenda

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



UPAAD21.  
**2 Digit Addenda On**



UPAAD20.  
**\* 2 Digit Addenda Off**



UPAAD51.  
**5 Digit Addenda On**



UPAAD50.  
**\* 5 Digit Addenda Off**

## UPC-A Addenda Required

When **Required** is scanned, the scanner will only read UPC-A bar codes that have addenda. You must then turn on a 2 or 5 digit addenda listed on [page 6-22](#). *Default = Not Required.*



UPAARQ1.  
**Required**



UPAARQ0.  
**\* Not Required**

## UPC-A Addenda Separator

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



UPAADS1.  
**\* On**



UPAADS0.  
**Off**

---

## **UPC-A/EAN-13**

### **with Extended Coupon Code**

Use the following codes to enable or disable UPC-A and EAN-13 with Extended Coupon Code. When left on the default setting (**Off**), the scanner treats Coupon Codes and Extended Coupon Codes as single bar codes.

If you scan the **Allow Concatenation** code, when the scanner sees the coupon code and the extended coupon code in a single scan, it transmits both as separate symbologies. Otherwise, it transmits the first coupon code it reads.

If you scan the **Require Concatenation** code, the scanner must see and read the coupon code and extended coupon code in a single read to transmit the data. No data is output unless both codes are read.

*Default = Off.*



CPNENAD.

\* Off



CPNENA1.

**Allow Concatenation**



CPNENA2.

**Require Concatenation**

## **Coupon GS1 DataBar Output**

If you scan coupons that have both UPC and GS1 DataBar codes, you may wish to scan and output only the data from the GS1 DataBar code. Scan the **GS1 Output On** code below to scan and output only the GS1 DataBar code data. *Default = GS1 Output Off.*



CPNGS10.

\* **GS1 Output Off**



CPNGS11.

**GS1 Output On**

---

## UPC-E0

<Default All UPC-E Settings>



UPEEDFT.

### UPC-E0 On/Off

Most U.P.C. bar codes lead with the 0 number system. To read these codes, use the **UPC-E0 On** selection. If you need to read codes that lead with the 1 number system, use [UPC-E1](#) (page 6-27). *Default = On.*



UPEEND01.

\* **UPC-E0 On**



UPEEND00.

**UPC-E0 Off**

### UPC-E0 Expand

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



UPEEXP1.

**On**



UPEEXP0.

\* **Off**

---

## UPC-E0 Addenda Required

When **Required** is scanned, the scanner will only read UPC-E bar codes that have addenda. *Default = Not Required.*



UPEARQ1.

**Required**



UPEARQ0.

**\* Not Required**

## UPC-E0 Addenda Separator

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



UPEADS1.

**\* On**



UPEADS0.

**Off**

## UPC-E0 Check Digit

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



UPECKX1.

**\* On**



UPECKX0.

**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. To prevent transmission, scan **Off**. *Default = On.*



UPENSX1.

\* On



UPENSX0.

Off

## **UPC-E0 Addenda**

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



UPEAD21.

2 Digit Addenda On



UPEAD20.

\* 2 Digit Addenda Off



UPEAD51.

5 Digit Addenda On



UPEAD50.

\* 5 Digit Addenda Off

---

## UPC-E1

Most U.P.C. bar codes lead with the 0 number system. For these codes, use **UPC-E0** (page 6-24). If you need to read codes that lead with the 1 number system, use the **UPC-E1 On** selection. *Default = Off.*



UPEEN11.  
UPC-E1 On



UPEEN10.  
\* UPC-E1 Off

## EAN/JAN-13

<Default All EAN/JAN Settings>



E13DFT.

### EAN/JAN-13 On/Off



E13ENA1.  
\* On



E13ENAD.  
Off

### EAN/JAN-13 Check Digit

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



E13CKX1.  
\* On



E13CKXD.  
Off

---

## ***EAN/JAN-13 Addenda***

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



E13AD21.  
**2 Digit Addenda On**



E13AD20.  
**\* 2 Digit Addenda Off**



E13AD51.  
**5 Digit Addenda On**



E13AD50.  
**\* 5 Digit Addenda Off**

## ***EAN/JAN-13 Addenda Required***

When **Required** is scanned, the scanner will only read EAN/JAN-13 bar codes that have addenda. *Default = Not Required.*



E13ARQ1.  
**Required**



E13ARQ0.  
**\* Not Required**

---

## ***EAN/JAN-13 Addenda Separator***

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



E13ADS1.

\* **On**



E13ADS0.

**Off**

*Note: If you want to enable or disable EAN13 with Extended Coupon Code, refer to [UPC-A/EAN-13 with Extended Coupon Code](#) (page 6-23).*

## ***ISBN Translate***

When **On** is scanned, EAN-13 Bookland symbols are translated into their equivalent ISBN number format. *Default = Off.*



E13ISB1.

**On**



E13ISB0.

\* **Off**

---

## **EAN/JAN-8**

*<Default All EAN/JAN-8 Settings>*



EA8DFT.

### **EAN/JAN-8 On/Off**



EA8ENA1.

\* On



EA8ENAD.

Off

### **EAN/JAN-8 Check Digit**

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



EA8CKX1.

\* On



EA8CKXD.

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 Addenda and 5 Digit Addenda.*



EABAD21.  
**2 Digit Addenda On**



EABAD20.  
**\* 2 Digit Addenda Off**



EABAD51.  
**5 Digit Addenda On**



EABAD50.  
**\* 5 Digit Addenda Off**

## ***EAN/JAN-8 Addenda Required***

When **Required** is scanned, the scanner will only read EAN/JAN-8 bar codes that have addenda. *Default = Not Required.*



EABARQ1.  
**Required**



EABARQ0.  
**\* Not Required**

## ***EAN/JAN-8 Addenda Separator***

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



EABADS1.  
**\* On**



EABADS0.  
**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 Type 10/11 and Transmit**, the scanner will only read MSI bar codes printed with the specified type check character(s), and will transmit the character(s) at the end of the scanned data.

---

When Check Character is set to **Validate Type 10/11, but Don't Transmit**, the unit will only read MSI bar codes printed with the specified type check character(s), but will not transmit the check character(s) with the scanned data.



MSICHK0.

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



MSICHK2.

**Validate 2 Type 10 Characters, but Don't Transmit**



MSICHK4.

**Validate Type 10 then Type 11 Character, but Don't Transmit**



MSICHK6.

**Disable MSI Check Characters**



MSICHK1.

**Validate Type 10 and Transmit**



MSICHK3.

**Validate 2 Type 10 Characters and Transmit**



MSICHK5.

**Validate Type 10 then Type 11 Character and Transmit**

## ***MSI Message Length***

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



MSIMIN.

**Minimum Message Length**



MSIMAX.

**Maximum Message Length**

---

## **GS1 DataBar Omnidirectional**

*< Default All GS1 DataBar Omnidirectional Settings >*



RSSDFT.

### **GS1 DataBar Omnidirectional On/Off**



RSSENA1.

\* On



RSSENA0.

Off

## **GS1 DataBar Limited**

*< Default All GS1 DataBar Limited Settings >*



RSLDFT.

### **GS1 DataBar Limited On/Off**



RSLENA1.

\* On



RSLENA0.

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 Description](#) (page 6-2) for additional information. Minimum and Maximum lengths = 4-74. Minimum Default = 4, Maximum Default = 74.



---

## Codablock A

<Default All Codablock A Settings>



### Codablock A On/Off



### Codablock A Message Length

Scan the bar codes below to change the message length. Refer to [Message Length Description](#) (page 6-2) for additional information. Minimum and Maximum lengths = 1-600. Minimum Default = 1, Maximum Default = 600.



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 Description](#) (page 6-2) for additional information. Minimum and Maximum lengths = 1-2048. Minimum Default = 1, Maximum Default = 2048.



---

# PDF417

< Default All PDF417 Settings >



PDFDFT.

## PDF417 On/Off



PDFENA1.

\* On



PDFENA0.

Off

## PDF417 Message Length

Scan the bar codes below to change the message length. Refer to [Message Length Description](#) (page 6-2) for additional information. Minimum and Maximum lengths = 1-2750. Minimum Default = 1, Maximum Default = 2750.



PDFMIN.

Minimum Message Length



PDFMAX.

Maximum Message Length

---

## **MacroPDF417**

MacroPDF417 is an implementation of PDF417 capable of encoding very large amounts of data into multiple PDF417 bar codes. When this selection is enabled, these multiple bar codes are assembled into a single data string.  
*Default = On.*



PDFMAC1.  
\* On



PDFMAC0.  
Off

## **MicroPDF417**

< Default All MicroPDF417 Settings >



MPDDFT.

## **MicroPDF417 On/Off**



MPDENA1.  
On



MPDENA0.  
\* Off

---

## MicroPDF417 Message Length

Scan the bar codes below to change the message length. Refer to [Message Length Description](#) (page 6-2) for additional information. Minimum and Maximum lengths = 1-366. Minimum Default = 1, Maximum Default = 366.



MPDMIN.  
Minimum Message Length



MPDMAX.  
Maximum Message Length

## GS1 Composite Codes

Linear codes are combined with a unique 2D composite component to form a new class called GS1 Composite symbology. GS1 Composite symbologies allow for the co-existence of symbologies already in use. *Default = Off.*



COMENA1.  
On



COMENAO.  
\* Off

## UPC/EAN Version

Scan the **UPC/EAN Version On** bar code to decode GS1 Composite symbols that have a U.P.C. or an EAN linear component. (This does not affect GS1 Composite symbols with a GS1-128 or GS1 linear component.)  
*Default = UPC/EAN Version Off.*



COMUPC1.  
UPC/EAN Version On



COMUPCO.  
\* UPC/EAN Version Off

*Note: If you scan coupons that have both UPC and GS1 DataBar codes, you may wish to scan and output only the data from the GS1 DataBar code. See [Coupon GS1 DataBar Output](#) (page 6-23) for further information.*

---

## GS1 Composite Code Message Length

Scan the bar codes below to change the message length. Refer to [Message Length Description](#) (page 6-2) for additional information. Minimum and Maximum lengths = 1-2435. Minimum Default = 1, Maximum Default = 2435.



