



HP Engage One Pro Barcode Scanner User Guide

HP Engage One Essential Barcode Scanner

M4776-003

M47766-003

RMN: HSN-NL02

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Third Edition: April 2023

Second Edition: August 2021

First Edition: December 2020

Document Part Number: M47766-003

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Preface

Introduction

This manual provides detailed instructions for setting up and using the HP Engage One Pro Barcode Scanner (hereinafter referred to as the scanner).

Chapter description

- | | |
|---|--|
| ✧ <i>Chapter 1, Getting started</i> | Gives a general description of the scanner. |
| ✧ <i>Chapter 2, HP Barcode Scanner N-Series Configuration Utility</i> | Introduces a useful tool you can use to set up the scanner. |
| ✧ <i>Chapter 3, System settings</i> | Introduces three configuration methods and describes how to configure general parameters of the scanner. |
| ✧ <i>Chapter 4, USB interface</i> | Describes how to configure USB communication parameters. |
| ✧ <i>Chapter 5, Symbologies</i> | Lists all compatible symbologies and describes how to configure the relevant parameters. |
| ✧ <i>Chapter 6, Data Formatter</i> | Explains how to customize scanned data with the advanced Data Formatter. |
| ✧ <i>Chapter 7, Prefixes and suffixes</i> | Describes how to use prefix and suffix to customize scanned data. |
| ✧ <i>Chapter 8, Batch programming</i> | Explains how to integrate a complex programming task into a single barcode. |
| ✧ <i>Appendix</i> | Provides factory defaults table and a bunch of frequently used programming barcodes. |

Explanation of icons



This icon indicates something relevant to this manual.



This icon indicates this information requires extra attention from the reader.



This icon indicates handy tips that can help you use or configure the scanner with ease.



This icon indicates practical examples that can help you to acquaint yourself with operations.

Chapter 1 Getting started

Introduction

The scanner is armed with a CMOS image capturer, a computerized image recognition system-on-chip that features fast scanning and accurate decoding on barcodes on virtually any medium: paper, magnetic card, mobile phones and LCD displays. The scanner can be easily integrated into OEM equipment or systems, such as handheld, portable, or stationary barcode scanners.

Features of the scanner



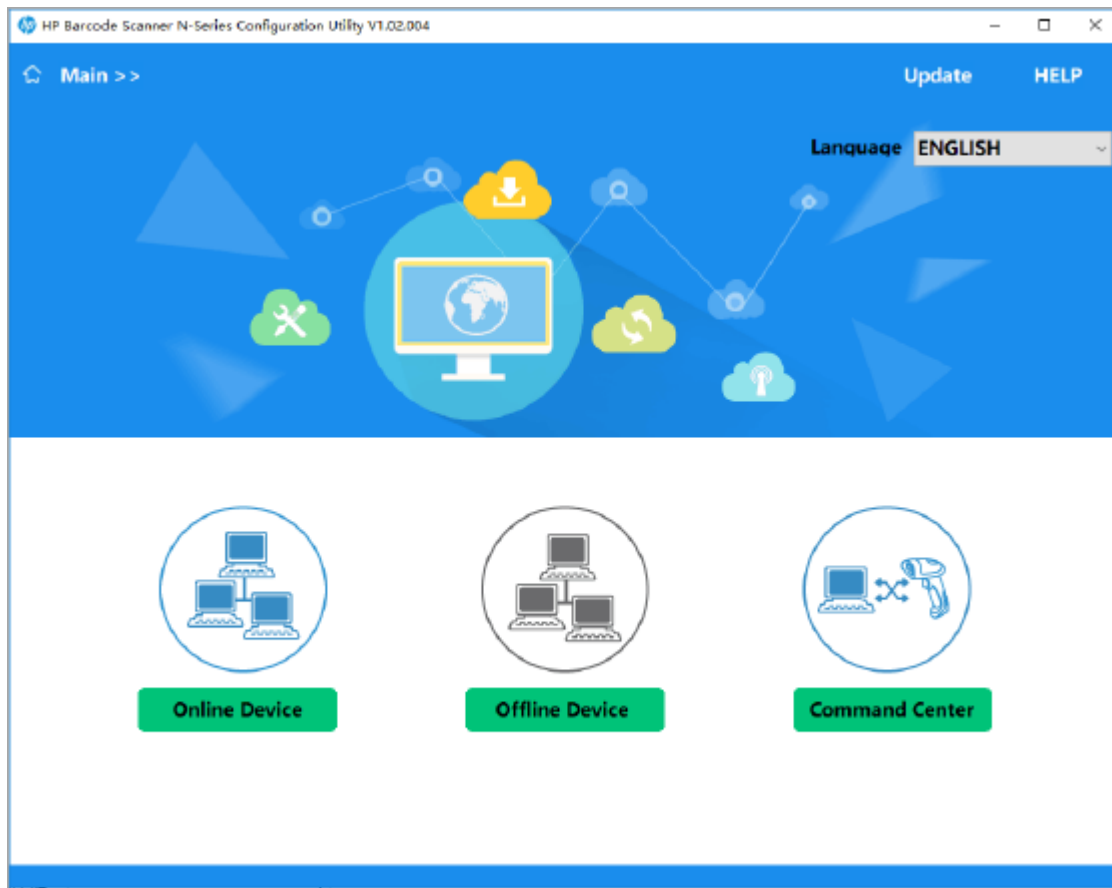
- Snappy on-screen barcode capture
- Slimmer, more compact construction
- Robust design with high vibration resistance
- Outstanding power efficiency
- Multiple interfaces



To prevent damage to the scanner, be sure that the host computer is turned off before you connect or disconnect the scanner to a USB port on the computer or a USB hub connected to the computer.

