Honeywell

Captuvo Enterprise Sled Series

User's Guide

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1 Getting Started

Introduction

The Captuvo Enterprise Sleds include an optional integrated imager for scanning all types of bar codes. You have the capability to configure the scan engine in the sled using the programming bar codes included in this user's guide; however, the application being used might override the settings you have programmed. An optional magnetic stripe reader (MSR) for reading cards with magnetic stripes is also available.

Out of the Box

Verify that the box contains the following items:

- Captuvo Enterprise Sled
- Charger (if appropriate)
- USB Cable
- Quick Start Guide
- Regulatory Sheet

Note: If you ordered accessories for your sled, verify that they are also included with the order.

Be sure to keep the original packaging in case you need to return the sled for service.

Note: Honeywell is not an authorized Apple repair center. Please return only your sled to us for repair. Honeywell is not liable for any non-Honeywell product shipped to our repair center.

Note: Refer to your Apple device's documentation for important product and safety information.

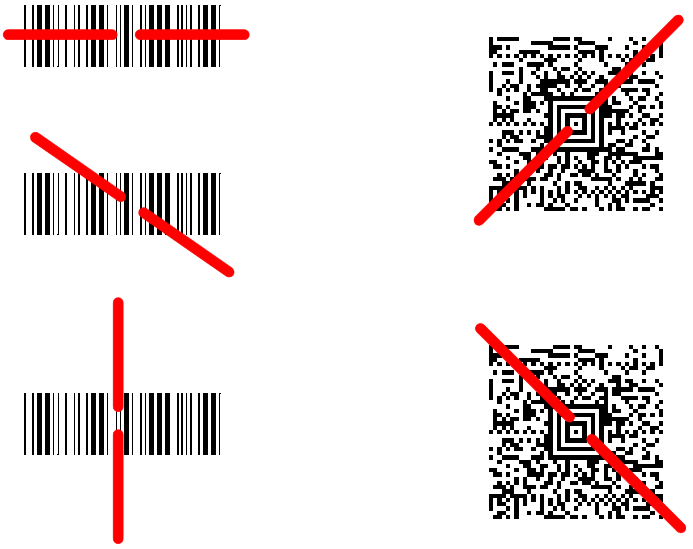
Operating Temperature

The maximum operating temperature range for the Captuvo sled is 0°C to 35°C (32°F to 95°F).

Reading Techniques

The sled has a view finder that projects a bright red aiming beam that corresponds to the sled'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 sled 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 sled 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.

Set Custom Defaults

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

Activate Custom Defaults

Resetting the Factory Defaults

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

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

Remove Custom Defaults

Activate Defaults

The Menu Commands, beginning on page 6-5 list the factory default settings for each of the commands (indicated by an asterisk (*) on the programming pages).

2 Input/Output Settings

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 sled emits on a good read. *Default = High.*


BEPLVL1.
Low


BEPLVL2.
Medium


BEPLVL3.
*** High**


BEPLVL0.
Off

Manual Trigger Mode

When in manual trigger mode, the scanner scans until a bar code is read, or until the trigger is released. Normal mode offers good scan speed and the longest working ranges (depth of field). *Default = Manual Trigger-Normal.*

Manual Trigger - Normal

Mobile Phone Read Mode

When this mode is selected, your sled 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.

Hand Held Scanning - Mobile Phone

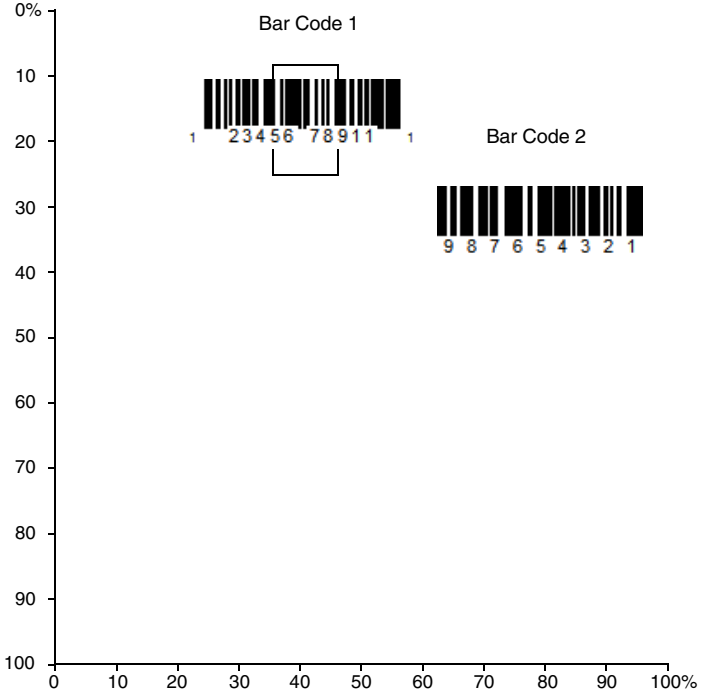
Note: To turn off Mobile Phone Read Mode, scan a Manual Trigger Mode bar code (see page 2-2).

Centering

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

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

*** Centering Off**

Top of Centering Window

Bottom of Centering Window

Left of Centering Window

Right of Centering Window

Preferred Symbology

The sled can be programmed to specify one symbology as a higher priority over other symbologies in situations where both bar code symbologies appear on the same label, but the lower priority symbology cannot be disabled.

For example, you may be using the sled in a retail setting to read U.P.C. symbols, but have occasional need to read a code on a drivers license. Since some licenses have a Code 39 symbol as well as the PDF417 symbol, you can use Preferred Symbology to specify that the PDF417 symbol be read instead of the Code 39.

Preferred Symbology classifies each symbology as **high priority**, **low priority**, or as an **unspecified type**. When a low priority symbology is presented, the sled ignores it for a set period of time (see Preferred Symbology Time-out on page 2-5) while it searches for the high priority symbology. If a high priority symbology is located during this period, then that data is read immediately.

If the time-out period expires before a high priority symbology is read, the sled will read any bar code in its view (low priority or unspecified). If there is no bar code in the sled's view after the time-out period expires, then no data is reported.

Note: A low priority symbol must be centered on the aiming pattern to be read.

Scan a bar code below to enable or disable Preferred Symbology. *Default = Preferred Symbology Off.*

PRFENA1.

Preferred Symbology On

PRFENA0.

*** Preferred Symbology Off**

High Priority Symbology

To specify the high priority symbology, scan the High Priority Symbology bar code below. On the Symbology Charts on page A-1, find the symbology you want to set as high priority. Locate the Hex value for that symbology and scan the 2 digit hex value from the Programming Chart (inside back cover). Scan **Save** to save your selection. *Default = None*

PRFCOD.

High Priority Symbology

Low Priority Symbology

To specify the low priority symbology, scan the Low Priority Symbology bar code below. On the Symbology Charts on page A-1, find the symbology you want to set as low priority. Locate the Hex value for that symbology and scan the 2 digit hex value from the Programming Chart (inside back cover).

If you want to set additional low priority symbologies, scan **FF**, then scan the 2 digit hex value from the Programming Chart for the next symbology. You can program up to 5 low priority symbologies. Scan **Save** to save your selection. *Default = None*

PRFBLK.

Low Priority Symbology

Preferred Symbology Time-out

Once you have enabled Preferred Symbology and entered the high and low priority symbologies, you must set the time-out period. This is the period of time the sled will search for a high priority bar code after a low priority bar

code has been encountered. Scan the bar code below, then set the delay (from 1-3,000 milliseconds) by scanning digits from the inside back cover, then scanning **Save**. *Default = 500 ms.*

Preferred Symbology Time-out

Preferred Symbology Default

Scan the bar code below to set all Preferred Symbology entries to their default values.

Preferred Symbology Default

Output Sequence Overview

Require Output Sequence

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

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

Output Sequence Editor

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

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

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

To Add an Output Sequence

1. Scan the ***Enter Sequence*** symbol (see Require Output Sequence, page 2-10).

2. **Code I.D.**
   On the Symbology Charts on page A-1, find the symbology to which you want to apply the output sequence format. Locate the Hex value for that symbology and scan the 2 digit hex value from the Programming Chart (inside back cover).

3. **Length**
   Specify what length (up to 9999 characters) of data output will be acceptable for this symbology. Scan the four digit data length from the Programming Chart. (Note: 50 characters is entered as 0050. 9999 is a universal number, indicating all lengths.) When calculating the length, you must count any programmed prefixes, suffixes, or formatted characters as part of the length (unless using 9999).

4. **Character Match Sequences**
   On the ISO 2022/ISO 646 Character Replacements, page A-10, find the Hex value that represents the character(s) you want to match. Use the Programming Chart to read the alphanumeric combination that represents the ASCII characters. (99 is the Universal number, indicating all characters.)

5. **End Output Sequence Editor**
   Scan ***F F*** to enter an Output Sequence for an additional symbology, or ***Save*** to save your entries.

Other Programming Selections

- ***Discard***
  This exits without saving any Output Sequence changes.

Output Sequence Example

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

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

A - Code 39

B - Code 128

C - Code 93

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

SEQBLK62999941FF6A999942FF69999943FF

The breakdown of the command line is shown below:

SEQBLK sequence editor start command

62 code identifier for **Code 39**

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

41 start character match for Code 39, 41h = “A”

FF termination string for first code

6A code identifier for **Code 128**

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

42 start character match for Code 128, 42h = “B”

FF termination string for second code

69 code identifier for **Code 93**

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

43 start character match for Code 93, 43h = “C”

FF termination string for third code

To program the previous example using specific lengths, you would have to count any programmed prefixes, suffixes, or formatted characters as part of the length. If you use the example on page 2-8, but assume a <CR> suffix and specific code lengths, you would use the following command line:

SEQBLK62001241FF6A001342FF69001243FF

The breakdown of the command line is shown below:

SEQBLK sequence editor start command

62 code identifier for **Code 39**

0012 A - Code 39 sample length (11) plus CR suffix (1) = 12

41 start character match for Code 39, 41h = “A”

FF termination string for first code

6A code identifier for **Code 128**

0013 B - Code 128 sample length (12) plus CR suffix (1) = 13

42 start character match for Code 128, 42h = “B”

FF termination string for second code

69 code identifier for **Code 93**

0012 C - Code 93 sample length (11) plus CR suffix (1) = 12

43 start character match for Code 93, 43h = “C”

FF termination string for third code

Output Sequence Editor

Enter Sequence

Default Sequence

Partial Sequence

If an output sequence operation is terminated before all your output sequence criteria are met, the bar code data acquired to that point is a “partial sequence.”

Scan **Discard Partial Sequence** to discard partial sequences when the output sequence operation is terminated before completion. Scan **Transmit Partial Sequence** to transmit partial sequences. (Any fields in the sequence where no data match occurred will be skipped in the output.)