COMMIN.

Minimum Message Length



COMMAX.

Maximum Message Length

## GS1 Emulation

The scanner can automatically format the output from any GS1 data carrier to emulate what would be encoded in an equivalent GS1-128 or GS1 DataBar symbol. GS1 data carriers include UPC-A and UPC-E, EAN-13 and EAN-8, ITF-14, GS1-128, and GS1-128 DataBar and 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 (U.P.C., 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 (U.P.C., 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, ]em (see [Symbology Chart](#) on page A-1).

If **GS1 Code Expansion Off** is scanned, retail code expansion is disabled, and UPC-E expansion is controlled by the [UPC-E0 Expand](#) (page 6-24) setting. If the AIM ID is enabled, the value will be the GS1-128 AIM ID, ]C1 (see [Symbology Chart](#) on page A-1).

If **EAN8 to EAN13 Conversion** is scanned, all EAN8 bar codes are converted to EAN13 format.

---

*Default = GS1 Emulation Off.*



EANEMU1.  
**GS1-128 Emulation**



EANEMU2.  
**GS1 DataBar Emulation**



EANEMU3.  
**GS1 Code Expansion Off**



EANEMU4.  
**EAN8 to EAN13 Conversion**



EANEMU0.  
**\* GS1 Emulation Off**

### ***TCIF Linked Code 39 (TLC39)***

This code is a composite code since it has a Code 39 linear component and a MicroPDF417 stacked code component. All bar code readers are capable of reading the Code 39 linear component. The MicroPDF417 component can only be decoded if **TLC39 On** is selected. The linear component may be decoded as Code 39 even if TLC39 is off. *Default = Off.*



T39ENA1.  
**On**



T39ENA0.  
**\* Off**

---

## QR Code

< Default All QR Code Settings >



### QR Code On/Off

This selection applies to both QR Code and Micro QR Code.



### QR Code Message Length

Scan the bar codes below to change the message length. Refer to [Message Length Description](#) (page 6-2) for additional information. Minimum and Maximum lengths = 1-7089. Minimum Default = 1, Maximum Default = 7089.



### QR Code Append

This function allows the scanner to append the data from several QR Code bar codes together before transmitting them to the host computer. When the scanner encounters an QR Code bar code with the append trigger character(s), it buffers the number of QR Code bar codes determined by

---

information encoded in those bar codes. Once the proper number of codes is reached, the data is output in the order specified in the bar codes.  
*Default = On.*



QRCAPP1.  
\* On



QRCAPP0.  
Off

## ***QR Code Page***

QR 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 (see [Code Page Mapping of Printed Bar Codes](#) on page A-6), and scan the value and the **Save** bar code from the [Programming Chart](#) on the inside the back cover of this manual. The data characters should then appear properly.



QRCDP.  
**QR Code Page**

---

## Data Matrix

< Default All Data Matrix Settings >



### Data Matrix On/Off



### Data Matrix Message Length

Scan the bar codes below to change the message length. Refer to [Message Length Description](#) (page 6-2) for additional information. Minimum and Maximum lengths = 1-3116. Minimum Default = 1, Maximum Default = 3116.



Minimum Message Length



Maximum Message Length

### Data Matrix Append

This function allows the scanner to append the data from several Data Matrix bar codes together before transmitting them to the host computer. When the scanner encounters an Data Matrix bar code with the append trigger character(s), it buffers the number of Data Matrix bar codes deter-

---

mined by information encoded in those bar codes. Once the proper number of codes is reached, the data is output in the order specified in the bar codes. *Default = On.*



IDMAPP1.  
\* On



IDMAPPO.  
Off

## Data Matrix Code Page

Data Matrix 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 (see [Code Page Mapping of Printed Bar Codes](#) on page A-6), and scan the value and the **Save** bar code from the [Programming Chart](#) on the inside the back cover of this manual. The data characters should then appear properly.



IDMDCP.  
Data Matrix Code Page

## Low Density Data Matrix

If you are reading low density Data Matrix codes (codes with little information), you can scan the **Low Density Codes On** bar code below. This setting improves scanner performance when reading these Data Matrix codes. *Default = Low Density Codes Off.*



IDMBST1.  
Low Density Codes On



IDMBST0.  
\* Low Density Codes Off

---

## Aztec Code

< Default All Aztec Code Settings >



### Aztec Code On/Off



### Aztec Code Message Length

Scan the bar codes below to change the message length. Refer to [Message Length Description](#) (page 6-2) for additional information. Minimum and Maximum lengths = 1-3832. Minimum Default = 1, Maximum Default = 3832.



### Aztec Append

This function allows the scanner to append the data from several Aztec bar codes together before transmitting them to the host computer. When the scanner encounters an Aztec bar code with the append trigger charac-

---

ter(s), it buffers the number of Aztec bar codes determined by information encoded in those bar codes. Once the proper number of codes is reached, the data is output in the order specified in the bar codes. *Default = Off.*



AZTAPP1.  
On



AZTAPP0.  
\* Off

## ***Aztec Code Page***

Aztec 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 (see [Code Page Mapping of Printed Bar Codes](#) on page A-6), and scan the value and the **Save** bar code from the [Programming Chart](#) on the inside the back cover of this manual. The data characters should then appear properly.



AZTDCP.  
**Aztec Code Page**

---

## Chinese Sensible (Han Xin) Code

< Default All Han Xin Settings >



### Han Xin Code On/Off



### Han Xin Code Message Length

Scan the bar codes below to change the message length. Refer to [Message Length Description](#) (page 6-2) for additional information. Minimum and Maximum lengths = 1-7833. Minimum Default = 1, Maximum Default = 7833.



## Postal Codes - Linear

The following lists linear postal codes. Any combination of linear postal code selections can be active at a time.

### China Post (Hong Kong 2 of 5)

<Default All China Post (Hong Kong 2 of 5) Settings>



---

## ***China Post (Hong Kong 2 of 5) On/Off***



CPCENA1.  
On



CPCENAD.  
\* Off

## ***China Post (Hong Kong 2 of 5) Message Length***

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



CPCMIN.  
Minimum Message Length



CPCMAX.  
Maximum Message Length

---

## **Korea Post**

*<Default All Korea Post Settings>*



### **Korea Post**



### **Korea Post Message Length**

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



### **Korea Post Check Digit**

This selection allows you to specify whether the check digit should be transmitted at the end of the scanned data. *Default = Don't Transmit.*





## 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 2-13](#) enable Control + ASCII mode.

Function Code	HEX/ASCII Value	Full ASCII “CTRL” +
NUL	00	@
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	^
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	[	ç	]	6	-
Denmark	8	\	9	6	-
Norway	8	\	9	6	-
Spain	[	\	]	6	-

---

## ***Supported Interface Keys***

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



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

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



PRECA2\_BK2995C80!

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

## ***Show Decoder Revision***

Scan the bar code below to output the decoder revision.



REV\_DR.

**Show Decoder Revision**

## ***Show Scan Driver Revision***

Scan the bar code below to output the scan driver revision. The scan driver controls image capture.



REV\_SD.

**Show Scan Driver Revision**

## ***Show Software Revision***

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



REVINF.

**Show Revision**

---

## Show Data Format

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



DFMBK3?  
Data Format Settings

## Test Menu

When you scan the Test Menu **On** code, then scan a programming code in this manual, the scanner displays the content of a programming code. The programming function will still occur, but in addition, the content of that programming code is output to the terminal.

*Note: This feature should not be used during normal scanner operation.*



TSTMNU1.  
On



TSTMNU0.  
\* Off

## TotalFreedom

TotalFreedom is an open system architecture that makes it possible for you create applications that reside on your scanner. Decoding apps and Data Formatting apps can be created using TotalFreedom. For further information about TotalFreedom, go to our website at [www.honeywellaidc.com](http://www.honeywellaidc.com).

---

## Application Plug-Ins (Apps)

Any apps that you are using can be turned off or on by scanning the following bar codes. You can enable and disable apps by scanning the **On** or **Off** bar code below. You can also scan the **List Apps** bar code to output a list of all your apps.



PLGFOE1.

\* **Formatting Apps On**



PLGFOE0.

**Formatting Apps Off**



PLGINF.

**List Apps**

*Note: You must reset your device in order for the apps setting to take effect.*

## EZConfig-Scanning Introduction

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

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

### **EZConfig-Scanning Operations**

The EZConfig-Scanning software performs the following operations:

#### **Scan Data**

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

---

## Configure

Configure displays the programming and configuration data of the scanner. The scanner's programming and configuration data is grouped into different categories. Each category is displayed as a tree item under the "Configure" tree node in the application explorer. When one of these tree nodes is clicked, the right-hand side is loaded with the parameters' form belonging to that particular category. The "Configure" tree option has all the programming and configuration parameters specified for a scanner. You can set or modify these parameters as required. You can later write the modified settings to the scanner, or save them to a dcf file.

## Installing EZConfig-Scanning from the Web

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

1. Access the Honeywell web site at [www.honeywellaidc.com](http://www.honeywellaidc.com)
2. Click on the **Resources** tab. Select **Software**.
3. Click on the dropdown for **Select Product Number**. Click on **1500**.
4. Click on the listing for **EZConfig-Scanning**.
5. When prompted, select **Save File**, and save the files to the **c:\windows\temp** directory.
6. Once you have finished downloading the file, exit the web site.
7. Using Explorer, go to the **c:\windows\temp** file.
8. Double click on the **Setup.exe** file. Follow the screen prompts to install the EZConfig-Scanning program.
9. If you've selected the defaults during installation, you can click on **Start Menu-All Programs-Honeywell-EZConfig-Scanning**.