Chapter 2 HP Barcode Scanner N-Series Configuration Utility

HP Barcode Scanner N-Series Configuration Utility is a Windows-based configuration tool, which allows users to gain access to decoded data and captured images and to configure scanners.





Chapter 3 System Settings

Introduction

There are three ways to configure the scanner: barcode programming, command programming and HP Barcode Scanner N-Series Configuration Utility programming.

Barcode programming

The scanner can be configured by scanning programming barcodes. All user programmable features/options are described along with their programming barcodes/commands in the following sections.

This programming method is most straightforward. However, it requires manually scanning barcodes. As a result, errors are more likely to occur.

Command programming

The scanner can also be configured by serial commands sent from the host device.

Users can design an application program to send those command strings to the scanners to perform device configuration.

HP Barcode Scanner N-Series Configuration Utility programming

Besides the two methods mentioned above, you can conveniently perform scanner configuration through Configuration Utility too. Configuration Utility is a Windows-based configuration tool particularly designed for HP Inc products, enabling users to gain access to decoded data and captured images and to configure scanners.





@SETUPE1
Enter Setup

Example programming barcode



The figure above is an example that shows you the programming barcode and command for the Enter Setup function:

1. The **No Case Conversion** barcode.
2. The **No Case Conversion** command.
3. The description of feature/option.
4. ** indicates factory default settings.



@SETUPE0
** Exit Setup



@SETUPE1
Enter Setup

Use of programming commands

Besides the barcode programming method, the scanner can also be configured by serial commands (HEX) sent from the host device. **All commands must be entered in uppercase letters.**

Command syntax

Prefix StorageType Tag SubTag {Data} [,SubTag {Data}] [:Tag SubTag {Data}] [...] Suffix

Prefix: "~<SOH>0000" (HEX: **7E 01 30 30 30 30**), 6 characters.

StorageType: "@" (HEX: **40**) or "#" (HEX: **23**), 1 character. "@" means permanent setting which will not be lost by removing power from the scanner or rebooting it; "#" means temporary setting which will be lost by removing power from the scanner or rebooting it.

Tag: A 3-character case-sensitive field that identifies the desired command group. For example, all USB HID Keyboard configuration settings are identified with a Tag of KBW.

SubTag: A 3-character case-sensitive field that identifies the desired parameter within the tag group. For example, the SubTag for the keyboard layout is CTY.

Data: The value for a feature or parameter setting, identified by the Tag and SubTag.

Suffix: "<ETX>" (HEX: **3B 03**), 2 characters.

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

Query commands

For query commands, the entry in the **Data** field in the syntax above is one of the following characters means:

- * (HEX: **2A**) What is the scanner's current value for the setting(s).
- & (HEX: **26**) What is the factory default value for the setting(s).
- ^ (HEX: **5E**) What is the range of possible values for the setting(s).



@SETUPE0
** Exit Setup



@SETUPE1
Enter Setup

The value of the **StoreType** field in a query command can be either "@" (HEX: 40) or "#" (HEX: 23).

A query command with the **SubTag** field omitted means to query all the settings concerning a tag. For example, to query all the current settings about Code 11, you should enter **7E 01 30 30 30 30 40 43 31 31 2A 3B 03** (i.e. ~<SOH>0000@C11*;<ETX>).

Responses

Different from command sequence, the prefix of a response consists of the six characters of "<STX><SOH>0000" (HEX: **02 01 30 30 30 30**).

The scanner responds to serial commands with one of the following three responses:

- <ACK> (HEX: **06**) Indicates a good command which has been processed.
- <NAK> (HEX: **15**) Indicates a good configuration command with its **Data** field entry out of the allowable range for this Tag and SubTag combination (e.g. an entry for an inter-keystroke delay of 100 when the field will only allow 2 digits), or an invalid query command.
- <ENQ> (HEX: **05**) Indicates an invalid Tag or SubTag command.

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

Examples

Example 1: Enable Code 11, set the minimum and maximum lengths to 12 and 22 respectively.

Enter: **7E 01 30 30 30 30 40 43 31 31 45 4E 41 31 2C 4D 49 4E 31 32 2C 4D 41 58 32 32 3B 03**
(~<SOH>0000@C11ENA1,MIN12,MAX22;<ETX>)

Response: **02 01 30 30 30 30 40 43 31 31 45 4E 41 31 06 2C 4D 49 4E 31 32 06 2C 4D 41 58 32 32 06 3B 03**
(<STX><SOH>0000@C11ENA1<ACK>,MIN12<ACK>,MAX22<ACK>;<ETX>)

Example 2: Query the current minimum and maximum lengths of Code 11.