Transmit Partial Sequence

*** Discard Partial Sequence**

Require Output Sequence

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

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

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


SEQ_EN2.
Required


SEQ_EN1.
On/Not Required


SEQ_EN0.
***Off**

Multiple Symbols

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


SHOTGN1.
On


SHOTGN0.
*** Off**

No Read

With No Read turned **On**, the sled notifies you if a code cannot be read. If using an EZConfig Tool Scan Data Window (see page 9-3), an "NR" appears when a code cannot be read. If No Read is turned **Off**, the "NR" will not appear. *Default = Off.*

On

*** 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 4-1). The hex code for the No Read symbol is 9C.

Video Reverse

Video Reverse is used to allow the sled 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.*

Note: Images downloaded from the unit are not reversed. This is a setting for decoding only.

Video Reverse Only

Video Reverse and Standard Bar Codes

*** Video Reverse Off**

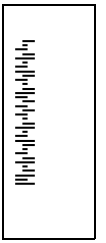
Working Orientation

Some bar codes are direction-sensitive. For example, KIX codes and OCR can misread when scanned sideways or upside down. Use the working orientation settings if your direction-sensitive codes will not usually be presented upright to the scanner. *Default = Upright.*

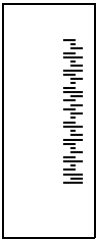
Upright:

Upside Down:

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



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



Default = Upright.

*** Upright**

Vertical, Bottom to Top

Upside Down

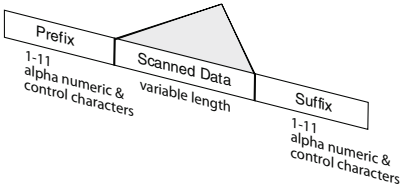
Vertical, Top to Bottom

3 Data Editing

Prefix/Suffix Overview

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

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



Points to Keep In Mind

- It is not necessary to build a message string. The selections in this chapter are only used if you wish to alter the default settings. *Default prefix = None. Default suffix = None.*
- A prefix or suffix may be added or cleared from one symbology or all symbologies.
- You can add any prefix or suffix from the ASCII Conversion Chart (Code Page 1252), 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 3-3).

Step 2. Determine the 2 digit Hex value from the Symbology Chart (included in the Symbology Charts, 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 Charts, 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 Charts, 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.

Add CR Suffix
All Symbologies

Prefix Selections

Add Prefix

Clear One Prefix

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 sled transmits the function code to the terminal. Charts of these function codes are provided in Supported Interface Keys starting on page 8-2. *Default = Enable.*


RMVFNC0.
*** Enable**


RMVFNC1.
Disable

4 Data Formatting

Data Format Editor Introduction

You may use the Data Format Editor to change the sled'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 outputted automatically. However when you create a format, you must use a "send" command (see Send Commands on page 4-4) within the format program to output data.

Multiple formats may be programmed into the sled. 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.

*** Default Data Format**

To Add a Data Format

Step 1. Scan the **Enter Data Format** symbol (page 4-2).

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

you are programming. (See Primary/Alternate Data Formats on page 4-17 for further information.)

Step 3. Terminal Type

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

Note: 099 indicates all terminal types.

Step 4. Code I.D.

In the Symbology Charts, 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.

If you wish to create a data format for all symbologies, with the exception of some specific symbologies, refer to B8 (page 4-14).

If you are creating a data format for Batch Mode Quantity, use 35 for the Code I.D.

Note: 99 indicates all symbologies.

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. For example, 50 characters is entered as 0050.

Note: 9999 indicates all lengths.

Step 6. Editor Commands

Refer to Data Format Editor Commands (page 4-4). 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.

DFMBK3.

Enter Data Format

MNUSAV.

Save

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 Charts on page A-1), and the bar code data length for the specific data format that you want to delete. All other formats remain unaffected.

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.

Clear One Data Format

Clear All Data Formats

Save

Discard

Terminal ID Table

Terminal	Model(s)	Terminal ID
Serial	RS232	000

Data Format Editor Commands

When working with the Data Format Editor, a virtual cursor is moved along your input data string. The following commands are used to both move this cursor to different positions, and to select, replace, and insert data into the final output. For examples that use the Data Format Editor commands, refer to Data Formatter on page 4-15.

Send Commands

Send all characters

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 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.

F2 Example: Send a number of characters

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

F2 is the "Send a number of characters" command

10 is the number of characters to send

0D is the hex value for a CR

The data is output as: **1234567890**

F2 and F1 Example: Split characters into 2 lines

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

Command string: **F2100DF10D**

F2 is the “Send a number of characters” command

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

0D is the hex value for a CR

F1 is the “Send all characters” command

0D is the hex value for a CR

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

Send all characters up to a particular character

F3 Include in the output message all characters from the input message, starting with the character at the current cursor position and continuing to, but not including, the search character “ss,” followed by an insert character. The cursor is moved forward to the “ss” character. *Syntax = F3ssxx* where ss stands for the search character’s hex value for 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), page A-4 for decimal, hex and character codes.

F3 Example: Send all characters up to a particular character

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

Command string: **F3440D**

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

44 is the hex value for a 'D”

0D is the hex value for a CR

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

Send all characters up to a string

B9 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 string “s...s.” The cursor is moved forward to the beginning of the “s...s” string. *Syntax = B9nnnns...s* where nnnn stands for the length of the string, and s...s stands for the string to be matched. The string is made up of hex values for the characters in the string. Refer to the ASCII Conversion Chart (Code Page 1252), beginning on page A-4 for decimal, hex and character codes.

B9 Example: Send all characters up to a defined string

Using the bar code above, send all characters up to but not including "AB."

Command string: **B900024142**

B9 is the "Send all characters up to a string" command

0002 is the length of the string (2 characters)

41 is the hex value for A

42 is the hex value for B

The data is output as: **1234567890**

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.

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

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

Command string: **E908F40902**

E9 is the "Send all but the last characters" command

08 is the number of characters at the end to ignore

F4 is the "Insert a character multiple times" command

09 is the hex value for a horizontal tab

02 is the number of times the tab character is sent

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

Insert a string

BA Send “ss” string of “nn” length in the output message, leaving the cursor in the current position. *Syntax = BAnnnns...s* where nnnn stands for the length of the string, and s...s stands for the string. The string is made up of hex values for the characters in the string. Refer to the ASCII Conversion Chart (Code Page 1252), beginning on page A-4 for decimal, hex and character codes.

B9 and BA Example: Look for the string “AB” and insert 2 asterisks (**)

Using the bar code above, send all characters up to but not including “AB.” Insert 2 asterisks at that point, and send the rest of the data with a carriage return after.

Command string: **B900024142BA00022A2AF10D**

B9 is the “Send all characters up to a string” command

0002 is the length of the string (2 characters)

41 is the hex value for A

42 is the hex value for B

BA is the “Insert a string” command

0002 is the length of the string to be added (2 characters)

2A is the hex value for an asterisk (*)

2A is the hex value for an asterisk (*)

F1 is the “Send all characters” command

0D is the hex value for a CR

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

Insert symbology name

B3 Insert the name of the bar code’s symbology in the output message, without moving the cursor. Only symbologies with a Honeywell ID are included (see Symbology Charts on page A-1).
Refer to the ASCII Conversion Chart (Code Page 1252), page A-4 for decimal, hex and character codes.

Insert bar code length

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

B3 and B4 Example: Insert the symbology name and length

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

Command string: **B3F42001B4F42001F10D**

B3 is the “Insert symbology name” command

F4 is the “Insert a character multiple times” command

20 is the hex value for a space

01 is the number of times the space character is sent

B4 is the “Insert bar code length” command

F4 is the “Insert a character multiple times” command

20 is the hex value for a space

01 is the number of times the space character is sent

F1 is the “Send all characters” command

0D is the hex value for a CR

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

Move Commands

Move the cursor forward a number of characters

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

F5 Example: Move the cursor forward and send the data

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

Command string: **F503F10D**

F5 is the “Move the cursor forward a number of characters” command

03 is the number of characters to move the cursor

F1 is the “Send all characters” command

0D is the hex value for a CR

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

Move the cursor backward a number of characters

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

Move the cursor to the beginning

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

FE and F7 Example: Manipulate bar codes that begin with a 1

Search for bar codes that begin with a 1. If a bar code matches, move the cursor back to the beginning of the data and send 6 characters followed by a carriage return. Using the bar code above:

Command string: **FE31F7F2060D**

FE is the “Compare characters” command

31 is the hex value for 1

F7 is the “Move the cursor to the beginning” command

F2 is the “Send a number of characters” command

06 is the number of characters to send

0D is the hex value for a CR

The data is output as: **123456**
<CR>

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), page A-4 for decimal, hex and character codes.

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

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

Command string: **F844F10D**

F8 is the “Search forward for a character” command

44 is the hex value for “D”

F1 is the “Send all characters” command

0D is the hex value for a CR

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

Search backward for a character

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

Search forward for a string

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

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

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

Command string: **B00003464748F10D**

B0 is the “Search forward for a string” command

0003 is the string length (3 characters)

46 is the hex value for “F”

47 is the hex value for “G”

48 is the hex value for “H”

F1 is the “Send all characters” command

0D is the hex value for a CR

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

Search backward for a string

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

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

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

Command string: **E630F10D**

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

30 is the hex value for 0

F1 is the “Send all characters” command

0D is the hex value for a CR

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

Search backward for a non-matching character

E7 Search the input message backward for the first non-“xx” character from the current cursor position, leaving the cursor pointing to the non-“xx” character. *Syntax = E7xx* where xx stands for the search character’s hex value for its ASCII code.
Refer to the ASCII Conversion Chart (Code Page 1252), 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.

FB Example: Remove spaces in bar code data

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

Command string: **FB0120F10D**

FB is the “Suppress characters” command

01 is the number of character types to be suppressed

20 is the hex value for a space

F1 is the “Send all characters” command

0D is the hex value for a CR

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

Stop suppressing characters

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

Replace characters

E4 Replaces up to 15 characters in the output message, without moving the cursor. Replacement continues until the E5 command is encountered. *Syntax = E4nnxx$_1$xx$_2$yy$_1$yy$_2$...zz$_1$zz$_2$* where nn is the total count of the number of characters in the list (characters to be replaced plus replacement characters); xx$_1$ defines characters to be replaced and xx$_2$ defines replacement characters, continuing through zz$_1$ and zz$_2$.