# Serial Programming Commands

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

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

## Conventions

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

- parameter* A label representing the actual value you should send as part of a command.
- [*option*] An optional part of a command.
- {*Data*} Alternatives in a command.
- bold** Names of menus, menu commands, buttons, dialog boxes, and windows that appear on the screen.

## Menu Command Syntax

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

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

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

**:Name:** To send information to the scanner, use :Xenon: The default factory setting for a Xenon scanner is Xenon scanner. This setting is changed by using the BT\_NAM command, which accepts alphanumeric values. If the name is not known, a wildcard (\*) can be used :\*:

**Tag** A 3 character case-insensitive field that identifies the desired menu command group. For example, all RS232 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 RS232 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 (|) separates items in a list of non-continuous values.)

### **:Name: Field Usage (Optional)**

This command returns the query information from the scanner.

### **Tag Field Usage**

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

### **SubTag Field Usage**

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

### **Data Field Usage**

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

### **Concatenation of Multiple Commands**

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

### **Responses**

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

**ACK** Indicates a good command which has been processed.

**ENQ** Indicates an invalid Tag or SubTag command.

---

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

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

## ***Examples of Query Commands***

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

**Example:** 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:** 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:** 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:** 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 Trigger Mode by scanning a Manual Trigger Mode bar code ([page 3-5](#)), or by sending a serial menu command for triggering ([page 3-5](#)). 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 3-6 for a description, and the serial command on [page 9-11](#)).

## ***Resetting the Custom Defaults***

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



DEFAULT.

**Activate Custom Defaults**

The charts on the following pages list the factory default settings for each of the commands (indicated by an asterisk (\*) on the programming pages).

## Menu Commands

Selection	Setting <i>* Indicates default</i>	Serial Command <i># Indicates a numeric entry</i>	Page
<b>Product Default Settings</b>			
Setting Custom Defaults	Set Custom Defaults	MNUCDP	1-4
	Save Custom Defaults	MNUCDS	1-4
Resetting the Custom Defaults	Activate Custom Defaults	DEFAULT	1-4
Resetting the Factory Defaults	Remove Custom Defaults	DEFOVR	1-5
	Activate Defaults	DEFAULT	1-5
<b>Programming the Interface</b>			
Plug and Play Codes: IBM SurePos	USB IBM SurePos Handheld	PAPSPH	2-1
	USB IBM SurePos Tabletop	PAPSPT	2-1
Plug and Play Codes: USB	USB Keyboard (PC)	PAP124	2-2
	USB Keyboard (Mac)	PAP125	2-2
	USB Japanese Keyboard (PC)	TRMUSB134	2-2
	USB HID	PAP131	2-2
	USB Serial	TRMUSB130	2-2
	CTS/RTS Emulation On	USBCTS1	2-3
	CTS/RTS Emulation Off*	USBCTS0	2-3
	ACK/NAK Mode On	USBACK1	2-3
	ACK/NAK Mode Off*	USBACK0	2-3
Program Keyboard Country	*U.S.A.	KBDCTY0	2-4
	Albania	KBDCTY35	2-4
	Azeri (Cyrillic)	KBDCTY81	2-4
	Azeri (Latin)	KBDCTY80	2-4
	Belarus	KBDCTY82	2-4

<b>Selection</b>	<b>Setting</b> <i>* Indicates default</i>	<b>Serial Command</b> <i># Indicates a numeric entry</i>	<b>Page</b>
Program Keyboard Country	Belgium	KBDCTY1	2-4
	Bosnia	KBDCTY33	2-4
	Brazil	KBDCTY16	2-4
	Brazil (MS)	KBDCTY59	2-5
	Bulgaria (Cyrillic)	KBDCTY52	2-5
	Bulgaria (Latin)	KBDCTY53	2-5
	Canada (French legacy)	KBDCTY54	2-5
	Canada (French)	KBDCTY18	2-5
	Canada (Multilingual)	KBDCTY55	2-5
	Croatia	KBDCTY32	2-5
	Czech	KBDCTY15	2-5
	Czech (Programmers)	KBDCTY40	2-5
	Czech (QWERTY)	KBDCTY39	2-5
	Czech (QWERTZ)	KBDCTY38	2-5
	Denmark	KBDCTY8	2-5
	Dutch (Netherlands)	KBDCTY11	2-5
	Estonia	KBDCTY41	2-6
	Faeroese	KBDCTY83	2-6
	Finland	KBDCTY2	2-6
	France	KBDCTY3	2-6
	Gaelic	KBDCTY84	2-6
	Germany	KBDCTY4	2-6
	Greek	KBDCTY17	2-6
	Greek (220 Latin)	KBDCTY64	2-6
	Greek (220)	KBDCTY61	2-6
	Greek (319 Latin)	KBDCTY65	2-6
	Greek (319)	KBDCTY62	2-6
	Greek (Latin)	KBDCTY63	2-6
	Greek (MS)	KBDCTY66	2-6

<b>Selection</b>	<b>Setting</b> <i>* Indicates default</i>	<b>Serial Command</b> <i># Indicates a numeric entry</i>	<b>Page</b>
Program Keyboard Country	Greek (Polytonic)	KBDCTY60	<a href="#">2-7</a>
	Hebrew	KBDCTY12	<a href="#">2-7</a>
	Hungarian (101 key)	KBDCTY50	<a href="#">2-7</a>
	Hungary	KBDCTY19	<a href="#">2-7</a>
	Iceland	KBDCTY75	<a href="#">2-7</a>
	Irish	KBDCTY73	<a href="#">2-7</a>
	Italian (142)	KBDCTY56	<a href="#">2-7</a>
	Italy	KBDCTY5	<a href="#">2-7</a>
	Japan ASCII	KBDCTY28	<a href="#">2-7</a>
	Kazakh	KBDCTY78	<a href="#">2-7</a>
	Kyrgyz (Cyrillic)	KBDCTY79	<a href="#">2-7</a>
	Latin America	KBDCTY14	<a href="#">2-7</a>
	Latvia	KBDCTY42	<a href="#">2-7</a>
	Latvia (QWERTY)	KBDCTY43	<a href="#">2-8</a>
	Lithuania	KBDCTY44	<a href="#">2-8</a>
	Lithuania (IBM)	KBDCTY45	<a href="#">2-8</a>
	Macedonia	KBDCTY34	<a href="#">2-8</a>
	Malta	KBDCTY74	<a href="#">2-8</a>
	Mongolian (Cyrillic)	KBDCTY86	<a href="#">2-8</a>
	Norway	KBDCTY9	<a href="#">2-8</a>
	Poland	KBDCTY20	<a href="#">2-8</a>
	Polish (214)	KBDCTY57	<a href="#">2-8</a>
	Polish (Programmers)	KBDCTY58	<a href="#">2-8</a>
	Portugal	KBDCTY13	<a href="#">2-8</a>
	Romania	KBDCTY25	<a href="#">2-8</a>
	Russia	KBDCTY26	<a href="#">2-8</a>
	Russian (MS)	KBDCTY67	<a href="#">2-9</a>
	Russian (Typewriter)	KBDCTY68	<a href="#">2-9</a>
	SCS	KBDCTY21	<a href="#">2-9</a>
	Serbia (Cyrillic)	KBDCTY37	<a href="#">2-9</a>
Serbia (Latin)	KBDCTY36	<a href="#">2-9</a>	

<b>Selection</b>	<b>Setting</b> <i>* Indicates default</i>	<b>Serial Command</b> <i># Indicates a numeric entry</i>	<b>Page</b>
Program Keyboard Country	Slovakia	KBDCTY22	<a href="#">2-9</a>
	Slovakia (QWERTY)	KBDCTY49	<a href="#">2-9</a>
	Slovakia (QWERTZ)	KBDCTY48	<a href="#">2-9</a>
	Slovenia	KBDCTY31	<a href="#">2-9</a>
	Spain	KBDCTY10	<a href="#">2-9</a>
	Spanish variation	KBDCTY51	<a href="#">2-9</a>
	Sweden	KBDCTY23	<a href="#">2-9</a>
	Switzerland (French)	KBDCTY29	<a href="#">2-9</a>
	Switzerland (German)	KBDCTY6	<a href="#">2-10</a>
	Tatar	KBDCTY85	<a href="#">2-10</a>
	Turkey F	KBDCTY27	<a href="#">2-10</a>
	Turkey Q	KBDCTY24	<a href="#">2-10</a>
	Ukrainian	KBDCTY76	<a href="#">2-10</a>
	United Kingdom	KBDCTY7	<a href="#">2-10</a>
	United States (Dvorak right)	KBDCTY89	<a href="#">2-10</a>
	United States (Dvorak left)	KBDCTY88	<a href="#">2-10</a>
	United States (Dvorak)	KBDCTY87	<a href="#">2-10</a>
	United States (International)	KBDCTY30	<a href="#">2-10</a>
	Uzbek (Cyrillic)	KBDCTY77	<a href="#">2-10</a>
	Keyboard Conversion	*Keyboard Conversion Off	KBDCNV0
Convert all Characters to Upper Case		KBDCNV1	<a href="#">2-12</a>
Convert all Characters to Lower Case		KBDCNV1	<a href="#">2-12</a>