Enter: **7E 01 30 30 30 30 40 43 31 31 4D 49 4E 2A 2C 4D 41 58 2A 3B 03**
(~<SOH>0000@C11MIN*,MAX*;<ETX>)

Response: **02 01 30 30 30 30 40 43 31 31 4D 49 4E 31 32 06 2C 4D 41 58 32 32 06 3B 03**
(<STX><SOH>0000@C11MIN12<ACK>,MAX22<ACK>;<ETX>)



@SETUPE0
** Exit Setup



@SETUPE1
Enter Setup

Use of programming barcodes

Scanning the **Enter Setup** barcode can enable the scanner to enter the setup mode. Then you can scan a number of programming barcodes to configure your scanner. To exit the setup mode, scan the **Exit Setup** barcode or a non-programming barcode, or reboot the scanner.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Programming barcode data (i.e. the characters under programming barcode) can be transmitted to the host device. Scan the appropriate barcode below to enable or disable the transmission of programming barcode data to the host device.



@SETUPT0
**** Do Not Transmit Programming Barcode Data**



@SETUPT1
Transmit Programming Barcode Data



@SETUPE0
**** Exit Setup**



@SETUPE1

Enter Setup

Illumination mode

A couple of illumination options are provided to improve the lighting conditions during every image capture:

Normal: Illumination LEDs on the scanner are turned on during image capture.

Always On: Illumination LEDs on the scanner keep on after the scanner is powered on.

Off: Illumination LEDs on the scanner are off all the time.



@ILLSCN1

**** Normal**



@ILLSCN0

Off



@ILLSCN2

Always On



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

Aiming

When scanning/capturing image, the scanner projects an aiming pattern which allows positioning the target barcode within its field of view and thus makes decoding easier.

Normal: The scanner projects an aiming pattern only during barcode scanning/capture.

Always On: Aiming pattern is constantly on after the scanner is powered on.

Off: Aiming pattern is off all the time.



@AMLENA1
**** Normal**



@AMLENA0
Off



@AMLENA2
Always On

Good read LED

The LED can be programmed to be On or Off to indicate good read.



@GRLNA1
**** On**



@GRLNA0
Off



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Good read LED duration

This parameter sets the amount of time that the Good Read LED to remain on following a good read. It is programmable in 1ms increments from 1ms to 2,500ms.



@GRLDUR20
** Short (20ms)



@GRLDUR120
Medium (120ms)



@GRLDUR220
Long (220ms)



@GRLDUR320
Prolonged (320ms)



@GRLDUR
Custom (1 - 2,500ms)

E
xample

Set the Good Read LED duration to 800ms:

1. Scan the **Enter Setup** barcode.
2. Scan the **Custom** barcode.
3. Scan the numeric barcodes “8”, “0” and “0” from the “Digit Barcodes” section in Appendix.
4. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
5. Scan the **Exit Setup** barcode.

Power-on beep

The scanner can be programmed to beep when it is powered on. Scan the **Off** barcode if you do not want a power on beep.



@SETUPE0
** Exit Setup



@SETUPE1
Enter Setup



@PWBENA1
**** On**



@PWBENA0
Off

Good read beep

Scanning the **Off** barcode can turn off the beep that indicates successful decode; scanning the **On** barcode can turn it back on.



@GRBENA1
**** On**



@GRBENA0
Off



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Good read beep duration

This parameter sets the length of the beep the scanner emits on a good read. It is programmable in 1ms increments from 20ms to 300ms.



@GRBDUR40
Short (40ms)



@GRBDUR80
**** Medium (80ms)**



@GRBDUR120
Long (120ms)



@GRBDUR
Custom (20 – 300ms)

E
xample

Set the Good Read Beep duration to 200ms:

1. Scan the **Enter Setup** barcode.
2. Scan the **Custom** barcode.
3. Scan the numeric barcodes “2”, “0” and “0” from the “Digit Barcodes” section in Appendix.
4. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
5. Scan the **Exit Setup** barcode.



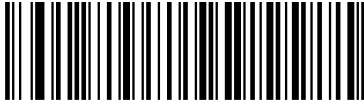
@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Good read beep frequency

This parameter is programmable in 1Hz increments from 20Hz to 20,000Hz.



@GRBFRQ800
Extra Low (800Hz)



@GRBFRQ1600
Low (1600Hz)



@GRBFRQ2730
**** Medium (2730Hz)**



@GRBFRQ4200
High (4200Hz)



@GRBFRQ
Custom (20 - 20,000Hz)

Example

Set the Good Read Beep frequency to 2,000Hz:

1. Scan the **Enter Setup** barcode.
2. Scan the **Custom** barcode.
3. Scan the numeric barcodes “2”, “0”, “0” and “0” from the “Digit Barcodes” section in Appendix.
4. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
5. Scan the **Exit Setup** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Good read beep volume

There are 20 volume levels to choose from. The bigger the value, the louder the Good Read Beep.



@GRBVLL50
**** Level 20**



@GRBVLL12
Medium



@GRBVLL6
Low



@GRBVLL
Custom Volume (Level 1-50)

E
sample

Set the Good Read Beep volume to Level 8:

1. Scan the **Enter Setup** barcode.
2. Scan the **Custom Volume** barcode.
3. Scan the numeric barcode “8” from the “Digit Barcodes” section in Appendix.
4. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
5. Scan the **Exit Setup** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Scan mode

Level Mode: A trigger pull activates a decode session. The decode session continues until a barcode is decoded or you release the trigger.