E4 Example: Replace zeroes with CRs in bar code data

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

Command string: **E402300DF10D**

E4 is the “Replace characters” command

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

30 is the hex value for 0

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

F1 is the “Send all characters” command

0D is the hex value for a CR

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

Stop replacing characters

E5 Terminates character replacement. *Syntax = E5.*

Compare characters

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

Compare string

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

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

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

Command string: **ECF10D**

EC is the “Check for a number” command

F1 is the “Send all characters” command

0D is the hex value for a CR

If this bar code is read, 

the format fails.

If this bar code is read: 

the data is output as:

1234AB
<CR>

Check for non-numeric character

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

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

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

Command string: **EDF10D**

ED is the “Check for a non-numeric character” command

F1 is the “Send all characters” command

0D is the hex value for a CR

If this bar code is read, 

the format fails.

If this bar code is read: 

the data is output as:

AB1234
<CR>

Discard Data

B8 Discards types of data. For example, you may want to discard Code 128 bar codes that begin with the letter A. In step 4 (page 4-2), select 6A (for Code 128), and in step 5, select 9999 (for all lengths). Enter FE41B8 to compare and discard Code 128 bar codes that begin with the letter A. *Syntax = B8.*

*The B8 command must be entered after all other commands. The Data Format must be **Required** (see page 4-15) in order for the B8 command to work. If Data Format is On, but Not Required (page 4-16), bar code data that meets the B8 format is scanned and output as usual.*

*Other data format settings impact the B8 command. If Data Format Non-Match Error Tone is **On** (page 4-16), the scanner emits an error tone. If Data format Non-Match Error Tone is **Off**, the code is disabled for reading and no tone is sounded.*

Data Formatter

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

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, Keep Prefix/Suffix
Scanned data is modified according to your data format, and prefixes and suffixes are transmitted.

Data Formatter On, Not Required, Drop Prefix/Suffix
Scanned data is modified according to your data format. If a data format is found for a particular symbol, those prefixes and suffixes are not transmitted.

Data Format Required, Keep Prefix/Suffix
Scanned data is modified according to your data format, and 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. If you wish to process this type of bar code without generating an error tone, see Data Format Non-Match Error Tone.

Data Format Required, Drop Prefix/Suffix
Scanned data is modified according to your data format. If a data format is found for a particular symbol, those prefixes and suffixes are not transmitted. Any data that does not match your data format requirements generates an error tone. If you wish to process this type of bar code without generating an error tone, see Data Format Non-Match Error Tone.

Choose one of the following options. *Default = Data Formatter On, Not Required, Keep Prefix/Suffix.*


DFM_EN1.

*** Data Formatter On, Not Required, Keep Prefix/Suffix**


DFM_EN3.

Data Formatter On, Not Required, Drop Prefix/Suffix


DFM_EN2.

Data Format Required, Keep Prefix/Suffix


DFM_EN4.

Data Format Required, Drop Prefix/Suffix

Data Format Non-Match Error Tone

When a bar code is encountered that doesn't match your required data format, the sled normally generates an error tone. However, you may want to continue scanning bar codes without hearing the error tone. If you scan the **Data Format Non-Match Error Tone Off** bar code, data that doesn't conform to your data format is not transmitted, and no error tone will sound. If you wish to hear the error tone when a non-matching bar code is found, scan the **Data Format Non-Match Error Tone On** bar code. *Default = Data Format Non-Match Error Tone On.*


DFMDEC0.

*** Data Format Non-Match Error Tone On**


DFMDEC1.

Data Format Non-Match Error Tone Off

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.

Primary Data Format

Data Format 1

Data Format 2

Data Format 3

Single Scan Data Format Change

You can also switch between data formats for a single scan. The next bar code is scanned using an alternate data format, then reverts to the format you have selected above (either Primary, 1, 2, or 3).

For example, you may have set your device to the data format you saved as Data Format 3. You can switch to Data Format 1 for a single trigger pull by scanning the **Single Scan-Data Format 1** bar code below. The next bar code that is scanned uses Data Format 1, then reverts back to Data Format 3.

Single Scan-Primary Data Format

Single Scan-Data Format 1

Single Scan-Data Format 2

Single Scan-Data Format 3

5 Symbologies

This programming section contains the following menu selections. Refer to Chapter 6 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 11
- Code 128
- Code 32 Pharmaceutical (PARAF)
- 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
- MaxiCode
- MicroPDF417
- MSI
- NEC 2 of 5
- Postal Codes - 2D
- 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)
- Telepen
- Trioptic Code
- 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 sled, scan the ***All Symbologies On*** code. If on the other hand, you want to decode only a particular symbology, scan **All Symbologies Off** followed by the On symbol for that particular symbology.

All Symbologies On

All Symbologies Off

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 sled will issue an error tone. You may wish to set the same value for minimum and maximum length to force the sled 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>


CBRDFT.

Codabar On/Off


CBRENA1.
*** On**


CBRENA0.
Off

Codabar Start/Stop Characters

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


CBRSSX1.
Transmit


CBRSSX0.
*** Don't Transmit**

Codabar Check Character

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

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

When Check Character is set to ***Validate and Transmit***, the sled 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 sled 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 sled from decoding a single "D" Codabar symbol without its companion. This selection has no effect on Codabar symbols without Stop/Start D characters.


CBRCCT1.
On


CBRCCT0.
*** Off**


CBRCCT2.
Require

Codabar Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 5-2) for additional information. Minimum and Maximum lengths = 2-60. Minimum Default = 4, Maximum Default = 60.

Minimum Message Length

Maximum Message Length

Code 39

< Default All Code 39 Settings >

Code 39 On/Off

*** On**

Off

Code 39 Start/Stop Characters

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

Transmit

*** Don't Transmit**

Code 39 Check Character

No Check Character indicates that the sled 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 sled only reads Code 39 bar codes printed with a check character, and will transmit this character at the end of the scanned data. *Default = No Check Character.*

*** No Check Character**

Validate, but Don't Transmit

Validate and Transmit

Code 39 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 5-2) for additional information. Minimum and Maximum lengths = 0-48. Minimum Default = 0, Maximum Default = 48.

Minimum Message Length

Maximum Message Length

Code 39 Append

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

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


C39APP1.
On


C39APP0.
*** Off**

Code 32 Pharmaceutical (PARAF)

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

Note: Trioptic Code (page 5-40) must be turned off while scanning Code 32 Pharmaceutical codes.


C39B321.
On


C39B320.
*** Off**

Full ASCII

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

NUL	%U	DLE	$P	SP	SPACE	0	0	@	%V	P	P	‘	%W	p	+P
SOH	$A	DC1	$Q	!	/A	1	1	A	A	Q	Q	a	+A	q	+Q
STX	$B	DC2	$R	“	/B	2	2	B	B	R	R	b	+B	r	+R
ETX	$C	DC3	$S	#	/C	3	3	C	C	S	S	c	+C	s	+S
EOT	$D	DC4	$T	$	/D	4	4	D	D	T	T	d	+D	t	+T
ENQ	$E	NAK	$U	%	/E	5	5	E	E	U	U	e	+E	u	+U
ACK	$F	SYN	$V	&	/F	6	6	F	F	V	V	f	+F	v	+V
BEL	$G	ETB	$W	‘	/G	7	7	G	G	W	W	g	+G	w	+W
BS	$H	CAN	$X	(	/H	8	8	H	H	X	X	h	+H	x	+X
HT	$I	EM	$Y	)	/I	9	9	I	I	Y	Y	i	+I	y	+Y
LF	$J	SUB	$Z	*	/J	:	/Z	J	J	Z	Z	j	+J	z	+Z
VT	$K	ESC	%A	+	/K	;	%F	K	K	[	%K	k	+K	{	%P
FF	$L	FS	%B	,	/L	<	%G	L	L	\	%L	l	+L	|	%Q
CR	$M	GS	%C	-	-	=	%H	M	M	]	%M	m	+M	}	%R
SO	$N	RS	%D	.	.	>	%I	N	N	^	%N	n	+N	~	%S
SI	$O	US	%E	/	/O	?	%J	O	O	_	%O	o	+O	DEL	%T

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

Full ASCII On

*** Full ASCII Off**

Code 39 Code Page

Code pages define the mapping of character codes to characters. If the data received does not display with the proper characters, it may be because the bar code being scanned was created using a code page that is different from the one the host program is expecting. If this is the case, scan the bar code below, select the code page with which the bar codes were created (see ISO 2022/ISO 646 Character Replacements on page A-

10), 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.

Code 39 Code Page

Interleaved 2 of 5

< Default All Interleaved 2 of 5 Settings >

Interleaved 2 of 5 On/Off

*** On**

Off

Check Digit

No Check Digit indicates that the sled 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 sled only reads Interleaved 2 of 5 bar codes printed with a check digit, and will transmit this digit at the end of the scanned data. *Default = No Check Digit.*

*** No Check Digit**

Validate, but Don't Transmit

Validate and Transmit

Interleaved 2 of 5 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 5-2) for additional information. Minimum and Maximum lengths = 2-80. Minimum Default = 4, Maximum Default = 80.

Minimum Message Length

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 sled 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 sled 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 5-2) for additional information. Minimum and Maximum lengths = 2-80. Minimum Default = 4, Maximum Default = 80.

Minimum Message Length

Maximum Message Length

Code 93

< Default All Code 93 Settings >

Code 93 On/Off

*** On**

Off

Code 93 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 5-2) for additional information. Minimum and Maximum lengths = 0-80. Minimum Default = 0, Maximum Default = 80.

Minimum Message Length

Maximum Message Length

Code 93 Code Page

Code pages define the mapping of character codes to characters. If the data received does not display with the proper characters, it may be because the bar code being scanned was created using a code page that is different from the one the host program is expecting. If this is the case, scan the bar code below, select the code page with which the bar codes were created (see ISO 2022/ISO 646 Character Replacements on page A-

10), 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 5-2) 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

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 5-2) for additional information. Minimum and Maximum lengths = 1-48. Minimum Default = 4, Maximum Default = 48.

Minimum Message Length

Maximum Message Length

Matrix 2 of 5

<Default All Matrix 2 of 5 Settings>

Matrix 2 of 5 On/Off

On

*** Off**

Matrix 2 of 5 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 5-2) for additional information. Minimum and Maximum lengths = 1-80. Minimum Default = 4, Maximum Default = 80.

Minimum Message Length

Maximum Message Length

Code 11

<Default All Code 11 Settings>

Code 11 On/Off

On

*** Off**

Check Digits Required

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

One Check Digit

*** Two Check Digits**

Code 11 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 5-2) for additional information. Minimum and Maximum lengths = 1-80. Minimum Default = 4, Maximum Default = 80.