<b>Selection</b>	<b>Setting</b> <i>* Indicates default</i>	<b>Serial Command</b> <i># Indicates a numeric entry</i>	<b>Page</b>
Keyboard Style	*Regular	KBDSTY0	2-11
	Caps Lock	KBDSTY1	2-11
	Shift Lock	KBDSTY2	2-11
	Automatic Caps Lock	KBDSTY6	2-11
Control Character Output	*Control Character Output Off	KBDNPE0	2-12
	*Control Character Output On	KBDNPE1	2-12
Keyboard Modifiers	*Control + ASCII Off	KBDCAS0	2-13
	DOS Mode Control + ASCII	KBDCAS1	2-13
	Windows Mode Control + ASCII	KBDCAS2	2-13
	Windows Mode Prefix/Suffix Off	KBDCAS3	2-13
	*Turbo Mode Off	KBDTMD0	2-13
	Turbo Mode On	KBDTMD1	2-13
	*Numeric Keypad Off	KBDNPS0	2-14
	Numeric Keypad On	KBDNPS1	2-14
<b>Input/Output Selections</b>			
Power Up Beeper	Power Up Beeper Off	BEPPWR0	3-1
	*Power Up Beeper On	BEPPWR1	3-1
Beep on BEL Character	Beep on BEL On	BELBEP1	3-1
	*Beep on BEL Off	BELBEP0	3-1
Trigger Click	On	BEPTRG1	3-1
	*Off	BEPTRG0	3-1
Beeper - Good Read	Off	BEPBEP0	3-2
	*On	BEPBEP1	3-2

<b>Selection</b>	<b>Setting</b> <i>* Indicates default</i>	<b>Serial Command</b> <i># Indicates a numeric entry</i>	<b>Page</b>
Beeper Volume - Good Read	Off	BEPLVL0	3-2
	Low	BEPLVL1	3-2
	*Medium	BEPLVL2	3-2
	High	BEPLVL3	3-2
Beeper Pitch - Good Read (Frequency)	Low (1600) (min 400Hz)	BEPFQ11600	3-3
	*Medium 2700)	BEPFQ12700	3-3
	High (4200) (max 9000Hz)	BEPFQ14200	3-3
Beeper Pitch - Error (Frequency)	*Razz (250) (min 200Hz)	BEPFQ2800	3-3
	Medium (3250)	BEPFQ23250	3-3
	High (4200) (max 9000Hz)	BEPFQ24200	3-3
Beeper Duration - Good Read	*Normal Beep	BEPBIP0	3-3
	Short Beep	BEPBIP1	3-3
LED - Good Read	Off	BEPLED0	3-4
	*On	BEPLED1	3-4
Number of Beeps - Error	*1	BEPERR3	3-4
	Range 1 - 9	BEPERR#	3-4
Number of Beeps - Good Read	*1	BEPRPT1	3-4
	Range 1 - 9	BEPRPT#	3-4
Good Read Delay	*No Delay	DLYGRD0	3-5
	Short Delay (500 ms)	DLYGRD500	3-5
	Medium Delay (1000 ms)	DLYGRD1000	3-5
	Long Delay (1500 ms)	DLYGRD1500	3-5
User-Specified Good Read Delay	Range 0 - 30,000 ms	DLYGRD#####	3-5
Manual Trigger Mode	*Manual Trigger - Normal	PAPHHF	3-5

<b>Selection</b>	<b>Setting</b> <i>* Indicates default</i>	<b>Serial Command</b> <i># Indicates a numeric entry</i>	<b>Page</b>
Serial Trigger Mode	Read Time-Out (0 - 300,000 ms) *30,000	TRGSTO####	3-6
Presentation	Presentation Mode	TRGMOD3	3-6
Presentation LED Behavior After Decode	*LEDs On	TRGPCK1	3-6
	LEDs Off	TRGPCK0	3-6
Presentation Sensitivity	Range 0-20 (*1)	TRGPMS##	3-7
Presentation Centering Window	Presentation Centering On	PDCWIN1	3-9
	*Presentation Centering Off	PDCWIN0	3-9
	Left of Presentation Centering Window (*40%)	PDCLFT###	3-9
	Right of Presentation Centering Window (*60%)	PDCRGT###	3-9
	Top of Presentation Centering Window (*40%)	PDCTOP###	3-9
	Bottom of Presentation Centering Window (*60%)	PDCBOT###	3-9
Mobile Phone Read Mode	Hand Held Scanning - Mobile Phone	PAPHHC	3-9
Hands Free Time-Out	Range 0 - 300,000 ms	TRGPTO#####	3-10
Reread Delay	Short (500 ms)	DLYRRD500	3-10
	*Medium (750 ms)	DLYRRD750	3-10
	Long (1000 ms)	DLYRRD1000	3-10
	Extra Long (2000 ms)	DLYRRD2000	3-10

<b>Selection</b>	<b>Setting</b> <i>* Indicates default</i>	<b>Serial Command</b> <i># Indicates a numeric entry</i>	<b>Page</b>
User-Specified Reread Delay	Range 0 - 30,000 ms	DLYRRD#####	<a href="#">3-11</a>
Illumination Lights	*Lights On	SCNLED1	<a href="#">3-11</a>
	Lights Off	SCNLED0	<a href="#">3-11</a>
Aimer Delay	200 milliseconds	SCNDLY200	<a href="#">3-11</a>
	400 milliseconds	SCNDLY400	<a href="#">3-11</a>
	*Off (no delay)	SCNDLY0	<a href="#">3-11</a>
User-Specified Aimer Delay	Range 0 - 4,000 ms	SCNDLY####	<a href="#">3-12</a>
Scanner Time-Out	0 - 999,999 ms	SDRTIM####	<a href="#">3-12</a>
Aimer Mode	Off	SCNAIM0	<a href="#">3-12</a>
	*Interlaced	SCNAIM2	<a href="#">3-12</a>
Centering Window	Centering On	DECWIN1	<a href="#">3-14</a>
	*Centering Off	DECWIN0	<a href="#">3-14</a>
	Left of Centering Window (*40%)	DECLFT###	<a href="#">3-14</a>
	Right of Centering Window (*60%)	DECRGT###	<a href="#">3-14</a>
	Top of Centering Window (*40%)	DECTOP###	<a href="#">3-14</a>
	Bottom of Centering Window (*60%)	DECBOT###	<a href="#">3-14</a>
No Read	On	SHWNRD1	<a href="#">3-14</a>
	*Off	SHWNRD0	<a href="#">3-14</a>
Video Reverse	Video Reverse Only	VIDREV1	<a href="#">3-15</a>
	Video Reverse and Standard Bar Codes	VIDREV2	<a href="#">3-15</a>
	*Video Reverse Off	VIDREV0	<a href="#">3-15</a>

<b>Selection</b>	<b>Setting</b> <i>* Indicates default</i>	<b>Serial Command</b> <i># Indicates a numeric entry</i>	<b>Page</b>
Working Orientation	*Upright	ROTATN0	3-16
	Vertical, Bottom to Top (Rotate CCW 90°)	ROTATN1	3-16
	Upside Down	ROTATN2	3-16
	Vertical, Top to Bottom (Rotate CW 90°)	ROTATN3	3-16
<b>Prefix/Suffix Selections</b>			
Add CR Suffix to All Symbolologies		VSUFCR	4-3
Prefix	Add Prefix	PREBK2##	4-3
	Clear One Prefix	PRECL2	4-3
	Clear All Prefixes	PRECA2	4-3
Suffix	Add Suffix	SUFBK2##	4-4
	Clear One Suffix	SUFCL2	4-4
	Clear All Suffixes	SUFCA2	4-4
Function Code Transmit	*Enable	RMVFNC0	4-4
	Disable	RMVFNC1	4-4
Intercharacter Delay	Range 0 - 1000 (5ms increments)	DLYCHR##	4-5
User Specified Intercharacter Delay	Delay Length 0 - 1000 (5ms increments)	DLYCRX##	4-5
	Character to Trigger Delay	DLY_XX##	4-5
Interfunction Delay	Range 0 - 1000 (5ms increments)	DLYFNC##	4-6
Intermessage Delay	Range 0 - 1000 (5ms increments)	DLYMSG##	4-6

<b>Selection</b>	<b>Setting</b> <i>* Indicates default</i>	<b>Serial Command</b> <i># Indicates a numeric entry</i>	<b>Page</b>
<b>Data Formatter Selections</b>			
Data Format Editor	*Default Data Format (None)	DFMDF3	5-1
	Enter Data Format	DFMBK3##	5-2
	Clear One Data Format	DFMCL3	5-3
	Clear All Data Formats	DFMCA3	5-3
Data Formatter	Data Formatter Off	DFM_EN0	5-7
	*Data Formatter On, Not Required	DFM_EN1	5-8
	Data Format Required	DFM_EN2	5-8
Primary/Alternate Data Formats	Primary Data Format	ALTFNM0	5-8
	Data Format 1	ALTFNM1	5-8
	Data Format 2	ALTFNM2	5-8
	Data Format 3	ALTFNM3	5-8
<b>Symbologies</b>			
All Symbologies	All Symbologies Off	ALLENA0	6-2
	All Symbologies On	ALLENA1	6-2
Codabar	Default All Codabar Settings	CBRDFT	6-3
	Off	CBRENA0	6-3
	*On	CBRENA1	6-3
Codabar Start/Stop Char.	*Don't Transmit	CBRSSX0	6-3
	Transmit	CBRSSX1	6-3
Codabar Check Char.	*No Check Char.	CBRCK20	6-4
	Validate, But Don't Transmit	CBRCK21	6-4
	Validate, and Transmit	CBRCK22	6-4