Sense Mode: The scanner activates a decode session every time it detects a barcode presented to it. The decode session continues until a barcode is decoded or the decode session timeout expires. **Reread Timeout** can avoid undesired rereading of same barcode in a given period of time. **Sensitivity** can change the Sense Mode's sensibility to changes in images captured. **Image Stabilization Timeout** gives the scanner time to adapt to ambient environment after it decodes a barcode and "looks" for another.

Continuous Mode: The scanner automatically starts one decode session after another. To suspend/resume barcode reading, simply press the trigger. **Reread Timeout** can avoid undesired rereading of same barcode in a given period of time. Note that when switching to this mode by scanning the **Continuous Mode** barcode, the scanner will stop barcode reading for 3 seconds before starting scanning continuously.

Pulse Mode: When the trigger is pulled and released, scanning is activated until a barcode is decoded or the decode session timeout expires (The decode session timeout begins when the trigger is released).

Batch Mode: A trigger pull activates a round of multiple decode sessions. This round of multiple scans continues until you release the trigger. Rereading the same barcode is not allowed in the same round.



@SCNMOD0
Level Mode



@SCNMOD2
** Sense Mode



@SCNMOD3
Continuous Mode



@SCNMOD4
Pulse Mode



@SCNMOD7
Batch Mode



@SETUPE0
** Exit Setup



@SETUPE1

Enter Setup



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

Decode session timeout

This parameter sets the maximum time decode session continues during a scan attempt. It is programmable in 1ms increments from 1ms to 3,600,000ms. When it is set to 0, the timeout is infinite. The default setting is 3,000ms.

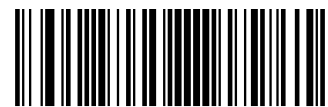


@ORTSET
Decode Session Timeout

E *xample*

Set the decode session timeout to 1,500ms:

1. Scan the **Enter Setup** barcode.
2. Scan the **Decode Session Timeout** barcode.
3. Scan the numeric barcodes “1”, “5”, “0” and “0” from the “Digit Barcodes” section in Appendix.
4. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
5. Scan the **Exit Setup** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Image stabilization timeout (Sense mode)

This parameter defines the amount of time the scanner will spend adapting to ambient environment after it decodes a barcode and “looks” for another. It is programmable in 1ms increments from 0ms to 3,000ms. The default setting is 200ms.



@SENIST
Image Stabilization Timeout

E
sample

Set the image stabilization timeout to 800ms:

1. Scan the **Enter Setup** barcode.
2. Scan the **Image Stabilization Timeout** barcode.
3. Scan the numeric barcodes “8”, “0” and “0” from the “Digit Barcodes” section in Appendix.
4. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
5. Scan the **Exit Setup** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Reread timeout

Reread Timeout can avoid undesired rereading of same barcode in a given period of time. This feature is only applicable to the Sense and Continuous modes.

Enable Reread Timeout: Do not allow the scanner to reread same barcode before the reread timeout expires.

Disable Reread Timeout: Allow the scanner to reread same barcode.



@RRDENA1
****Enable Reread Timeout**



@RRDENA0
Disable Reread Timeout

The following parameter sets the time interval between two successive reads on same barcode. It is programmable in 1ms increments from 0ms to 3,600,000ms. When it is set to a value greater than 3,000, the timeout for rereading same programming barcode is limited to 3,000ms. The default setting is 1,500ms.



@RRDDUR
Set Reread Timeout

E
xample

Set the reread timeout to 1,000ms:

1. Scan the **Enter Setup** barcode.
2. Scan the **Set Reread Timeout** barcode.
3. Scan the numeric barcodes “1”, “0”, “0” and “0” from the “Digit Barcodes” section in Appendix.
4. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
5. Scan the **Exit Setup** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

You may wish to restart the reread timeout when the scanner encounters the same barcode that was decoded in the last scan session before the reread timeout expires. To enable this feature, scan the **Reread Timeout Reset On** barcode. This feature is only effective when **Reread Timeout** is enabled.



@RRDREN1
Reread Timeout Reset On



** **Reread Timeout Reset Off**

Image decoding timeout

Image Decoding Timeout specifies the maximum time the scanner will spend decoding an image. This parameter is programmable in 1ms increments from 1ms to 3,000ms. The default timeout is 500ms.



@DETSET
Image Decoding Timeout

E
sample

Set the image decoding timeout to 1,000ms:

1. Scan the **Enter Setup** barcode.
2. Scan the **Image Decoding Timeout** barcode.
3. Scan the numeric barcodes "1", "0", "0" and "0" from the "Digit Barcodes" section in Appendix.
4. Scan the **Save** barcode from the "Save/Cancel Barcodes" section in Appendix.
5. Scan the **Exit Setup** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1

Enter Setup

Good read delay

Good Read Delay sets the minimum amount of time before the scanner can read another barcode. This parameter is programmable in 1ms increments from 1ms to 3,600,000ms. The default setting is 500ms. Scan the appropriate barcode below to enable or disable the delay.



@GRDENA1

Enable Good Read Delay



@GRDENA0

**** Disable Good Read Delay**

To set the good read delay, scan the barcode below, then set the delay (from 1 to 3,600,000ms) by scanning the digit barcode(s) then scanning the **Save** barcode from the Appendix.