Minimum Message Length

Maximum Message Length

Code 128

<Default All Code 128 Settings>

Code 128 On/Off

*** On**

Off

ISBT 128 Concatenation

In 1994 the International Society of Blood Transfusion (ISBT) ratified a standard for communicating critical blood information in a uniform manner. The use of ISBT formats requires a paid license. The ISBT 128 Application Specification describes 1) the critical data elements for labeling blood products, 2) the current recommendation to use Code 128 due to its high degree of security and its space-efficient design, 3) a variation of Code 128

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

On

*** Off**

Code 128 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 5-2) for additional information. Minimum and Maximum lengths = 0-90. Minimum Default = 0, Maximum Default = 90.

Minimum Message Length

Maximum Message Length

Code 128 Append

This function allows the sled to append the data from several Code 128 bar codes together before transmitting them to the host computer. When this function is enabled, the sled stores those Code 128 bar codes that start with a space (excluding the start and stop symbols), and does not immediately transmit the data. The sled stores the data in the order in which the bar codes are read, deleting the first space from each. The sled transmits the appended data when it reads a Code 128 bar code that starts with a character other than a space. *Default = On.*

*** On**

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 ISO 2022/ISO 646 Character Replacements on page A-10), 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.

Code 128 Code Page

GS1-128

<Default All GS1-128 Settings>

GS1-128 On/Off

*** On**

Off

GS1-128 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 5-2) for additional information. Minimum and Maximum lengths = 1-80. Minimum Default = 1, Maximum Default = 80.

Minimum Message Length

Maximum Message Length

Telepen

<Default All Telepen Settings>


TELDFT.

Telepen On/Off


TELENA1.

On


TELENA0.

*** Off**

Telepen Output

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


TELOLD0.

*** AIM Telepen Output**


TELOLD1.

Original Telepen Output

Telepen Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 5-2) for additional information. Minimum and Maximum lengths = 1-60. Minimum Default = 1, Maximum Default = 60.

TELMIN.
Minimum Message Length

TELMAX.
Maximum Message Length

UPC-A

<Default All UPC-A Settings>

UPADFT.

UPC-A On/Off

UPAENA1.
*** On**

UPAENA0.
Off

Note: To convert UPC-A bar codes to EAN-13, see Convert UPC-A to EAN-13 on page 5-31.

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**


UPACKX0.

Off

UPC-A Number System

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


UPANSX1.

*** On**


UPANSX0.

Off

UPC-A Addenda

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


UPAAD21.

2 Digit Addenda On


UPAAD51.

5 Digit Addenda On


UPAAD20.

*** 2 Digit Addenda Off**


UPAAD50.

*** 5 Digit Addenda Off**

UPC-A Addenda Required

When ***Required*** is scanned, the sled will only read UPC-A bar codes that have addenda. You must then turn on a 2 or 5 digit addenda listed on page 5-25. *Default = Not Required.*

Required

*** Not Required**

UPC-A Addenda Separator

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

*** On**

Off

UPC-A/EAN-13 with Extended Coupon Code

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

If you scan the **Allow Concatenation** code, when the sled 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 sled 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.

*** Off**

Allow Concatenation

Require Concatenation

UPC-E0

<Default All UPC-E Settings>

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 5-30). *Default = On.*

*** UPC-E0 On**

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 sled 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.*

*** On**

Off

UPC-E0 Leading Zero

This feature allows the transmission of a leading zero (0) at the beginning of scanned data. To prevent transmission, scan **Off**. *Default = On.*

*** On**

Off

UPC-E0 Addenda

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

2 Digit Addenda On

*** 2 Digit Addenda Off**

5 Digit Addenda On

*** 5 Digit Addenda Off**

UPC-E1

Most U.P.C. bar codes lead with the 0 number system. For these codes, use UPC-E0 (page 5-27). If you need to read codes that lead with the 1 number system, use the **UPC-E1 On** selection. *Default = Off.*

UPC-E1 On

*** UPC-E1 Off**

EAN/JAN-13

<Default All EAN/JAN Settings>

EAN/JAN-13 On/Off

*** On**

Off

Convert UPC-A to EAN-13

When **UPC-A Converted to EAN-13** is selected, UPC-A bar codes are converted to 13 digit EAN-13 codes by adding a zero to the front. When **Do not Convert UPC-A** is selected, UPC-A codes are read as UPC-A.

UPC-A Converted to EAN-13

*** Do not Convert UPC-A**

EAN/JAN-13 Check Digit

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


E13CKX1.

*** On**


E13CKX0.

Off

EAN/JAN-13 Addenda

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


E13AD21.

2 Digit Addenda On


E13AD20.

*** 2 Digit Addenda Off**


E13AD51.

5 Digit Addenda On


E13AD50.

*** 5 Digit Addenda Off**

EAN/JAN-13 Addenda Required

When **Required** is scanned, the sled 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.*

*** On**

Off

Note: If you want to enable or disable EAN13 with Extended Coupon Code, refer to UPC-A/EAN-13 with Extended Coupon Code (page 5-26).

ISBN Translate

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

On

*** Off**

EAN/JAN-8

<Default All EAN/JAN-8 Settings>


EA8DFT.

EAN/JAN-8 On/Off


EA8ENA1.
*** On**


EA8ENA0.
Off

EAN/JAN-8 Check Digit

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


EA8CKX1.
*** On**


EA8CKX0.
Off

EAN/JAN-8 Addenda

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


EA8AD21.
2 Digit Addenda On


EA8AD20.
*** 2 Digit Addenda Off**


EA8AD51.
5 Digit Addenda On


EA8AD50.
*** 5 Digit Addenda Off**

EAN/JAN-8 Addenda Required

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


EA8ARQ1.
Required


EA8ARQ0.
*** 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.*


EA8ADS1.
*** On**


EA8ADS0.
Off

MSI

<Default All MSI Settings>

MSI On/Off

On

*** Off**

MSI Check Character

Different types of check characters are used with MSI bar codes. You can program the sled 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 sled 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.

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

Validate Type 10 and Transmit

Validate 2 Type 10 Characters, but Don't Transmit

Validate 2 Type 10 Characters and Transmit

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

Validate Type 10 then Type 11 Character and Transmit

Disable MSI Check Characters

MSI Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 5-2) for additional information. Minimum and Maximum lengths = 4-48. Minimum Default = 4, Maximum Default = 48.

Minimum Message Length

Maximum Message Length

GS1 DataBar Omnidirectional

< Default All GS1 DataBar Omnidirectional Settings >


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 >


RSEDFT.

GS1 DataBar Expanded On/Off


RSEENA1.

*** On**


RSEENA0.

Off

GS1 DataBar Expanded Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 5-2) for additional information. Minimum and Maximum lengths = 4-74. Minimum Default = 4, Maximum Default = 74.


RSEMIN.

Minimum Message Length


RSEMAX.

Maximum Message Length

Trioptic Code

Note: If you are going to scan Code 32 Pharmaceutical codes (page 5-8), Trioptic Code must be off.

Trioptic Code is used for labeling magnetic storage media.


TRIENA1.
On


TRIENA0.
*** Off**

Codablock A

<Default All Codablock A Settings>


CBADFT.

Codablock A On/Off


CBAENA1.
On


CBAENA0.
*** Off**

Codablock A Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 5-2) 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>


CBFDFT.

Codablock F On/Off


CBFENA1.
On


CBFENA0.
*** Off**

Codablock F Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 5-2) for additional information. Minimum and Maximum lengths = 1-2048. Minimum Default = 1, Maximum Default = 2048.


CBFMIN.
Minimum Message Length


CBFMAX.
Maximum Message Length

PDF417

< Default All PDF417 Settings >

PDF417 On/Off

*** On**

Off

PDF417 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 5-2) for additional information. Minimum and Maximum lengths = 1-2750. Minimum Default = 1, Maximum Default = 2750.

Minimum Message Length

Maximum Message Length

MicroPDF417

< Default All MicroPDF417 Settings >

MicroPDF417 On/Off

On

*** Off**

MicroPDF417 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 5-2) for additional information. Minimum and Maximum lengths = 1-366. Minimum Default = 1, Maximum Default = 366.

Minimum Message Length

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.


COMENA1.
On


COMENA0.
*** 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.)


COMUPC1.
UPC/EAN Version On


COMUPC0.
*** UPC/EAN Version Off**

GS1 Composite Code Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 5-2) 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 sled 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 Charts 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,]e*m* (see Symbology Charts 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 5-28) setting. If the AIM ID is enabled, the value will be the GS1-128 AIM ID,]C1 (see Symbology Charts on page A-1).

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

Default = GS1 Emulation Off.

GS1-128 Emulation

GS1 DataBar Emulation

GS1 Code Expansion Off

EAN8 to EAN13 Conversion

*** 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.*

On

*** Off**

QR Code

< Default All QR Code Settings >

QR Code On/Off

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

*** On**

Off

QR Code Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 5-2) for additional information. Minimum and Maximum lengths = 1-7089. Minimum Default = 1, Maximum Default = 7089.

Minimum Message Length

Maximum Message Length

Data Matrix

< Default All Data Matrix Settings >

Data Matrix On/Off

*** On**

Off

Data Matrix Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 5-2) 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.*

*** On**

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 ISO 2022/ISO 646 Character Replacements on page A-10), 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.

Data Matrix Code Page

MaxiCode

< Default All MaxiCode Settings >

MaxiCode On/Off

On

*** Off**

MaxiCode Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 5-2) for additional information. Minimum and Maximum lengths = 1-150. Minimum Default = 1, Maximum Default = 150.

Minimum Message Length

Maximum Message Length

Aztec Code

< Default All Aztec Code Settings >

Aztec Code On/Off

*** On**

Off

Aztec Code Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 5-2) for additional information. Minimum and Maximum lengths = 1-3832. Minimum Default = 1, Maximum Default = 3832.

Minimum Message Length

Maximum Message Length

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 = On.*

*** On**

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 ISO 2022/ISO 646 Character Replacements on page A-10), 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.

Aztec Code Page

Chinese Sensible (Han Xin) Code

< Default All Han Xin Settings >


HX_DFT.

Han Xin Code On/Off


HX_ENA1.
On


HX_ENA0.
*** Off**

Han Xin Code Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 5-2) for additional information. Minimum and Maximum lengths = 1-7833. Minimum Default = 1, Maximum Default = 7833.


HX_MIN.
Minimum Message Length


HX_MAX.
Maximum Message Length

Postal Codes - 2D

The following lists the possible 2D postal codes, and 2D postal code combinations that are allowed. Only one 2D postal code selection can be active at a time. If you scan a second 2D postal code selection, the first selection is overwritten. *Default = 2D Postal Codes Off.*

*** 2D Postal Codes Off**

Single 2D Postal Codes:

Australian Post On

British Post On

Canadian Post On

Intelligent Mail Bar Code On

Japanese Post On

KIX Post On

Planet Code On

Also see Planet Code Check Digit, page 5-58.

Postal-4i On

Postnet On

Also see Postnet Check Digit, page 5-58.