<b>Selection</b>	<b>Setting</b> <i>* Indicates default</i>	<b>Serial Command</b> <i># Indicates a numeric entry</i>	<b>Page</b>
Codabar Concatenation	*Off	CBRCCT0	6-4
	On	CBRCCT1	6-4
	Require	CBRCCT2	6-4
Codabar Message Length	Minimum (2 - 60) *4	CBRMIN##	6-5
	Maximum (2 - 60) *60	CBRMAX##	6-5
Code 39	Default All Code 39 Settings	C39DFT	6-6
	Off	C39ENA0	6-6
	*On	C39ENA1	6-6
Code 39 Start/Stop Char.	*Don't Transmit	C39SSX0	6-6
	Transmit	C39SSX1	6-6
Code 39 Check Char.	*No Check Char.	C39CK20	6-7
	Validate, But Don't Transmit	C39CK21	6-7
	Validate, and Transmit	C39CK22	6-7
Code 39 Message Length	Minimum (0 - 48) *0	C39MIN##	6-7
	Maximum (0 - 48) *48	C39MAX##	6-7
Code 39 Append	*Off	C39APP0	6-8
	On	C39APP1	6-8
Code 39 Full ASCII	*Off	C39ASC0	6-9
	On	C39ASC1	6-9
	Code 39 Code Page	C39DCP	6-9
Interleaved 2 of 5	Default All Interleaved 2 of 5 Settings	I25DFT	6-10
	Off	I25ENA0	6-10
	*On	I25ENA1	6-10

<b>Selection</b>	<b>Setting</b> <i>* Indicates default</i>	<b>Serial Command</b> <i># Indicates a numeric entry</i>	<b>Page</b>
Interleaved 2 of 5 Check Digit	*No Check Char.	I25CK20	<a href="#">6-10</a>
	Validate, But Don't Transmit	I25CK21	<a href="#">6-10</a>
	Validate, and Transmit	I25CK22	<a href="#">6-10</a>
Interleaved 2 of 5 Message Length	Minimum (2 - 80) *4	I25MIN##	<a href="#">6-11</a>
	Maximum (2 - 80) *80	I25MAX##	<a href="#">6-11</a>
NEC 2 of 5	Default All NEC 2 of 5 Settings	N25DFT	<a href="#">6-11</a>
	Off	N25ENA0	<a href="#">6-11</a>
	*On	N25ENA1	<a href="#">6-11</a>
NEC 2 of 5 Check Digit	*No Check Char.	N25CK20	<a href="#">6-12</a>
	Validate, But Don't Transmit	N25CK21	<a href="#">6-12</a>
	Validate, and Transmit	N25CK22	<a href="#">6-12</a>
NEC 2 of 5 Message Length	Minimum (2 - 80) *4	N25MIN##	<a href="#">6-12</a>
	Maximum (2 - 80) *80	N25MAX##	<a href="#">6-12</a>
Code 93	Default All Code 93 Settings	C93DFT	<a href="#">6-13</a>
	Off	C93ENA0	<a href="#">6-13</a>
	*On	C93ENA1	<a href="#">6-15</a>
Code 93 Message Length	Minimum (0 - 80) *0	C93MIN##	<a href="#">6-13</a>
	Maximum (0 - 80) *80	C93MAX##	<a href="#">6-13</a>
Code 93 Append	On	C93APP1	<a href="#">6-14</a>
	*Off	C93APP0	<a href="#">6-14</a>
Code 93 Code Page	Code 93 Code Page	C93DCP	<a href="#">6-14</a>

<b>Selection</b>	<b>Setting</b> <i>* Indicates default</i>	<b>Serial Command</b> <i># Indicates a numeric entry</i>	<b>Page</b>
Straight 2 of 5 Industrial	Default All Straight 2 of 5 Industrial Settings	R25DFT	<a href="#">6-15</a>
	*Off	R25ENA0	<a href="#">6-15</a>
	On	R25ENA1	<a href="#">6-15</a>
Straight 2 of 5 Industrial Message Length	Minimum (1 - 48) *4	R25MIN##	<a href="#">6-15</a>
	Maximum (1 - 48) *48	R25MAX##	<a href="#">6-15</a>
Straight 2 of 5 IATA	Default All Straight 2 of 5 IATA Settings	A25DFT	<a href="#">6-16</a>
	*Off	A25ENA0	<a href="#">6-16</a>
	On	A25ENA1	<a href="#">6-16</a>
Straight 2 of 5 IATA Message Length	Minimum (1 - 48) *4	A25MIN##	<a href="#">6-16</a>
	Maximum (1 - 48) *48	A25MAX##	<a href="#">6-16</a>
Matrix 2 of 5	Default All Matrix 2 of 5 Settings	X25DFT	<a href="#">6-17</a>
	*Off	X25ENA0	<a href="#">6-17</a>
	On	X25ENA1	<a href="#">6-17</a>
Matrix 2 of 5 Message Length	Minimum (1 - 80) *4	X25MIN##	<a href="#">6-17</a>
	Maximum (1 - 80) *80	X25MAX##	<a href="#">6-17</a>
Code 128	Default All Code 128 Settings	128DFT	<a href="#">6-18</a>
	Off	128ENA0	<a href="#">6-18</a>
	*On	128ENA1	<a href="#">6-18</a>
ISBT Concatenation	*Off	ISBENA0	<a href="#">6-18</a>
	On	ISBENA1	<a href="#">6-18</a>
Code 128 Message Length	Minimum (0 - 80) *0	128MIN##	<a href="#">6-19</a>
	Maximum (0 - 80) *80	128MAX##	<a href="#">6-19</a>

<b>Selection</b>	<b>Setting</b> <i>* Indicates default</i>	<b>Serial Command</b> <i># Indicates a numeric entry</i>	<b>Page</b>
Code 128 Append	On	128APP1	6-18
	*Off	128APP0	6-19
Code 128 Code Page	Code 128 Code Page (*2)	128DCP##	6-19
GS1-128	Default All GS1-128 Settings	GS1DFT	6-20
	*On	GS1ENA1	6-20
	Off	GS1ENA0	6-20
GS1-128 Message Length	Minimum (1 - 80) *1	GS1MIN	6-20
	Maximum (0 - 80) *80	GS1MAX	6-20
UPC-A	Default All UPC-A Settings	UPADFT	6-21
	Off	UPAENA0	6-21
	*On	UPAENA1	6-21
UPC-A Check Digit	Off	UPACKX0	6-21
	*On	UPACKX1	6-21
UPC-A Number System	Off	UPANSX0	6-21
	*On	UPANSX1	6-21
UPC-A 2 Digit Addenda	*Off	UPAAD20	6-22
	On	UPAAD21	6-22
UPC-A 5 Digit Addenda	*Off	UPAAD50	6-22
	On	UPAAD51	6-22
UPC-A Addenda Required	*Not Required	UPAARQ0	6-22
	Required	UPAARQ1	6-22
UPC-A Addenda Separator	Off	UPAADS0	6-22
	*On	UPAADS1	6-22
UPC-A/EAN-13 with Extended Coupon Code	*Off	CPNENA0	6-23
	Allow Concatenation	CPNENA1	6-23
	Require Concatenation	CPNENA2	6-23
Coupon GS1 DataBar Output	GS1 Output Off	CPNGS10	6-23
	GS1 Output On	CPNGS11	6-23

<b>Selection</b>	<b>Setting</b> <i>* Indicates default</i>	<b>Serial Command</b> <i># Indicates a numeric entry</i>	<b>Page</b>
UPC-E0	Default All UPC-E Settings	UPEDFT	<a href="#">6-24</a>
	Off	UPEEN00	<a href="#">6-24</a>
	*On	UPEEN01	<a href="#">6-24</a>
UPC-E0 Expand	*Off	UPEEXP0	<a href="#">6-24</a>
	On	UPEEXP1	<a href="#">6-24</a>
UPC-E0 Addenda Required	Required	UPEARQ1	<a href="#">6-25</a>
	*Not Required	UPEARQ0	<a href="#">6-25</a>
UPC-E0 Addenda Separator	*On	UPEADS1	<a href="#">6-25</a>
	Off	UPEADS0	<a href="#">6-25</a>
UPC-E0 Check Digit	Off	UPECKX0	<a href="#">6-25</a>
	*On	UPECKX1	<a href="#">6-25</a>
UPC-E0 Number System	Off	UPENSX0	<a href="#">6-26</a>
	*On	UPENSX1	<a href="#">6-26</a>
UPC-E0 Addenda	2 Digit Addenda On	UPEAD21	<a href="#">6-26</a>
	*2 Digit Addenda Off	UPEAD20	<a href="#">6-26</a>
	5 Digit Addenda On	UPEAD51	<a href="#">6-26</a>
	*5 Digit Addenda Off	UPEAD50	<a href="#">6-26</a>
UPC-E1	*Off	UPEEN10	<a href="#">6-27</a>
	On	UPEEN11	<a href="#">6-27</a>
EAN/JAN-13	Default All EAN/JAN Settings	E13DFT	<a href="#">6-27</a>
	Off	E13ENA0	<a href="#">6-27</a>
	*On	E13ENA1	<a href="#">6-27</a>
EAN/JAN-13 Check Digit	Off	E13CKX0	<a href="#">6-27</a>
	*On	E13CKX1	<a href="#">6-27</a>
EAN/JAN-13 2 Digit Addenda	2 Digit Addenda On	E13AD21	<a href="#">6-28</a>
	*2 Digit Addenda Off	E13AD20	<a href="#">6-28</a>
	5 Digit Addenda On	E13AD51	<a href="#">6-28</a>
	*5 Digit Addenda Off	E13AD50	<a href="#">6-28</a>
EAN/JAN-13 Addenda Required	*Not Required	E13ARQ0	<a href="#">6-28</a>
	Required	E13ARQ1	<a href="#">6-28</a>