@GRDDUR

Good Read Delay

E
example

Set the good read delay to 1,000ms:

1. Scan the **Enter Setup** barcode.
2. Scan the **Good Read Delay** barcode.
3. Scan the numeric barcodes "1", "0", "0" and "0" from the "Digit Barcodes" section in Appendix.
4. Scan the **Save** barcode from the "Save/Cancel Barcodes" section in Appendix.
5. Scan the **Exit Setup** barcode.



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

Sensitivity (Sense mode)

Sensitivity specifies the degree of acuteness of the scanner's response to changes in images captured. There are 20 levels to choose from. The smaller the value, the higher the sensitivity and the lower requirement in image change to trigger the scanner. You can select an appropriate degree of sensitivity that fits the application environment. This feature is only applicable to the Sense mode.



@SENLVL14
Low Sensitivity



@SENLVL11
Medium Sensitivity



@SENLVL8
High Sensitivity



@SENLVL5
** Enhanced Sensitivity



@SENLVL
Custom Sensitivity (Level 1-20)

E
example

Set the sensitivity to Level 10:

1. Scan the **Enter Setup** barcode.
2. Scan the **Custom Sensitivity** barcode.
3. Scan the numeric barcodes "1" and "0" from the "Digit Barcodes" section in Appendix.
4. Scan the **Save** barcode from the "Save/Cancel Barcodes" section in Appendix.
5. Scan the **Exit Setup** barcode.



@SETUPE0
** Exit Setup



@SETUPE1
Enter Setup

Illumination brightness control



@ILLBRL0
Level 1



@ILLBRL1
Level 2



@ILLBRL2
**** Level 3**



@ILLBRL3
Level 4



@ILLBRL4
Level 5



Scanner may experience high temperature when illumination is set to Level 4 or 5 after an extended period. When this occurs, illumination level may auto adjust to a lower level to allow scanner to cool down. Once temperature returns to normal, device will auto adjust back to the higher illumination level setting.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Trigger commands

When **Enable Trigger Commands** is selected, you can activate and deactivate the scanner in the Level mode with serial trigger commands. Sending the **Start Scanning** command (default: <SOH> T <EOT>, user-programmable) to the scanner in the Level mode activates a decode session. The decode session continues until a barcode is decoded or the decode session timeout expires or the scanner receives the **Stop Scanning** command (default: <SOH> P <EOT>, user-programmable).



@SCNTCE0
** Disable Trigger Commands



@SCNTCE1
Enable Trigger Commands

Modify start scanning command

The **Start Scanning** command can consist of 1-10 characters (HEX values from 0x01 to 0xFF). In this command, the character "?" (HEX: 0x3F) cannot be the first character. The default **Start Scanning** command is <SOH> T <EOT>.



@SCNTCT
Modify Start Scanning Command

E
xample

Set the Start Scanning command to "*T":

1. Scan the **Enter Setup** barcode.
2. Scan the **Modify Start Scanning Command** barcode.
3. Scan the numeric barcodes "2", "A", "5" and "4" from the "Digit Barcodes" section in Appendix.
4. Scan the **Save** barcode from the "Save/Cancel Barcodes" section in Appendix.
5. Scan the **Exit Setup** barcode.



@SETUPE0
** Exit Setup



@SETUPE1
Enter Setup

Modify stop scanning command

The **Stop Scanning** command can consist of 1-10 characters (HEX values from 0x01 to 0xFF). In this command, the character "?" (HEX: 0x3F) cannot be the first character. The default **Stop Scanning** command is **<SOH> P <EOT>**.



@SCNTCP

Modify Stop Scanning Command

E
xample

Set the Stop Scanning command to **"*P"**:

1. Scan the **Enter Setup** barcode.
2. Scan the **Modify Stop Scanning Command** barcode.
3. Scan the numeric barcodes "2", "A", "5" and "0" from the "Digit Barcodes" section in Appendix.
4. Scan the **Save** barcode from the "Save/Cancel Barcodes" section in Appendix.
5. Scan the **Exit Setup** barcode.

Make a beeping sound

You may wish to force the scanner to beep upon a command sent from the host. A beeping sound is made to gain a user's attention to an error or other important event.

BEEPONxxxFyyyTnnV (xxx: The desired frequency, 1-20,000Hz; yyy: The desired duration, 1-10,000ms; nn: The desired volume level, 1-20 (lowest-loudest))

Example: Make a 50ms beep at 2,000Hz with volume level set to 20

Enter: ~<SOH>0000#BEEPON2000F50T20V;<ETX>

Response: <STX><SOH>0000#BEEPON2000F50T20V<ACK>;<ETX>



@SETUPE0
** Exit Setup



@SETUPE1

Enter Setup

Turning on good read LED

You might turn on the external good read LED of the scanner for a certain period of time with a command sent from the host. When using this feature, you should first query the range of possible values for the setting. Note that the scanner **cannot** scan barcodes when it is executing this command.

LEDONSxCyyD (x: Specify the LED color: 0 – Red, 1 – White, 2 – Green, 3 - Blue; yy: Specify the length of time the LED stays lit, 10-3,600,000ms)

Command for querying whether the scanner supports this feature: LEDONS* or LEDONS&

Returning LEDONS<ACK> indicates the scanner supports this feature.

Command for querying the range of possible values for the setting: LEDONS^

Returning LEDONS0-3C10-3600000D <ACK> indicates LED color options include red, white, green and blue, and the range for the length of time the LED stays lit is 10-3,600,000ms.