Postnet with B and B' Fields On

InfoMail On

Combination 2D Postal Codes:

InfoMail and British Post On

Intelligent Mail Bar Code and Postnet with B and B' Fields On

Postnet and Postal-4i On

Postnet and Intelligent Mail Bar Code On

Postal-4i and Intelligent Mail Bar Code On

Postal-4i and Postnet with B and B' Fields On

Planet Code and Postnet On

Planet Code and Postnet with B and B' Fields On

POSTAL13.

Planet Code and Postal-4i On

POSTAL15.

Planet Code and Intelligent Mail Bar Code On

POSTAL21.

Planet Code, Postnet, and Postal-4i On

POSTAL22.

Planet Code, Postnet, and Intelligent Mail Bar Code On

POSTAL23.

Planet Code, Postal-4i, and Intelligent Mail Bar Code On

POSTAL24.

Postnet, Postal-4i, and Intelligent Mail Bar Code On

POSTAL25.

Planet Code, Postal-4i, and Postnet with B and B' Fields On

POSTAL26.

Planet Code, Intelligent Mail Bar Code, and Postnet with B and B' Fields On

POSTAL27.

Postal-4i, Intelligent Mail Bar Code, and Postnet with B and B' Fields On

POSTAL28.

Planet Code, Postal-4i, Intelligent Mail Bar Code, and Postnet On

POSTAL29.

Planet Code, Postal-4i, Intelligent Mail Bar Code, and Postnet with B and B' Fields On

Planet Code Check Digit

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


PLNCKX1.

Transmit Check Digit


PLNCKX0.

*** Don't Transmit Check Digit**

Postnet Check Digit

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


NETCKX1.

Transmit Check Digit


NETCKX0.

*** Don't Transmit Check Digit**

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>


CPCDFT.

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

On

*** 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 5-2) for additional information. Minimum and Maximum lengths = 2-80. Minimum Default = 4, Maximum Default = 80.

Minimum Message Length

Maximum Message Length

Korea Post

<Default All Korea Post Settings>


KPCDFT.

Korea Post


KPCENA1.
On


KPCENA0.
*** Off**

Korea Post Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 5-2) for additional information. Minimum and Maximum lengths = 2-80. Minimum Default = 4, Maximum Default = 48.


KPCMIN.
Minimum Message Length


KPCMAX.
Maximum Message Length

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.*


KPCCHK1.
Transmit Check Digit


KPCCHK0.
*** Don't Transmit Check Digit**

6 Serial Programming Commands

Note: This section is for developers' reference only.

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 sled. For complete descriptions and examples of each serial programming command, refer to the corresponding programming bar code in this manual.

The device must be set to an RS232 interface (see page 2-1). The following commands can be sent via a PC COM port using terminal emulation software.

Conventions

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

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

Menu Command Syntax

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

Prefix Tag SubTag {Data} [, SubTag {Data}] [; Tag SubTag {Data}] […] Storage

Prefix	Three ASCII characters: **SYN M CR** (ASCII 22,77,13).
Tag	A 3 character case-insensitive field that identifies the desired menu command group. For example, all RS-232 configuration settings are identified with a Tag of **232**.
SubTag	A 3 character case-insensitive field that identifies the desired menu command within the tag group. For example, the SubTag for the RS-232 baud rate is **BAD**.
Data	The new value for a menu setting, identified by the Tag and SubTag.
Storage	A single character that specifies the storage table to which the command is applied. An exclamation point (**!**) performs the command's operation on the device's volatile menu configuration table. A period (**.**) performs the command's operation on the device's non-volatile menu configuration table. Use the non-volatile table only for semi-permanent changes you want saved through a power cycle.

Query Commands

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

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

:Name: Field Usage (Optional)

This command returns the query information from the sled.

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.

Resetting the Custom Defaults

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

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 ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Product Default Settings			
Setting Custom Defaults	Set Custom Defaults	MNUCDF	1-3
	Save Custom Defaults	MNUCDS	1-3
Resetting the Custom Defaults	Activate Custom Defaults	DEFALT	1-3
Resetting the Factory Defaults	Remove Custom Defaults	DEFOVR	1-4
	Activate Defaults	DEFALT	1-4
Input/Output Selections			
Beeper - Good Read	Off	BEPBEP0	2-1
	*On	BEPBEP1	2-1
Beeper Volume - Good Read	Off	BEPLVL0	2-1
	Low	BEPLVL1	2-1
	Medium	BEPLVL2	2-1
	*High	BEPLVL3	2-1
Manual Trigger Mode	Manual Trigger - Normal	PAPHHF	2-2
Mobile Phone Read Mode	Hand Held Scanning - Mobile Phone	PAPHHC	2-2
Centering Window	Centering On	DECWIN1	2-3
	*Centering Off	DECWIN0	2-4
	Left of Centering Window (*40%)	DECLFT###	2-4
	Right of Centering Window (*60%)	DECRGT###	2-4
	Top of Centering Window (*40%)	DECTOP###	2-4
	Bottom of Centering Window (*60%)	DECBOT###	2-4

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Preferred Symbology	On	PRFENA1	2-5
	*Off	PRFENA0	2-5
	High Priority Symbology	PRFCOD##	2-5
	Low Priority Symbology	PRFBLK##	2-5
	Preferred Symbology Timeout (*500) Range 100-3000	PRFPTO####	2-6
	Preferred Symbology Default	PRFDFT	2-6
Output Sequence Editor	Enter Sequence	SEQBLK	2-9
	Default Sequence	SEQDFT	2-9
Partial Sequence	Transmit Partial Sequence	SEQTTS1	2-9
	*Discard Partial Sequence	SEQTTS0	2-9
Require Output Sequence	Required	SEQ_EN2	2-10
	On/Not Required	SEQ_EN1	2-10
	*Off	SEQ_EN0	2-10
Multiple Symbols	On	SHOTGN1	2-10
	*Off	SHOTGN0	2-10
No Read	On	SHWNRD1	2-11
	*Off	SHWNRD0	2-11
Video Reverse	Video Reverse Only	VIDREV1	2-11
	Video Reverse and Standard Bar Codes	VIDREV2	2-11
	*Video Reverse Off	VIDREV0	2-11
Data Editing Selections			
Add CR Suffix to All Symbologies		VSUFCR	3-3

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Prefix	Add Prefix	PREBK2##	3-3
	Clear One Prefix	PRECL2	3-3
	Clear All Prefixes	PRECA2	3-3
Suffix	Add Suffix	SUFBK2##	3-4
	Clear One Suffix	SUFCL2	3-4
	Clear All Suffixes	SUFCA2	3-4
Function Code Transmit	*Enable	RMVFNC0	3-4
	Disable	RMVFNC1	3-4
Data Formatter Selections			
Data Format Editor	*Default Data Format (None)	DFMDF3	4-1
	Enter Data Format	DFMBK3##	4-2
	Clear One Data Format	DFMCL3	4-3
	Clear All Data Formats	DFMCA3	4-3
Data Formatter	Data Formatter Off	DFM_EN0	4-15
	*Data Formatter On, Not Required, Keep Prefix/Suffix	DFM_EN1	4-16
	Data Format Required, Keep Prefix/Suffix	DFM_EN2	4-16
	Data Formatter On, Not Required, Drop Prefix/Suffix	DFM_EN3	4-16
	Data Format Required, Drop Prefix/Suffix	DFM_EN4	4-16
Data Format Non-Match Error Tone	*Data Format Non-Match Error Tone On	DFMDEC0	4-16
	Data Format Non-Match Error Tone Off	DFMDEC1	4-16

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Primary/Alternate Data Formats	Primary Data Format	ALTFNM0	4-17
	Data Format 1	ALTFNM1	4-17
	Data Format 2	ALTFNM2	4-17
	Data Format 3	ALTFNM3	4-17
Single Scan Data Format Change	Single Scan-Primary Data Format	VSAF_0	4-18
	Single Scan-Data Format 1	VSAF_1	4-18
	Single Scan-Data Format 2	VSAF_2	4-18
	Single Scan-Data Format 3	VSAF_3	4-18
Symbologies			
All Symbologies	All Symbologies Off	ALLENA0	5-2
	All Symbologies On	ALLENA1	5-2
Codabar	Default All Codabar Settings	CBRDFT	5-3
	Off	CBRENA0	5-3
	*On	CBRENA1	5-3
Codabar Start/Stop Char.	*Don't Transmit	CBRSSX0	5-3
	Transmit	CBRSSX1	5-3
Codabar Check Char.	*No Check Char.	CBRCK20	5-4
	Validate, But Don't Transmit	CBRCK21	5-4
	Validate, and Transmit	CBRCK22	5-4
Codabar Concatenation	*Off	CBRCCT0	5-4
	On	CBRCCT1	5-4
	Require	CBRCCT2	5-4
Codabar Message Length	Minimum (2 - 60) *4	CBRMIN##	5-5
	Maximum (2 - 60) *60	CBRMAX##	5-5

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Code 39	Default All Code 39 Settings	C39DFT	5-6
	Off	C39ENA0	5-6
	*On	C39ENA1	5-6
Code 39 Start/Stop Char.	*Don't Transmit	C39SSX0	5-6
	Transmit	C39SSX1	5-6
Code 39 Check Char.	*No Check Char.	C39CK20	5-7
	Validate, But Don't Transmit	C39CK21	5-7
	Validate, and Transmit	C39CK22	5-7
Code 39 Message Length	Minimum (0 - 48) *0	C39MIN##	5-7
	Maximum (0 - 48) *48	C39MAX##	5-7
Code 39 Append	*Off	C39APP0	5-8
	On	C39APP1	5-8
Code 32 Pharmaceutical (PARAF)	*Off	C39B320	5-8
	On	C39B321	5-8
Code 39 Full ASCII	*Off	C39ASC0	5-9
	On	C39ASC1	5-9
	Code 39 Code Page	C39DCP	5-10
Interleaved 2 of 5	Default All Interleaved 2 of 5 Settings	I25DFT	5-10
	Off	I25ENA0	5-10
	*On	I25ENA1	5-10
Interleaved 2 of 5 Check Digit	*No Check Char.	I25CK20	5-11
	Validate, But Don't Transmit	I25CK21	5-11
	Validate, and Transmit	I25CK22	5-11