<b>Selection</b>	<b>Setting</b> <i>* Indicates default</i>	<b>Serial Command</b> <i># Indicates a numeric entry</i>	<b>Page</b>
EAN/JAN-13 Addenda Separator	Off	E13ADS0	<a href="#">6-29</a>
	*On	E13ADS1	<a href="#">6-29</a>
ISBN Translate	*Off	E13ISB0	<a href="#">6-29</a>
	On	E13ISB1	<a href="#">6-29</a>
EAN/JAN-8	Default All EAN/ JAN 8 Settings	EA8DFT	<a href="#">6-30</a>
	Off	EA8ENA0	<a href="#">6-30</a>
	*On	EA8ENA1	<a href="#">6-30</a>
EAN/JAN-8 Check Digit	Off	EA8CKX0	<a href="#">6-30</a>
	*On	EA8CKX1	<a href="#">6-30</a>
EAN/JAN-8 Addenda	*2 Digit Addenda Off	EA8AD20	<a href="#">6-31</a>
	2 Digit Addenda On	EA8AD21	<a href="#">6-31</a>
	*5 Digit Addenda Off	EA8AD50	<a href="#">6-31</a>
	5 Digit Addenda On	EA8AD51	<a href="#">6-31</a>
EAN/JAN-8 Addenda Required	*Not Required	EA8ARQ0	<a href="#">6-31</a>
	Required	EA8ARQ1	<a href="#">6-31</a>
EAN/JAN-8 Addenda Separator	Off	EA8ADS0	<a href="#">6-31</a>
	*On	EA8ADS1	<a href="#">6-31</a>
MSI	Default All MSI Settings	MSIDFT	<a href="#">6-32</a>
	*Off	MSIENA0	<a href="#">6-32</a>
	On	MSIENA1	<a href="#">6-32</a>

<b>Selection</b>	<b>Setting</b> <i>* Indicates default</i>	<b>Serial Command</b> <i># Indicates a numeric entry</i>	<b>Page</b>
MSI Check Character	*Validate Type 10, but Don't Transmit	MSICLK0	6-33
	Validate Type 10 and Transmit	MSICLK1	6-33
	Validate 2 Type 10 Chars, but Don't Transmit	MSICLK2	6-33
	Validate 2 Type 10 Chars and Transmit	MSICLK3	6-33
	Validate Type 10 then Type 11 Char, but Don't Transmit	MSICLK4	6-33
	Validate Type 10 then Type 11 Char and Transmit	MSICLK5	6-33
	Disable MSI Check Characters	MSICLK6	6-33
MSI Message Length	Minimum (4 - 48) *4	MSIMIN##	6-33
	Maximum (4 - 48) *48	MSIMAX##	6-33
GS1 DataBar Omnidirectional	Default All GS1 DataBar Omnidirectional Settings	RSSDFT	6-34
	Off	RSSENA0	6-34
	*On	RSSENA1	6-34
GS1 DataBar Limited	Default All GS1 DataBar Limited Settings	RSLDFT	6-34
	Off	RSLENA0	6-34
	*On	RSLENA1	6-34

<b>Selection</b>	<b>Setting</b> <i>* Indicates default</i>	<b>Serial Command</b> <i># Indicates a numeric entry</i>	<b>Page</b>
GS1 DataBar Expanded	Default All GS1 DataBar Expanded Settings	RSEDFT	<a href="#">6-35</a>
	Off	RSEENA0	<a href="#">6-35</a>
	*On	RSEENA1	<a href="#">6-35</a>
GS1 DataBar Expanded Msg. Length	Minimum (4 - 74) *4	RSEMIN##	<a href="#">6-35</a>
	Maximum (4 - 74) *74	RSEMAX##	<a href="#">6-35</a>
Codablock A	Default All Codablock A Settings	CBADFT	<a href="#">6-36</a>
	*Off	CBAENA0	<a href="#">6-36</a>
	On	CBAENA1	<a href="#">6-36</a>
Codablock A Msg. Length	Minimum (1 - 600) *1	CBAMIN####	<a href="#">6-36</a>
	Maximum (1 - 600) *600	CBAMAX####	<a href="#">6-36</a>
Codablock F	Default All Codablock F Settings	CBFDFT	<a href="#">6-36</a>
	*Off	CBFENA0	<a href="#">6-37</a>
	On	CBFENA1	<a href="#">6-37</a>
Codablock F Msg. Length	Minimum (1 - 2048) *1	CBFMIN####	<a href="#">6-37</a>
	Maximum (1 - 2048) *2048	CBFMAX####	<a href="#">6-37</a>
PDF417	Default All PDF417 Settings	PDFDFT	<a href="#">6-38</a>
	*On	PDFENA1	<a href="#">6-38</a>
	Off	PDFENA0	<a href="#">6-38</a>
PDF417 Msg. Length	Minimum (1-2750) *1	PDFMIN	<a href="#">6-38</a>
	Maximum (1-2750) *2750	PDFMAX	<a href="#">6-38</a>

<b>Selection</b>	<b>Setting</b> <i>* Indicates default</i>	<b>Serial Command</b> <i># Indicates a numeric entry</i>	<b>Page</b>
MacroPDF417	*On	PDFMAC1	6-39
	Off	PDFMAC0	6-39
MicroPDF417	Default All Micro PDF417 Settings	MPDDFT	6-39
	On	MPDENA1	6-39
	*Off	MPDENA0	6-39
MicroPDF417 Msg. Length	Minimum (1-366) *1	MPDMIN	6-40
	Maximum (1-366) *366	MPDMAX	6-40
GS1 Composite Codes	On	COMENA1	6-40
	*Off	COMENA0	6-40
UPC/EAN Version	On	COMUPC1	6-40
	*Off	COMUPC0	6-40
GS1 Composite Codes Msg. Length	Minimum (1-2435) *1	COMMIN	6-41
	Maximum (1-2435) *2435	COMMAX	6-41
GS1 Emulation	GS1-128 Emulation	EANEMU1	6-42
	GS1 DataBar Emulation	EANEMU2	6-42
	GS1 Code Expansion Off	EANEMU3	6-42
	EAN8 to EAN13 Conversion	EANEMU4	6-42
	*GS1 Emulation Off	EANEMU0	6-42
TCIF Linked Code 39	On	T39ENA1	6-42
	*Off	T39ENA0	6-42
QR Code	Default All QR Code Settings	QRCDFT	6-49
	*On	QRCENA1	6-43
	Off	QRCENA0	6-43

<b>Selection</b>	<b>Setting</b> <i>* Indicates default</i>	<b>Serial Command</b> <i># Indicates a numeric entry</i>	<b>Page</b>
QR Code Msg. Length	Minimum (1-7089) *1	QRCPMIN	6-43
	Maximum (1-7089) *7089	QRCPMAX	6-43
QR Code Append	*On	QRCPAPP1	6-44
	Off	QRCPAPP0	6-44
QR Code Page	QR Code Page (*3)	QRCDP##	6-44
Data Matrix	Default All Data Matrix Settings	IDMDFT	6-45
	*On	IDMENA1	6-45
	Off	IDMENA0	6-45
Data Matrix Msg. Length	Minimum (1-3116) *1	IDMMIN	6-45
	Maximum (1-3116) *3116	IDMMAX	6-45
Data Matrix Append	*On	IDMAPP1	6-46
	Off	IDMAPP0	6-46
Data Matrix Code Page	Data Matrix Code Page (*51)	IDMDCP##	6-46
Low Density Data Matrix	Low Density Codes On	IDMBST1	6-46
	*Low Density Codes Off	IDMBST0	6-46
Aztec Code	Default All Aztec Code Settings	AZTDFT	6-47
	*On	AZTENA1	6-47
	Off	AZTENA0	6-47
Aztec Code Msg. Length	Minimum (1-3832) *1	AZTMIN	6-47
	Maximum (1-3832) *3832	AZTMAX	6-47
Aztec Append	On	AZTAPP1	6-48
	*Off	AZTAPP0	6-48

<b>Selection</b>	<b>Setting</b> <i>* Indicates default</i>	<b>Serial Command</b> <i># Indicates a numeric entry</i>	<b>Page</b>
Aztec Code Page	Aztec Code Page (*51)	AZTDCP##	6-48
Chinese Sensible (Han Xin) Code	Default All Han Xin Code Settings	HX_DFT	6-49
	On	HX_ENA1	6-49
	*Off	HX_ENA0	6-49
Chinese Sensible (Han Xin) Code Msg. Length	Minimum (1-7833) *1	HX_MIN	6-49
	Maximum (1-7833) *7833	HX_MAX	6-49
<b><i>Postal Codes - Linear</i></b>			
China Post (Hong Kong 2 of 5)	Default All China Post (Hong Kong 2 of 5) Settings	CPCDFT	6-49
	*Off	CPCENA0	6-50
	On	CPCENA1	6-50
China Post (Hong Kong 2 of 5) Msg. Length	Minimum (2 - 80) *4	CPCMIN##	6-50
	Maximum (2 - 80) *80	CPCMAX##	6-50
Korea Post	Default All Korea Post Settings	KPCDFT	6-51
	*Off	KPCENA0	6-51
	On	KPCENA1	6-51
Korea Post Msg. Length	Minimum (2 - 80) *4	KPCMIN##	6-51
	Maximum (2 - 80) *48	KPCMAX##	6-51
Korea Post Check Digit	Transmit Check Digit	KPCCHK1	6-51
	*Don't Transmit Check Digit	KPCCHK0	6-51