Example: Turn on the red Good Read LED for 2,000ms

Enter: ~<SOH>0000#LEDONS0C2000D;<ETX>

Response: <STX><SOH>0000#LEDONS0C2000D<ACK>;<ETX>

Turning on illumination LED

You may turn on the internal illumination LED on the scanner for a certain period of time with a command sent from the host. When using this feature, you should first query the range of possible values for the setting. Note that the scanner **cannot** scan barcodes when it is executing this command.

LEDONixCyyD (x: Specify the LED color: 0 – Red, 1 – White, 2 – Green, 3 - Blue; yy: Specify the length of time the LED stays lit, 10-3,600,000ms)

Command for querying whether the scanner supports this feature: LEDONI* or LEDONI&

Returning LEDONI<ACK> indicates the scanner supports this feature.

Command for querying the range of possible values for the setting: LEDONI^

Returning LEDONI0-3C10-3600000D <ACK> indicates LED color options include red, white, green and blue, and the range for the length of time the LED stays lit is 10-3,600,000ms.

Example: Turn on the white illumination LED for 2,000ms

Enter: ~<SOH>0000#LEDONI1C2000D;<ETX>

Response: <STX><SOH>0000#LEDONI1C2000D<ACK>;<ETX>



@SETUPE0

** Exit Setup



@SETUPE1

Enter Setup

Turning on the aimer

You may turn on the aimer on the scanner for a certain period of time with a command sent from the host. When using this feature, you should first query the range of possible values for the setting. Note that the scanner **cannot** scan barcodes when it is executing this command.

LEDONAy (yy: Specify the length of time the aimer stays on, 10-3,600,000ms)

Command for querying whether the scanner supports this feature: LEDONA* or LEDONA&

Returning LEDONA<ACK> indicates the scanner supports this feature.

Command for querying the range of possible values for the setting: LEDONA^

Returning LEDONA**10-3600000** <ACK> indicates the range for the length of time the aimer stays on is 10-3,600,000ms.

Example: Turn on the aimer for 2,000ms

Enter: ~<SOH>0000#LEDONA2000;<ETX>

Response: <STX><SOH>0000#LEDONA2000<ACK>;<ETX>

Turning the read barcode command on or off

Sending the Read Barcode Off command ~<SOH>0000#SCNENA0;<ETX> to the scanner can disable it from reading barcode, and the scanner is unable to scan barcode unless you send the Read Barcode On command ~<SOH>0000#SCNENA1;<ETX> to it or power cycle it. By default, Read Barcode is On.

Scanning preference

Normal Mode: Select this mode when reading barcodes on paper.

Screen Mode: Select this mode when reading barcodes on the screen.

High Motion Tolerance Mode: Select this mode when reading barcodes on moving objects.



@EXPLVL0

**** Normal Mode**



@EXPLVL2

Screen Mode



@EXPLVL4

High Motion Tolerance Mode



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

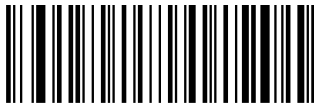
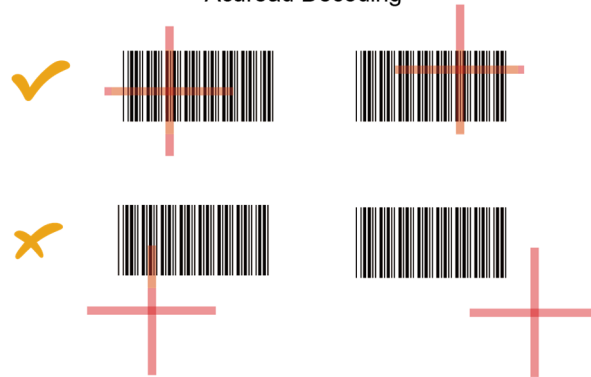
Decode area

Whole Area Decoding: The scanner attempts to decode barcode(s) within its field of view, from the center to the periphery, and transmits the barcode that has been first decoded.

Specific Area Decoding: The scanner attempts to read barcode(s) within a specified decoding area and transmits the barcode that has been first decoded. This option allows the scanner to narrow its field of view to make sure it reads only those barcodes intended by the user. For instance, if multiple barcodes are placed closely together, specific area decoding in conjunction with appropriate pre-defined decoding area will insure that only the desired barcode is read.

Acuread Decoding: The scanner only decodes the barcode aimed squarely by the aiming pattern. For those using a crosshair aiming pattern, only the barcode aimed by the center of crosshair will be decoded.

Acuread Decoding



@CADENA0
** Whole Area Decoding



@CADENA1
Specific Area Decoding



@CADENA2
Acuread Decoding



@SETUPE0
** Exit Setup



@SETUPE1

Enter Setup

If **Specific Area Decoding** is enabled, the scanner only reads barcodes that intersect the predefined decoding area.

The default decoding area is an area of 40% top, 60% bottom, 40% left and 60% right of the scanner's field of view

You can define the decoding area using the **Top of Decoding Area**, **Bottom of Decoding Area**, **Left of Decoding Area** and **Right of Decoding Area** barcodes as well as numeric barcode(s) that represent(s) a desired percentage (0-100). The value of Bottom must be greater than that of Top; the value of Right must be greater than that of Left.