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Interleaved 2 of 5 Message Length	Minimum (2 - 80) *4	I25MIN##	5-11
	Maximum (2 - 80) *80	I25MAX##	5-11
NEC 2 of 5	Default All NEC 2 of 5 Settings	N25DFT	5-12
	Off	N25ENA0	5-12
	*On	N25ENA1	5-12
NEC 2 of 5 Check Digit	*No Check Char.	N25CK20	5-12
	Validate, But Don't Transmit	N25CK21	5-12
	Validate, and Transmit	N25CK22	5-12
NEC 2 of 5 Message Length	Minimum (2 - 80) *4	N25MIN##	5-13
	Maximum (2 - 80) *80	N25MAX##	5-13
Code 93	Default All Code 93 Settings	C93DFT	5-14
	Off	C93ENA0	5-14
	*On	C93ENA1	5-15
Code 93 Message Length	Minimum (0 - 80) *0	C93MIN##	5-14
	Maximum (0 - 80) *80	C93MAX##	5-14
	Code 93 Code Page	C93DCP	5-15
Straight 2 of 5 Industrial	Default All Straight 2 of 5 Industrial Settings	R25DFT	5-15
	*Off	R25ENA0	5-15
	On	R25ENA1	5-15
Straight 2 of 5 Industrial Message Length	Minimum (1 - 48) *4	R25MIN##	5-15
	Maximum (1 - 48) *48	R25MAX##	5-15
Straight 2 of 5 IATA	Default All Straight 2 of 5 IATA Settings	A25DFT	5-16

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Straight 2 of 5 IATA	*Off	A25ENA0	5-16
	On	A25ENA1	5-16
Straight 2 of 5 IATA Message Length	Minimum (1 - 48) *4	A25MIN##	5-16
	Maximum (1 - 48) *48	A25MAX##	5-16
Matrix 2 of 5	Default All Matrix 2 of 5 Settings	X25DFT	5-17
	*Off	X25ENA0	5-17
	On	X25ENA1	5-17
Matrix 2 of 5 Message Length	Minimum (1 - 80) *4	X25MIN##	5-17
	Maximum (1 - 80) *80	X25MAX##	5-17
Code 11	Default All Code 11 Settings	C11DFT	5-18
	*Off	C11ENA0	5-18
	On	C11ENA1	5-18
Code 11 Check Digits Required	1 Check Digit	C11CK20	5-18
	*2 Check Digits	C11CK21	5-18
Code 11 Message Length	Minimum (1 - 80) *4	C11MIN##	5-19
	Maximum (1 - 80) *80	C11MAX##	5-19
Code 128	Default All Code 128 Settings	128DFT	5-19
	Off	128ENA0	5-19
	*On	128ENA1	5-19
ISBT Concatenation	*Off	ISBENA0	5-20
	On	ISBENA1	5-20
Code 128 Message Length	Minimum (0 - 80) *0	128MIN##	5-20
	Maximum (0 - 90) *80	128MAX##	5-20
Code 128 Append	Off	C39APP0	5-20
	*On	C39APP1	5-20

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Code 128 Code Page	Code 128 Code Page (*2)	128DCP##	5-21
GS1-128	Default All GS1-128 Settings	GS1DFT	5-22
	*On	GS1ENA1	5-22
	Off	GS1ENA0	5-22
GS1-128 Message Length	Minimum (1 - 80) *1	GS1MIN	5-22
	Maximum (0 - 80) *80	GS1MAX	5-22
Telepen	Default All Telepen Settings	TELDFT	5-23
	*Off	TELENA0	5-23
	On	TELENA1	5-23
Telepen Output	*AIM Telepen Output	TELOLD0	5-23
	Original Telepen Output	TELOLD1	5-23
Telepen Message Length	Minimum (1 - 60) *1	TELMIN##	5-24
	Maximum (1 - 60) *60	TELMAX##	5-24
UPC-A	Default All UPC-A Settings	UPADFT	5-24
	Off	UPAENA0	5-25
	*On	UPAENA1	5-25
UPC-A Check Digit	Off	UPACKX0	5-24
	*On	UPACKX1	5-25
UPC-A Number System	Off	UPANSX0	5-25
	*On	UPANSX1	5-25
UPC-A 2 Digit Addenda	*Off	UPAAD20	5-25
	On	UPAAD21	5-25
UPC-A 5 Digit Addenda	*Off	UPAAD50	5-25
	On	UPAAD51	5-25
UPC-A Addenda Required	*Not Required	UPAARQ0	5-26
	Required	UPAARQ1	5-26

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
UPC-A Addenda Separator	Off	UPAADS0	5-26
	*On	UPAADS1	5-26
UPC-A/EAN-13 with Extended Coupon Code	*Off	CPNENA0	5-27
	Allow Concatenation	CPNENA1	5-27
	Require Concatenation	CPNENA2	5-27
UPC-E0	Default All UPC-E Settings	UPEDFT	5-27
	Off	UPEEN00	5-27
	*On	UPEEN01	5-27
UPC-E0 Expand	*Off	UPEEXP0	5-28
	On	UPEEXP1	5-28
UPC-E0 Addenda Required	Required	UPEARQ1	5-28
	*Not Required	UPEARQ0	5-28
UPC-E0 Addenda Separator	*On	UPEADS1	5-28
	Off	UPEADS0	5-28
UPC-E0 Check Digit	Off	UPECKX0	5-29
	*On	UPECKX1	5-29
UPC-E0 Number System	Off	UPENSX0	5-29
	*On	UPENSX1	5-29
UPC-E0 Addenda	2 Digit Addenda On	UPEAD21	5-29
	*2 Digit Addenda Off	UPEAD20	5-29
	5 Digit Addenda On	UPEAD51	5-29
	*5 Digit Addenda Off	UPEAD50	5-29
UPC-E1	*Off	UPEEN10	5-30
	On	UPEEN11	5-30
EAN/JAN-13	Default All EAN/ JAN Settings	E13DFT	5-31
	Off	E13ENA0	5-31
	*On	E13ENA1	5-31
EAN/JAN-13 Check Digit	Off	E13CKX0	5-32
	*On	E13CKX1	5-31

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
EAN/JAN-13 2 Digit Addenda	2 Digit Addenda On	E13AD21	5-32
	*2 Digit Addenda Off	E13AD20	5-32
	5 Digit Addenda On	E13AD51	5-32
	*5 Digit Addenda Off	E13AD50	5-32
EAN/JAN-13 Addenda Required	*Not Required	E13ARQ0	5-32
	Required	E13ARQ1	5-32
EAN/JAN-13 Addenda Separator	Off	E13ADS0	5-33
	*On	E13ADS1	5-33
ISBN Translate	*Off	E13ISB0	5-33
	On	E13ISB1	5-33
EAN/JAN-8	Default All EAN/ JAN 8 Settings	EA8DFT	5-34
	Off	EA8ENA0	5-34
	*On	EA8ENA1	5-34
EAN/JAN-8 Check Digit	Off	EA8CKX0	5-34
	*On	EA8CKX1	5-34
EAN/JAN-8 Addenda	*2 Digit Addenda Off	EA8AD20	5-35
	2 Digit Addenda On	EA8AD21	5-35
	*5 Digit Addenda Off	EA8AD50	5-35
	5 Digit Addenda On	EA8AD51	5-35
EAN/JAN-8 Addenda Required	*Not Required	EA8ARQ0	5-35
	Required	EA8ARQ1	5-35
EAN/JAN-8 Addenda Separator	Off	EA8ADS0	5-35
	*On	EA8ADS1	5-35
MSI	Default All MSI Settings	MSIDFT	5-36
	*Off	MSIENA0	5-36
	On	MSIENA1	5-36

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
MSI Check Character	*Validate Type 10, but Don't Transmit	MSICHK0	5-37
	Validate Type 10 and Transmit	MSICHK1	5-37
	Validate 2 Type 10 Chars, but Don't Transmit	MSICHK2	5-37
	Validate 2 Type 10 Chars and Transmit	MSICHK3	5-37
	Validate Type 10 then Type 11 Char, but Don't Transmit	MSICHK4	5-37
	Validate Type 10 then Type 11 Char and Transmit	MSICHK5	5-37
	Disable MSI Check Characters	MSICHK6	5-37
MSI Message Length	Minimum (4 - 48) *4	MSIMIN##	5-37
	Maximum (4 - 48) *48	MSIMAX##	5-37
GS1 DataBar Omnidirectional	Default All GS1 DataBar Omnidirectional Settings	RSSDFT	5-38
	Off	RSSENA0	5-38
	*On	RSSENA1	5-38
GS1 DataBar Limited	Default All GS1 DataBar Limited Settings	RSLDFT	5-38
	Off	RSLENA0	5-38
	*On	RSLENA1	5-38

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
GS1 DataBar Expanded	Default All GS1 DataBar Expanded Settings	RSEDFT	5-39
	Off	RSEENA0	5-39
	*On	RSEENA1	5-39
GS1 DataBar Expanded Msg. Length	Minimum (4 - 74) *4	RSEMIN##	5-39
	Maximum (4 - 74) *74	RSEMAX##	5-39
Trioptic Code	*Off	TRIENA0	5-40
	On	TRIENA1	5-40
Codablock A	Default All Codablock A Settings	CBADFT	5-40
	*Off	CBAENA0	5-40
	On	CBAENA1	5-40
Codablock A Msg. Length	Minimum (1 - 600) *1	CBAMIN####	5-41
	Maximum (1 - 600) *600	CBAMAX####	5-41
Codablock F	Default All Codablock F Settings	CBFDFT	5-40
	*Off	CBFENA0	5-42
	On	CBFENA1	5-42
Codablock F Msg. Length	Minimum (1 - 2048) *1	CBFMIN####	5-42
	Maximum (1 - 2048) *2048	CBFMAX####	5-42
PDF417	Default All PDF417 Settings	PDFDFT	5-43
	*On	PDFENA1	5-43
	Off	PDFENA0	5-43

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
PDF417 Msg. Length	Minimum (1-2750) *1	PDFMIN	5-43
	Maximum (1-2750) *2750	PDFMAX	5-43
MicroPDF417	Default All Micro PDF417 Settings	MPDDFT	5-44
	On	MPDENA1	5-44
	*Off	MPDENA0	5-44
MicroPDF417 Msg. Length	Minimum (1-366) *1	MPDMIN	5-44
	Maximum (1-366) *366	MPDMAX	5-44
GS1 Composite Codes	On	COMENA1	5-45
	*Off	COMENA0	5-45
UPC/EAN Version	On	COMUPC1	5-45
	*Off	COMUPC0	5-45
GS1 Composite Codes Msg. Length	Minimum (1-2435) *1	COMMIN	5-45
	Maximum (1-2435) *2435	COMMAX	5-45
GS1 Emulation	GS1-128 Emulation	EANEMU1	5-46
	GS1 DataBar Emulation	EANEMU2	5-46
	GS1 Code Expansion Off	EANEMU3	5-46
	EAN8 to EAN13 Conversion	EANEMU4	5-46
	*GS1 Emulation Off	EANEMU0	5-46
TCIF Linked Code 39	On	T39ENA1	5-47
	*Off	T39ENA0	5-47
QR Code	Default All QR Code Settings	QRCDFT	5-54
	*On	QRCENA1	5-47
	Off	QRCENA0	5-47