**Xenon 1500 Scanner Product Specifications**

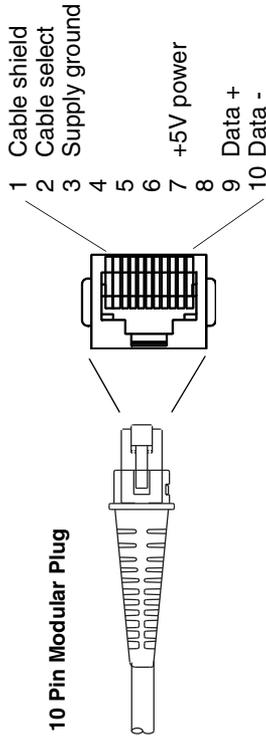
<b>Parameter</b>	<b>Specification</b>
Dimensions (Typical):	
Height	6.3 inches (16cm)
Length	4.1 inches (10.41cm)
Width	2.8 inches (7.11cm)
Weight	5.2 ounces (147.42g)
Illumination LED:	
Peak Wavelength	624nm $\pm$ 18nm IEC 62471: "Exempt risk group"
Aiming LED:	
Peak Wavelength	624nm $\pm$ 18nm IEC 62471: "Exempt risk group"
Output power	.339mW
Image Size	838 x 640 pixels
Skew Angle	$\pm 65^\circ$
Pitch Angle	$\pm 45^\circ$
Symbol Contrast	Grade 1.0 (20% or greater)
Voltage Requirements	4 - 5.5 VDC at input connector
Current Draw @5VDC	Scanning                      Standby 450mA, 2.3W                      90mA, .45W
Power Supply Noise Rejection	Maximum 100mV peak to peak, 10 to 100 kHz
Temperature Ranges:	
Operating	+32°F to +122°F (0°C to 50°C)
Storage	-40°F to +158°F (-40°C to 70°C)
Humidity	0 to 95% non-condensing
Mechanical Drop	Operational after 50 drops from 6 feet (1.83m) to concrete at 23°C
Vibration	Withstands 5G peak from 22 to 300 Hz
ESD Tolerance	Up to 15kV direct air Up to 8 kV indirect coupling plane

# Depth of Field Chart

Symbology		Typical Performance		Guaranteed Performance	
		Near Distance	Far Distance	Near Distance	Far Distance
5 mil Code 39	in.	.7	4.2	.8	4.1
	mm	17.8	106.7	20.3	104.1
13 mil UPC	in.	.5	10	.7	7.2
	mm	12.7	254	17.8	182.9
20 mil Code 39	in.	1	12	1	12
	mm	25.4	304.8	25.4	304.8
6.7 mil PDF417	in.	.5	4.5	.5	4.5
	mm	12.7	114.3	12.7	114.3
10 mil Data Matrix	in.	.5	5.5	.5	5.5
	mm	12.7	139.7	12.7	139.7
20 mil QR Code	in.	.8	9.5	.8	9.5
	mm	20.3	241.3	20.3	241.3
Resolution (1D Code 39)		3 mil (.076mm)		5 mil (.127mm)	
Resolution (2D Data Matrix)		5 mil (.127mm)		5 mil (.127mm)	

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## Standard USB Cable Pinout



**Note:** Pin assignments are not compatible with Honeywell legacy products.  
Use of a cable with improper pin assignments may lead to damage to the unit.  
Use of any cables not provided by the manufacturer may result in damage not covered by your warranty.



## Repairs

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

## Maintenance

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

### ***Cleaning the Scanner***

The scanner's housing may be cleaned with a soft cloth or tissue dampened with water (or a mild detergent-water solution.) If a detergent solution is used, rinse with a clean tissue dampened with water only.



#### **Caution:**

**Do not submerge the scanner in water. The scanner's housing is not watertight.**

**Do not use abrasive wipes or tissues on the scanner's window – abrasive wipes may scratch the window. Never use solvents (e.g., acetone) on the housing or window – solvents may damage the finish or the window.**

### ***Cleaning the 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 one of the cleaning solutions listed for [Health Care Housing](#), below.

### ***Health Care Housing***

Some configurations of Xenon scanners are available with an external plastic housing that is designed to resist the effects of harsh chemicals in a health care environment. The plastic is crystalline in nature, which helps prevent chemicals from seeping through the housing.

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**Important!** The following cleaning solutions have been tested to assure safe cleaning of your scanner's disinfectant-ready housing. They are the only solutions approved for use with these scanners. Damage caused by the use of cleaners other than those listed below may not be covered by the warranty.

- Sani-Cloth<sup>®</sup> HB wipes
- Sani-Cloth<sup>®</sup> Plus wipes
- Super Sani-Cloth<sup>®</sup> wipes
- Isopropyl Alcohol wipes (70%)
- CaviWipes<sup>™</sup>
- Virex<sup>®</sup> 256
- 409<sup>®</sup> Glass and Surface Cleaner
- Windex<sup>®</sup> Blue
- Clorox<sup>®</sup> Bleach – 10%
- Gentle dish soap and water

### ***Inspecting Cords and Connectors***

Inspect the 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 distributor for information about cable replacement. Cable replacement instructions are on [page 11-2](#).

### ***Replacing Cables in Corded Scanners***

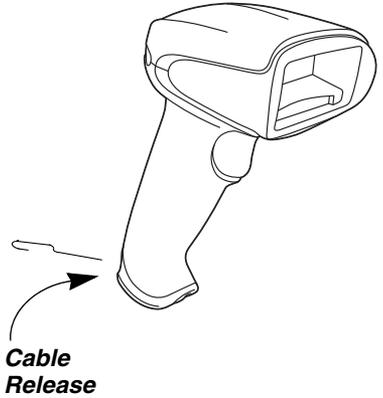
The standard interface cable is attached to the scanner with an 10-pin modular connector. When properly seated, the connector is held in the scanner's handle by a flexible retention tab. The interface cable is designed to be field replaceable.

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

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## ***Replacing an 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 back of the scanner's handle. This is the cable release.
4. Straighten one end of a paper clip.
5. Insert the end of the paper clip into the small hole and press in. This depresses the retention tab, releasing the connector. Pull the connector out while maintaining pressure on the paper clip, then remove the paper clip.
6. Replace with the new cable.  
Insert the connector into the opening and press firmly. The connector is keyed to go in only one way, and will click into place.



## ***Troubleshooting a Xenon Scanner***

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

### ***Is the power on? Is the aiming beam on?***

If the aiming beam 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

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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 bar code. See [Programming the Interface](#) beginning on page 2-1.

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

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

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

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

If you aren't sure what programming options have been set in the scanner, or if you want the factory default settings restored, refer to [Resetting the Factory Defaults](#) on page 1-5.

## 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](mailto:hsmnasupport@honeywell.com)

### Latin America

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

### Brazil

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

### Mexico

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

### Hong Kong

Telephone: +852-29536436  
Fax: +852-2511-3557  
E-mail: [aptechsupport@honeywell.com](mailto:aptechsupport@honeywell.com)

### Singapore

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### Japan

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Fax: +81-3-6730-7222  
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## **Online Technical Assistance**

You can also access technical assistance online at [www.honeywellaidc.com](http://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](mailto:hsmnaservice@honeywell.com)*

### **Latin America**

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

### **Brazil**

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

### **Mexico**

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

### **Hong Kong**

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Fax: +852-2511-3557  
*E-mail: [apservice@honeywell.com](mailto:apservice@honeywell.com)*

### **Singapore**

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Fax: +65-6842-7166  
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### **China**

Telephone: +86 800 828 2803  
Fax: +86-512-6762-2560  
*E-mail: [apservice@honeywell.com](mailto:apservice@honeywell.com)*

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## Japan

Telephone: +81-3-6730-7344

Fax: +81-3-6730-7222

E-mail: [apservice@honeywell.com](mailto:apservice@honeywell.com)

## **Online Product Service and Repair Assistance**

You can also access product service and repair assistance online at [www.honeywellaidc.com](http://www.honeywellaidc.com).

## **Limited Warranty**

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

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

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

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

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HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH INJURIES, LOSSES, OR DAMAGES. SOME STATES, PROVINCES, OR COUNTRIES DO NOT ALLOW THE EXCLUSION OR LIMITATIONS OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

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

The duration of the limited warranty for the Xenon 1500 scanner is five (5) years.

## Symbology Chart

Symbology	AIM ID	Possible AIM ID Modifiers ( <i>m</i> )	Code ID (hex)
<i>All Symbologies</i>			(0x99)
Australian Post	]X0		A (0x41)
Aztec Code	]zm	0-9, A-C	z (0x7A)
Batch Mode Quantity			5 (0x35)
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 <i>m</i>	0-1	a (0x61)
Codablock A	]O6	0, 1, 4, 5, 6	V (0x56)
Codablock F	]O <i>m</i>	0, 1, 4, 5, 6	q (0x71)
Code 11	]H3		h (0x68)
Code 128	]C <i>m</i>	0, 1, 2, 4	j (0x6A)
GS1-128	]C1		l (0x49)
Code 32 Pharmaceutical (PARAF)	]X0		< (0x3C)
Code 39 (supports Full ASCII mode)	]A <i>m</i>	0, 1, 3, 4, 5, 7	b (0x62)
Code 49	]T <i>m</i>	0, 1, 2, 4	l (0x6C)
Code 93 and 93i	]G <i>m</i>	0-9, A-Z, a-m	i (0x69)
Data Matrix	]d <i>m</i>	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)

<b>Symbology</b>	<b>AIM ID</b>	<b>Possible AIM ID Modifiers (m)</b>	<b>Code ID (hex)</b>
EAN-8 with Add-On	]E3		D (0x44)
GS1 Composite	]em	0-3	y (0x79)
GS1 DataBar	]em	0	y (0x79)
GS1 DataBar Limited	]em		{ (0x7B)
GS1 DataBar Omnidirectional	]em		y (0x79)
GS1 DataBar Expanded	]em		} (0x7D)
InfoMail	]X0		, (0x2c)
Intelligent Mail Bar Code	]X0		M (0x4D)
Interleaved 2 of 5	]Im	0, 1, 3	e (0x65)
Japanese Post	]X0		J (0x4A)
KIX (Netherlands) Post	]X0		K (0x4B)
Korea Post	]X0		? (0x3F)
Matrix 2 of 5	]X0		m (0x6D)
MaxiCode	]Um	0-3	x (0x7 8)
MicroPDF417	]Lm	3-5	R (0x52)
MSI	]Mm	0	g (0x67)
NEC 2 of 5	]X0		Y (0x59)
OCR MICR (E 13 B)	]o3		O (0x4F)
OCR SEMI Font	]o3		O (0x4F)
OCR-A	]o1		O (0x4F)
OCR-B	]o2		O (0x4F)
PDF417	]Lm	0-2	r (0x72)
Planet Code	]X0		L (0x4C)
Postal-4i	]X0		N (0x4E)
Postnet	]X0		P (0x50)
QR Code and Micro QR Code	]Qm	0-6	s (0x73)
Straight 2 of 5 IATA	]Rm	0, 1, 3	f (0x66)
Straight 2 of 5 Industrial	]S0		f (0x66)