@CADTOP

Top of Decoding Area



@CADBOT

Bottom of Decoding Area



@CADLEF

Left of Decoding Area



@CADRIG

Right of Decoding Area



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup



Example

Program the scanner to only read Barcode 1 in the figure above by setting the decoding area to 10% top, 45% bottom, 15% left and 30% right:

1. Scan the **Enter Setup** barcode.
2. Scan the **Top of Decoding Area** barcode.
3. Scan the numeric barcode "0" from the "Digit Barcodes" section in Appendix.
4. Scan the **Save** barcode from the "Save/Cancel Barcodes" section in Appendix.
5. Scan the **Bottom of Decoding Area** barcode.
6. Scan the numeric barcodes "4" and "5" from the "Digit Barcodes" section in Appendix.
7. Scan the **Save** barcode from the "Save/Cancel Barcodes" section in Appendix.
8. Scan the **Top of Decoding Area** barcode.
9. Scan the numeric barcodes "1" and "0" from the "Digit Barcodes" section in Appendix.
10. Scan the **Save** barcode from the "Save/Cancel Barcodes" section in Appendix.
11. Scan the **Left of Decoding Area** barcode.
12. Scan the numeric barcode "0" from the "Digit Barcodes" section in Appendix.
13. Scan the **Save** barcode from the "Save/Cancel Barcodes" section in Appendix.
14. Scan the **Right of Decoding Area** barcode.
15. Scan the numeric barcodes "3" and "0" from the "Digit Barcodes" section in Appendix.
16. Scan the **Save** barcode from the "Save/Cancel Barcodes" section in Appendix.
17. Scan the **Left of Decoding Area** barcode.
18. Scan the numeric barcodes "1" and "5" from the "Digit Barcodes" section in Appendix.
19. Scan the **Save** barcode from the "Save/Cancel Barcodes" section in Appendix.
20. Scan the **Exit Setup** barcode.



@SETUPE0
** Exit Setup



@SETUPE1

Enter Setup

Image flipping



@MIRROR0

**** Do Not Flip**



@MIRROR2

Flip Vertically



@MIRROR1

Flip Horizontally



@MIRROR3

Flip Horizontally & Vertically



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

Example of image not flipped



Example of image flipped horizontally



Example of image flipped vertically



Example of image flipped horizontally & vertically



Bad read message

Scan the appropriate barcode below to select whether or not to send a bad read message (user-programmable) when a good read does not occur before trigger release, or the decode session timeout expires, or the scanner receives the **Stop Scanning** command (For more information, see the “Serial Trigger Command” section in this Chapter).



@NGRENA0
**** Bad Read Message OFF**



@NGRENA1
Bad Read Message ON

Setting a bad read message

A bad read message can contain up to 7 characters (HEX values from 0x00 to 0xFF). To set a bad read message, scan the



@SETUPE0
**** Exit Setup**



@SETUPE1

Enter Setup

Set Bad Read Message barcode, the numeric barcodes representing the hexadecimal values of desired character(s) and the **Save** barcode. The default setting is "NG".



@NGRSET

Set Bad Read Message

E
xample

Set the bad read message to "F" (HEX: 0x46):

1. Scan the **Enter Setup** barcode.
2. Scan the **Set Bad Read Message** barcode.
3. Scan the numeric barcodes "4" and "6" from the "Digit Barcodes" section in Appendix.
4. Scan the **Save** barcode from the "Save/Cancel Barcodes" section in Appendix.
5. Scan the **Exit Setup** barcode.



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

Default settings

Factory defaults

Scanning the following barcode can restore the scanner to the factory defaults.

You may need to reset all parameters to the factory defaults when:

- ✧ scanner is not properly configured so that it fails to decode barcodes.
- ✧ you forget previous configuration and want to avoid its impact.



@FACDEF

Restore All Factory Defaults

Custom defaults

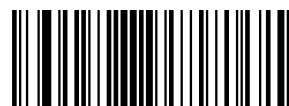
Scanning the **Restore All Custom Defaults** barcode can reset all parameters to the custom defaults. Scanning the **Save as Custom Defaults** barcode can set the current settings as custom defaults.

Custom defaults are stored in the non-volatile memory.



@CUSSAV

Save as Custom Defaults



@CUSDEF

Restore All Custom Defaults



Restoring the scanner to the factory defaults will not remove the custom defaults from the scanner.



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

Querying product information

After scanning the barcode below, the product information (including product name, firmware version, decoder version, hardware version, serial number, OEM serial number and manufacturing date) will be sent to the host device.



@QRYSYS
Query Product Information

Query product name



@QRYPDN
Query Product Name

Query firmware version



@QRYFWV
Query Firmware Version



@SETUPE0
**** Exit Setup**



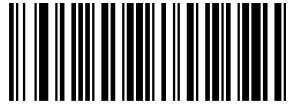
@SETUPE1
Enter Setup

Query decoder version



@QRYDCV
Query Decoder Version

Query hardware version



@QRYHWW
Query Hardware Version

Query product serial number



@QRYPSN
Query Product Serial Number



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Query manufacturing date



@QRYDAT
Query Manufacturing Date

Query OEM serial number



@QRYESN
Query OEM Serial Number

Query data formatter version



@QRYDFM
Query Data Formatter Version



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Chapter 4 USB interface

Introduction

There are three options for USB connection:

- ✧ USB HID Keyboard: The scanner's transmission is simulated as USB keyboard input with no need for command configuration or a driver. Barcode data could be entered by the virtual keyboard directly and it is also convenient for the host device to receive data.
- ✧ USB CDC (COM): It is compliant with the standard USB CDC (COM) class specifications defined by the USB-IF and allows the host device to receive data in the way as a serial port does. A driver is needed when using this feature.
- ✧ HID POS (POS HID Barcode Scanner): It is based on the HID interface, with no need for a custom driver.