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
QR Code Msg. Length	Minimum (1-7089) *1	QRCMIN	5-48
	Maximum (1-7089) *7089	QRCMAX	5-48
Data Matrix	Default All Data Matrix Settings	IDMDFT	5-49
	*On	IDMENA1	5-49
	Off	IDMENA0	5-49
Data Matrix Msg. Length	Minimum (1-3116) *1	IDMMIN	5-49
	Maximum (1-3116) *3116	IDMMAX	5-49
Data Matrix Append	Off	IDMAPP0	5-50
	*On	IDMAPP1	5-50
Data Matrix Code Page	Data Matrix Code Page (*51)	IDMDCP##	5-50
MaxiCode	Default All MaxiCode Settings	MAXDFT	5-51
	*On	MAXENA1	5-51
	Off	MAXENA0	5-51
MaxiCode Msg. Length	Minimum (1-150) *1	MAXMIN	5-51
	Maximum (1-150) *150	MAXMAX	5-51
Aztec Code	Default All Aztec Code Settings	AZTDFT	5-52
	*On	AZTENA1	5-52
	Off	AZTENA0	5-52
Aztec Code Msg. Length	Minimum (1-3832) *1	AZTMIN	5-52
	Maximum (1-3832) *3832	AZTMAX	5-52
Aztec Code Append	Off	AZTAPP0	5-53
	*On	AZTAPP1	5-53

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Aztec Code Page	Aztec Code Page (*51)	AZTDCP##	5-53
Chinese Sensible (Han Xin) Code	Default All Han Xin Code Settings	HX_DFT	5-54
	On	HX_ENA1	5-54
	*Off	HX_ENA0	5-54
Chinese Sensible (Han Xin) Code Msg. Length	Minimum (1-7833) *1	HX_MIN	5-54
	Maximum (1-7833) *7833	HX_MAX	5-54
Postal Codes - 2D			
2D Postal Codes	*Off	POSTAL0	5-55
Single 2D Postal Codes	Australian Post On	POSTAL1	5-55
	British Post On	POSTAL7	5-55
	Canadian Post On	POSTAL30	5-55
	Intelligent Mail Bar Code On	POSTAL10	5-55
	Japanese Post On	POSTAL3	5-55
	KIX Post On	POSTAL4	5-55
	Planet Code On	POSTAL5	5-55
	Postal-4i On	POSTAL9	5-55
	Postnet On	POSTAL6	5-56
	Postnet with B and B' Fields On	POSTAL11	5-56
	InfoMail On	POSTAL2	5-56

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Combination 2D Postal Codes	InfoMail and British Post On	POSTAL8	5-56
	Intelligent Mail Bar Code and Postnet with B and B' Fields On	POSTAL20	5-56
	Postnet and Postal-4i On	POSTAL14	5-56
	Postnet and Intelligent Mail Bar Code On	POSTAL16	5-56
	Postal-4i and Intelligent Mail Bar Code On	POSTAL17	5-56

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Combination 2D Postal Codes (continued)	Postal-4i and Postnet with B and B' Fields On	POSTAL19	5-56
	Planet and Postnet On	POSTAL12	5-56
	Planet and Postnet with B and B' Fields On	POSTAL18	5-56
	Planet and Postal-4i On	POSTAL13	5-57
	Planet and Intelligent Mail Bar Code On	POSTAL15	5-57
	Planet, Postnet, and Postal-4i On	POSTAL21	5-57
	Planet, Postnet, and Intelligent Mail Bar Code On	POSTAL22	5-57
	Planet, Postal-4i, and Intelligent Mail Bar Code On	POSTAL23	5-57
	Postnet, Postal-4i, and Intelligent Mail Bar Code On	POSTAL24	5-57
	Planet, Postal-4i, and Postnet with B and B' Fields On	POSTAL25	5-57
	Planet, Intelligent Mail Bar Code, and Postnet with B and B' Fields On	POSTAL26	5-57
	Postal-4i, Intelligent Mail Bar Code, and Postnet with B and B' Fields On	POSTAL27	5-57

Selection	Setting ** Indicates default*	Serial Command *# Indicates a numeric entry*	Page
Combination 2D Postal Codes (continued)	Planet, Postal-4i, Intelligent Mail Bar Code, and Postnet On	POSTAL28	5-57
	Planet, Postal-4i, Intelligent Mail Bar Code, and Postnet with B and B' Fields On	POSTAL29	5-57
Planet Code Check Digit	Transmit	PLNCKX1	5-58
	*Don't Transmit	PLNCKX0	5-58
Postnet Check Digit	Transmit	NETCKX1	5-58
	*Don't Transmit	NETCKX0	5-58
Postal Codes - Linear			
China Post (Hong Kong 2 of 5)	Default All China Post (Hong Kong 2 of 5) Settings	CPCDFT	5-58
	*Off	CPCENA0	5-59
	On	CPCENA1	5-59
China Post (Hong Kong 2 of 5) Msg. Length	Minimum (2 - 80) *4	CPCMIN##	5-59
	Maximum (2 - 80) *80	CPCMAX##	5-59
Korea Post	Default All Korea Post Settings	KPCDFT	5-60
	*Off	KPCENA0	5-60
	On	KPCENA1	5-60
Korea Post Msg. Length	Minimum (2 - 80) *4	KPCMIN##	5-60
	Maximum (2 - 80) *48	KPCMAX##	5-60
Korea Post Check Digit	Transmit Check Digit	KPCCHK1	5-60
	*Don't Transmit Check Digit	KPCCHK0	5-60

7 Maintenance

Repairs

Honeywell is not an authorized Apple repair center. Please return only your sled to us for repair. Honeywell is not liable for any non-Honeywell product shipped to our repair center.

Healthcare Housing Cleaning Directions (Healthcare unit only)

⚠ *Honeywell is not responsible for any damage to the Apple device. Since the Apple device can be affected by these cleaning agents, be sure to remove it before cleaning the sled.*

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

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

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 charging. Contact your distributor for information about cable replacement.

Troubleshooting

If your sled is not functioning properly, review the following Troubleshooting Guide to try to isolate the problem.

Is the power on? Is the red or green aiming illumination line on?

If the aiming line doesn't appear, check that:

- The battery is in the battery well.

- The battery has been charged for at least 4 hours.
- Make certain that the Honeywell Price Check Simulator application from the Apple App Store[SM] is loaded.

Is the sled having trouble reading your symbols?

If the sled 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.

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

1. Scan the sample bar codes in the back of this manual. If the sled reads the sample bar codes, check that your bar code is readable. Verify that your bar code symbology is enabled (see Chapter 5).
2. If the sled still can't read the sample bar codes, scan "All Symbologies On" on page 5-2.

If you aren't sure what programming options have been set in the sled, or if you want the factory default settings restored, scan Resetting the Factory Defaults on page 1-4.

8 Customer Support

Technical Assistance

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

Knowledge Base: www.hsmknowledgebase.com

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

Technical Support Portal: www.hsmsupportportal.com

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

Web form: www.hsmcontactsupport.com

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

Telephone: www.honeywellaidc.com/locations

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

Product Service and Repair

Honeywell International Inc. provides service for all of its products through service centers throughout the world. To obtain warranty or non-warranty service, please visit www.honeywellaidc.com and select **Support > Contact Service and Repair** to see your region's instructions on how to obtain a Return Material Authorization number (RMA #). You should do this prior to returning the product.

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 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.

Refer to www.honeywellaidc.com/warranty_information for your product's warranty information.

A Reference Charts

Symbology Charts

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

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

Refer to Data Editing beginning on page 3-1 and Data Formatting beginning on page 4-1 for information about using Code ID and AIM ID.

Linear Symbologies

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

Symbology	AIM		Honeywell	
	ID	Possible modifiers (*m*)	ID	Hex
GS1				
GS1 DataBar	]e*m*	0	y	79
GS1 DataBar Limited	]e*m*		{	7B
GS1 DataBar Expanded	]e*m*		}	7D
GS1-128	]C1		I	49
2 of 5				
China Post (Hong Kong 2 of 5)	]X0		Q	51
Interleaved 2 of 5	]I*m*	0, 1, 3	e	65
Matrix 2 of 5	]X0		m	6D
NEC 2 of 5	]X0		Y	59
Straight 2 of 5 IATA	]R*m*	0, 1, 3	f	66
Straight 2 of 5 Industrial	]S0		f	66
MSI	]M*m*	0, 1	g	67
Telepen	]B*m*		t	74
UPC		0, 1, 2, 3, 8, 9, A, B, C		
UPC-A	]E0		c	63
UPC-A with Add-On	]E3		c	63
UPC-A with Extended Coupon Code	]E3		c	63
UPC-E	]E0		E	45
UPC-E with Add-On	]E3		E	45
UPC-E1	]X0		E	45

Add Honeywell Code ID				5C80
Add AIM Code ID				5C81
Add Backslash				5C5C
Batch mode quantity			5	35

2D Symbologies

Symbology	AIM		Honeywell	
	ID	Possible modifiers (*m*)	ID	Hex
All Symbologies				99
Aztec Code	]z*m*	0-9, A-C	z	7A
Chinese Sensible Code (Han Xin Code)	]X0		H	48
Codablock A	]O6	0, 1, 4, 5, 6	V	56
Codablock F	]O*m*	0, 1, 4, 5, 6	q	71
Code 49	]T*m*	0, 1, 2, 4	l	6C
Data Matrix	]d*m*	0-6	w	77
GS1	]e*m*	0-3		
GS1 Composite	]e*m*	0-3	y	79
GS1 DataBar Omnidirectional	]e*m*		y	79
MaxiCode	]U*m*	0-3	x	78
PDF417	]L*m*	0-2	r	72
MicroPDF417	]L*m*	3-5	R	52
QR Code	]Q*m*	0-6	s	73
Micro QR Code	]Q*m*		s	73

Postal Symbologies

Symbology	AIM		Honeywell	
	ID	Possible modifiers (*m*)	ID	Hex
All Symbologies				99
Australian Post	]X0		A	41
British Post	]X0		B	42
Canadian Post	]X0		C	43

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

ASCII Conversion Chart (Code Page 1252)

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

Non-printable ASCII control characters			Keyboard Control + ASCII (CTRL+X) Mode		
				Windows Mode Control + X Mode On (KBDCAS2)	
DEC	HEX	Char	Control + X Mode Off (KBDCAS0)	CTRL + X	CTRL + X function
0	00	NUL	Reserved	CTRL+ @	
1	01	SOH	NP Enter	CTRL+ A	Select all
2	02	STX	Caps Lock	CTRL+ B	Bold
3	03	ETX	ALT Make	CTRL+ C	Copy
4	04	EOT	ALT Break	CTRL+ D	Bookmark
5	05	ENQ	CTRL Make	CTRL+ E	Center
6	06	ACK	CTRL Break	CTRL+ F	Find
7	07	BEL	Enter / Ret	CTRL+ G	
8	08	BS	*(Apple Make)*	CTRL+ H	History
9	09	HT	Tab	CTRL+ I	Italic
10	0A	LF	*(Apple Break)*	CTRL+ J	Justify