Symbology	AIM ID	Possible AIM ID Modifiers (m)	Code ID (hex)
TCIF Linked Code 39 (TLC39)	]L2		T (0x54)
Telepen	]Bm		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	]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.*

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

## ASCII Conversion Chart (Code Page 1252)

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

Non-Printable Characters					
DEC	HEX	Character (Code)	DEC	HEX	Character (Code)
0	0	NULL	16	10	DATA LINK ESCAPE (DLE)
1	1	START OF HEADING (SOH)	17	11	DEVICE CONTROL 1 (DC1)
2	2	START OF TEXT (STX)	18	12	DEVICE CONTROL 2 (DC2)
3	3	END OF TEXT (ETX)	19	13	DEVICE CONTROL 3 (DC3)
4	4	END OF TRANSMISSION (EOT)	20	14	DEVICE CONTROL 4 (DC4)
5	5	END OF QUERY (ENQ)	21	15	NEGATIVE ACKNOWLEDGEMENT (NAK)
6	6	ACKNOWLEDGE (ACK)	22	16	SYNCHRONIZE (SYN)
7	7	BEEP (BEL)	23	17	END OF TRANSMISSION BLOCK (ETB)
8	8	BACKSPACE (BS)	24	18	CANCEL (CAN)
9	9	HORIZONTAL TAB (HT)	25	19	END OF MEDIUM (EM)
10	A	LINE FEED (LF)	26	1A	SUBSTITUTE (SUB)
11	B	VERTICAL TAB (VT)	27	1B	ESCAPE (ESC)
12	C	FF (FORM FEED)	28	1C	FILE SEPARATOR (FS) RIGHT ARROW
13	D	CR (CARRIAGE RETURN)	29	1D	GROUP SEPARATOR (GS) LEFT ARROW
14	E	SO (SHIFT OUT)	30	1E	RECORD SEPARATOR (RS) UP ARROW
15	F	SI (SHIFT IN)	31	1F	UNIT SEPARATOR (US) DOWN ARROW

Printable Characters								
DEC	HEX	Character	DEC	HEX	Character	DEC	HEX	Character
32	20	<SPACE>	64	40	@	96	60	`
33	21	!	65	41	A	97	61	a
34	22	"	66	42	B	98	62	b
35	23	#	67	43	C	99	63	c
36	24	\$	68	44	D	100	64	d
37	25	%	69	45	E	101	65	e
38	26	&	70	46	F	102	66	f
39	27	'	71	47	G	103	67	g

Printable Characters (Continued)								
DEC	HEX	Character	DEC	HEX	Character	DEC	HEX	Character
40	28	(	72	48	H	104	68	h
41	29	)	73	49	I	105	69	i
42	2A	*	74	4A	J	106	6A	j
43	2B	+	75	4B	K	107	6B	k
44	2C	,	76	4C	L	108	6C	l
45	2D	-	77	4D	M	109	6D	m
46	2E	.	78	4E	N	110	6E	n
47	2F	/	79	4F	O	111	6F	o
48	30	0	80	50	P	112	70	p
49	31	1	81	51	Q	113	71	q
50	32	2	82	52	R	114	72	r
51	33	3	83	53	S	115	73	s
52	34	4	84	54	T	116	74	t
53	35	5	85	55	U	117	75	u
54	36	6	86	56	V	118	76	v
55	37	7	87	57	W	119	77	w
56	38	8	88	58	X	120	78	x
57	39	9	89	59	Y	121	79	y
58	3A	:	90	5A	Z	122	7A	z
59	3B	;	91	5B	[	123	7B	{
60	3C	<	92	5C	\	124	7C	
61	3D	=	93	5D	]	125	7D	}
62	3E	>	94	5E	^	126	7E	~
63	3F	?	95	5F	_	127	7F	<DEL>

Extended ASCII Characters								
DEC	HEX	Character	DEC	HEX	Character	DEC	HEX	Character
128	80	€	171	AB	«	214	D6	Ö
129	81		172	AC	¬	215	D7	×
130	82	,	173	AD		216	D8	Ø
131	83	f	174	AE	®	217	D9	Ù
132	84	„	175	AF	¯	218	DA	Ú
133	85	…	176	B0	°	219	DB	Û
134	86	†	177	B1	±	220	DC	Ü
135	87	‡	178	B2	²	221	DD	Ý
136	88	^	179	B3	³	222	DE	Þ
137	89	‰	180	B4	´	223	DF	ß
138	8A	Š	181	B5	µ	224	E0	à
139	8B	‹	182	B6	¶	225	E1	á

Extended ASCII Characters (Continued)								
DEC	HEX	Character	DEC	HEX	Character	DEC	HEX	Character
140	8C	Œ	183	B7	·	226	E2	â
141	8D		184	B8	¸	227	E3	ã
142	8E	Ž	185	B9	¹	228	E4	ä
143	8F		186	BA	º	229	E5	å
144	90		187	BB	»	230	E6	æ
145	91	‘	188	BC	¼	231	E7	ç
146	92	’	189	BD	½	232	E8	è
147	93	“	190	BE	¾	233	E9	é
148	94	”	191	BF	¿	234	EA	ê
149	95	•	192	C0	À	235	EB	ë
150	96	–	193	C1	Á	236	EC	ì
151	97	—	194	C2	Â	237	ED	í
152	98	˜	195	C3	Ã	238	EE	î
153	99	™	196	C4	Ä	239	EF	ï
154	9A	š	197	C5	Å	240	F0	ð
155	9B	›	198	C6	Æ	241	F1	ñ
156	9C	œ	199	C7	Ç	242	F2	ò
157	9D		200	C8	È	243	F3	ó
158	9E	ž	201	C9	É	244	F4	ô
159	9F	ÿ	202	CA	Ê	245	F5	õ
160	A0		203	CB	Ë	246	F6	ö
161	A1	ı	204	CC	Ì	247	F7	÷
162	A2	ç	205	CD	Í	248	F8	ø
163	A3	£	206	CE	Î	249	F9	ù
164	A4	¤	207	CF	Ï	250	FA	ú
165	A5	¥	208	D0	Ð	251	FB	û
166	A6	ı	209	D1	Ñ	252	FC	ü
167	A7	§	210	D2	Ò	253	FD	ý
168	A8	¨	211	D3	Ó	254	FE	þ
169	A9	©	212	D4	Ô	255	FF	ÿ
170	AA	ª	213	D5	Õ			

## 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.

<b>Code Page</b>	<b>Standard</b>	<b>Description</b>
1	CP ISO646	
2 (Default)	ISO 2022	Automatic National Replacement Characters
3	CP Binary	
51	ISO 8859 1 51	Western European Replacement Characters
82	ISO 2022 11 Swe	Swedish Replacement Characters
83	ISO 2022 69 Fra	French/Belgium Replacement Characters
81	ISO 2022 25 Fra	French/Belgium Replacement Characters
84	ISO 2022 11 Ger	German Replacement Characters
85	ISO 2022 11 Ita	Italian Replacement Characters
86	ISO 2022 11 Swi	Swiss Replacement Characters
87	ISO 2022 11 UK	British Replacement Characters
88	ISO 2022 11 Dan	Danish Replacement Characters
89	ISO 2022 11 Nor	Norwegian Replacement Characters
90	ISO 2022 11 Spa	Spanish Replacement Characters
91	ISO 2022 85	Spanish Replacement Characters
92	ISO 2022 16	Portuguese Replacement Characters
93	ISO 2022 84	Portuguese Replacement Characters
94	ISO 2022 60	Norwegian Replacement Characters

# Unicode Key Maps

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

104 Key U.S. Style Keyboard

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

105 Key European Style Keyboard

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# Sample Symbols

**UPC-A**



0 123456 7890

**Interleaved 2 of 5**



1234567890

**Code 128**



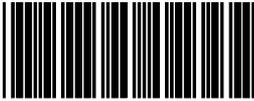
Code 128

**EAN-13**



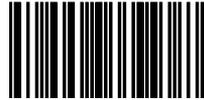
9 780330 290951

**Code 39**



BC321

**Codabar**



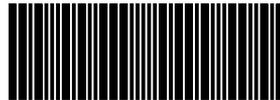
A13579B

**Code 93**



123456-9\$

**Straight 2 of 5 Industrial**



123456

---

---

# Sample Symbols

**Matrix 2 of 5**



6543210

**GS1 DataBar**



(01)00123456789012

**PDF417**



Car Registration

**Data Matrix**



Test Symbol

**QR Code**



Numbers

**Aztec**



Package Label

**Micro PDF417**



Test Message

---

---

# Programming Chart



K0K  
0



K2K  
2



K4K  
4



K6K  
6



K8K  
8



K1K  
1



K3K  
3



K5K  
5



K7K  
7



K9K  
9

---

---

# Programming Chart



KAK

**A**



KBK

**B**



KCK

**C**



KDK

**D**



KEK

**E**



KFK

**F**



MNUSAV.

**Save**



MNUABT.

**Discard**



RESET\_.

**Reset**

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

**Honeywell Scanning & Mobility**

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