Non-printable ASCII control characters			Keyboard Control + ASCII (CTRL+X) Mode		
				Windows Mode Control + X Mode On (KBDCAS2)	
DEC	HEX	Char	Control + X Mode Off (KBDCAS0)	CTRL + X	CTRL + X function
11	0B	VT	Tab	CTRL+ K	hyperlink
12	0C	FF	Delete	CTRL+ L	list, left align
13	0D	CR	Enter / Ret	CTRL+ M	
14	0E	SO	Insert	CTRL+ N	New
15	0F	SI	ESC	CTRL+ O	Open
16	10	DLE	F11	CTRL+ P	Print
17	11	DC1	Home	CTRL+ Q	Quit
18	12	DC2	PrtScn	CTRL+ R	
19	13	DC3	Backspace	CTRL+ S	Save
20	14	DC4	Back Tab	CTRL+ T	
21	15	NAK	F12	CTRL+ U	
22	16	SYN	F1	CTRL+ V	Paste
23	17	ETB	F2	CTRL+ W	
24	18	CAN	F3	CTRL+ X	
25	19	EM	F4	CTRL+ Y	
26	1A	SUB	F5	CTRL+ Z	
27	1B	ESC	F6	CTRL+ [	
28	1C	FS	F7	CTRL+ \	
29	1D	GS	F8	CTRL+]	
30	1E	RS	F9	CTRL+ ^	
31	1F	US	F10	CTRL+ -	
127	7F	⌂	NP Enter		

Lower ASCII Reference Table

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

Printable Characters								
DEC	HEX	Character	DEC	HEX	Character	DEC	HEX	Character
32	20	<SPACE>	64	40	@	96	60	`
33	21	!	65	41	A	97	61	a
34	22	"	66	42	B	98	62	b
35	23	#	67	43	C	99	63	c

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

Extended ASCII Characters					
DEC	HEX	CP 1252	ASCII	Alternate Extended	PS2 Scan Code
128	80	€	Ç	up arrow ↑	0x48
129	81		ü	down arrow ↓	0x50
130	82	‚	é	right arrow →	0x4B
131	83	*ƒ*	â	left arrow ←	0x4D
132	84	„	ä	Insert	0x52
133	85	…	à	Delete	0x53

Extended ASCII Characters (Continued)					
DEC	HEX	CP 1252	ASCII	Alternate Extended	PS2 Scan Code
134	86	†	å	Home	0x47
135	87	‡	ç	End	0x4F
136	88	ˆ	ê	Page Up	0x49
137	89	‰	ë	Page Down	0x51
138	8A	Š	è	Right ALT	0x38
139	8B	‹	ï	Right CTRL	0x1D
140	8C	Œ	î	Reserved	n/a
141	8D		ì	Reserved	n/a
142	8E	Ž	Ä	Numeric Keypad Enter	0x1C
143	8F		Å	Numeric Keypad /	0x35
144	90		É	F1	0x3B
145	91	‘	æ	F2	0x3C
146	92	’	Æ	F3	0x3D
147	93	“	ô	F4	0x3E
148	94	”	ö	F5	0x3F
149	95	•	ò	F6	0x40
150	96	–	û	F7	0x41
151	97	—	ù	F8	0x42
152	98	˜	ÿ	F9	0x43
153	99	™	Ö	F10	0x44
154	9A	š	Ü	F11	0x57
155	9B	›	¢	F12	0x58
156	9C	œ	£	Numeric Keypad +	0x4E
157	9D		¥	Numeric Keypad -	0x4A
158	9E	ž	Pts	Numeric Keypad *	0x37
159	9F	Ÿ	ƒ	Caps Lock	0x3A
160	A0		á	Num Lock	0x45
161	A1	¡	í	Left Alt	0x38
162	A2	¢	ó	Left Ctrl	0x1D
163	A3	£	ú	Left Shift	0x2A
164	A4	¤	ñ	Right Shift	0x36
165	A5	¥	Ñ	Print Screen	n/a
166	A6	¦	ª	Tab	0x0F
167	A7	§	º	Shift Tab	0x8F
168	A8	¨	¿	Enter	0x1C
169	A9	©	⌐	Esc	0x01
170	AA	ª	¬	Alt Make	0x36
171	AB	«	½	Alt Break	0xB6
172	AC	¬	¼	Control Make	0x1D

Extended ASCII Characters (Continued)					
DEC	HEX	CP 1252	ASCII	Alternate Extended	PS2 Scan Code
173	AD		¡	Control Break	0x9D
174	AE	®	«	Alt Sequence with 1 Character	0x36
175	AF	¯	»	Ctrl Sequence with 1 Character	0x1D
176	B0	°	░		
177	B1	±	▒		
178	B2	²	▓		
179	B3	³	│		
180	B4	´	┤		
181	B5	µ	╡		
182	B6	¶	╢		
183	B7	·	╖		
184	B8	¸	╕		
185	B9	¹	╣		
186	BA	º	║		
187	BB	»	╗		
188	BC	¼	╝		
189	BD	½	╜		
190	BE	¾	╛		
191	BF	¿	┐		
192	C0	À	└		
193	C1	Á	┴		
194	C2	Â	┬		
195	C3	Ã	├		
196	C4	Ä	─		
197	C5	Å	í		
198	C6	Æ	╞		
199	C7	Ç	╟		
200	C8	È	╚		
201	C9	É	╔		
202	CA	Ê	╩		
203	CB	Ë	╦		
204	CC	Ì	╠		
205	CD	Í	═		
206	CE	Î	╬		
207	CF	Ï	╧		
208	D0	Ð	╨		
209	D1	Ñ	╤		
210	D2	Ò	╥		
211	D3	Ó	╙		

Extended ASCII Characters (Continued)					
DEC	HEX	CP 1252	ASCII	Alternate Extended	PS2 Scan Code
212	D4	Ô	╘		
213	D5	Õ	╒		
214	D6	Ö	╓		
215	D7	×	╫		
216	D8	Ø	╪		
217	D9	Ù	┘		
218	DA	Ú	┌		
219	DB	Û	█		
220	DC	Ü	▄		
221	DD	Ý	▌		
222	DE	Þ	▐		
223	DF	ß	▀		
224	E0	à	α		
225	E1	á	ß		
226	E2	â	Γ		
227	E3	ã	π		
228	E4	ä	Σ		
229	E5	å	σ		
230	E6	æ	µ		
231	E7	ç	τ		
232	E8	è	Φ		
233	E9	é	Θ		
234	EA	ê	Ω		
235	EB	ë	δ		
236	EC	ì	∞		
237	ED	í	φ		
238	EE	î	ε		
239	EF	ï	∩		
240	F0	ð	≡		
241	F1	ñ	±		
242	F2	ò	≥		
243	F3	ó	≤		
244	F4	ô	⌠		
245	F5	õ	⌡		
246	F6	ö	÷		
247	F7	÷	≈		
248	F8	ø	°		
249	F9	ù	·		
250	FA	ú	·		

Extended ASCII Characters (Continued)					
DEC	HEX	CP 1252	ASCII	Alternate Extended	PS2 Scan Code
251	FB	û	√		
252	FC	ü	ⁿ		
253	FD	ý	²		
254	FE	þ	■		
255	FF	ÿ			

ISO 2022/ISO 646 Character Replacements

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

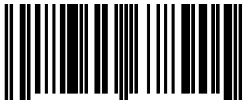
Code Page Selection Method/Country	Standard	Keyboard Country	Honeywell Code Page Option
United States (standard ASCII)	ISO/IEC 646-IRV	n/a	1
Automatic National Character Replacement	**ISO/IEC 2022**	**n/a**	**2 (default)**
Binary Code page	n/a	n/a	3
Default "Automatic National Character replacement" will select the below Honeywell Code Page options for Code128, Code 39 and Code 93.			
United States	ISO/IEC 646-06	0	1
Canada	ISO /IEC 646-121	54	95
Canada	ISO /IEC 646-122	18	96
Japan	ISO/IEC 646-14	28	98
China	ISO/IEC 646-57	92	99
Great Britain (UK)	ISO /IEC 646-04	7	87

Code Page Selection Method/Country	Standard	Keyboard Country	Honeywell Code Page Option
France	ISO /IEC 646-69	3	83
Germany	ISO/IEC646-21	4	84
Switzerland	ISO /IEC 646-CH	6	86
Sweden / Finland (extended Annex C)	ISO/IEC 646-11	2	82
Ireland	ISO /IEC 646-207	73	97
Denmark	ISO/IEC 646-08	8	88
Norway	ISO/IEC 646-60	9	94
Italy	ISO/IEC 646-15	5	85
Portugal	ISO/IEC 646-16	13	92
Spain	ISO/IEC 646-17	10	90
Spain	ISO/IEC 646-85	51	91

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

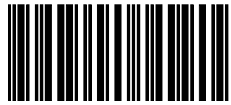
Sample Symbols

UPC-A



0 123456 7890

Interleaved 2 of 5



1234567890

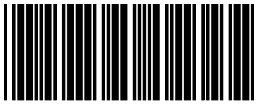
Code 128

Code 128

EAN-13

9 780330 290951

Code 39

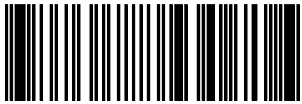


BC321

Codabar

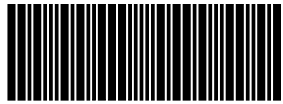
A13579B

Code 93



123456-9$

Straight 2 of 5 Industrial



123456

Sample Symbols

Matrix 2 of 5

6543210

GS1 DataBar

(01)00123456789012

PDF417

Car Registration

Postnet

Zip Code

Data Matrix

Test Symbol

QR Code

Numbers

4-CB (4-State Customer Bar Code)

01,234,567094,987654321,01234567891

ID-tag (UPU 4-State)

J18CUSA8E6N062315014880T

Sample Symbols

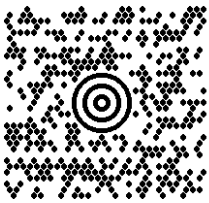
Aztec

Package Label

Micro PDF417

Test Message

MaxiCode



Test Message

Programming Chart

0

1

2

3

4

5

6

7

8

9

Programming Chart

A

B

C

D

E

F

Save

Discard

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.*

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