The host sends the Suspend command via the USB interface to enable the scanner to enter the sleep mode. It sends the Resume command to wake up the scanner.



@SETUPE0
** Exit Setup



@SETUPE1
Enter Setup

USB HID keyboard

When the scanner is connected to the USB port on a host device, you can enable the USB HID Keyboard feature by scanning the barcode below. The scanner's transmission will be simulated as USB keyboard input. The Host receives keystrokes on the virtual keyboard. It works on a Plug and Play basis and no driver is required.



@INTERF3
**** USB HID Keyboard**



If the host device allows keyboard input, then no extra software is needed for HID Keyboard input.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

USB country keyboard types

Keyboard layouts vary from country to country. The default setting is U.S. keyboard.



@KBWCTY0
**** U.S. (English)**



@KBWCTY2
Brazil



@KBWCTY4
Czechoslovakia



@KBWCTY6
Finland (Swedish)



@KBWCTY1
Belgium



@KBWCTY3
Canada (French)



@KBWCTY5
Denmark



@SETUPE0
**** Exit Setup**



@SETUPE1

Enter Setup



@KBWCTY7

France



@KBWCTY8

Germany/ Austria



@KBWCTY9

Greece



@KBWCTY10

Hungary



@KBWCTY11

Israel (Hebrew)



@KBWCTY12

Italy



@KBWCTY13

Latin America/ South America



@KBWCTY14

Netherlands (Dutch)



@SETUPE0

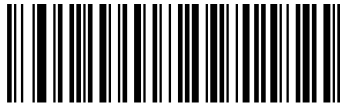
**** Exit Setup**



@SETUPE1
Enter Setup



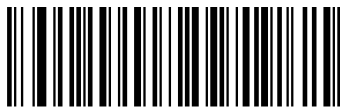
@KBWCTY15
Norway



@KBWCTY16
Poland



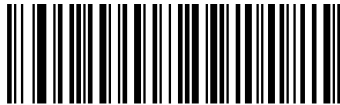
@KBWCTY17
Portugal



@KBWCTY18
Romania



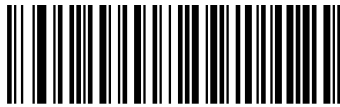
@KBWCTY19
Russia



@KBWCTY21
Slovakia



@KBWCTY22
Spain



@KBWCTY23
Sweden



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup



@KBWCTY24
Switzerland (German)



@KBWCTY25
Turkey_F



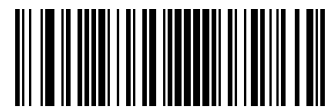
@KBWCTY26
Turkey_Q



@KBWCTY27
UK



@KBWCTY28
Japan



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Beep on unknown character

Due to the differences in keyboard layouts, some characters contained in barcode data may be unavailable on the selected keyboard. As a result, the scanner fails to transmit the unknown characters.

Scan the appropriate barcode below to enable or disable the emission of beep when an unknown character is detected.



@KBWBUC0

**** Do Not Beep on Unknown Character**



@KBWBUC1

Beep on Unknown Character

E
sample

Supposing French keyboard (Country Code: 7) is selected and barcode data "ADF" is being dealt with, the keyboard will fail to locate the "Ð" (0xD0) character and the scanner will ignore the character and continue to process the next one.

Do Not Beep on Unknown Character: The scanner does not beep and the Host receives "AF".

Beep on Unknown Character: The scanner beeps and the Host still receives "AF".



If **Emulate ALT+Keypad ON** is selected, **Beep on Unknown Character** does not function.



@SETUPE0
**** Exit Setup**



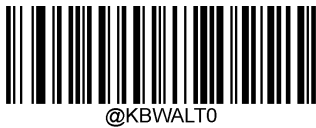
@SETUP1
Enter Setup

Emulate ALT + keypad

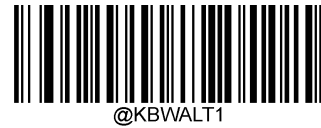
When **Emulate ALT + keypad** is turned on, ASCII characters (0x20 - 0xFF) are sent over the numeric keypad no matter which keyboard type is selected.

1. ALT Make
2. Enter the number corresponding to a desired character on the keypad.
3. ALT Break

After **Emulate ALT+Keypad ON** is selected, you need to choose the code page with which the barcodes were created and to turn **Unicode Encoding** On or Off depending on the encoding used by the application software.



** Emulate ALT+Keypad OFF



Emulate ALT+Keypad ON



Since sending a character involves multiple keystroke emulations, this method appears less efficient.



Supposing **Emulate ALT+Keypad** is ON, **Unicode Encoding** is Off, **Code Page 1252 (West European Latin)** is selected, and **Emulate Keypad with Leading Zero** is Off, barcode data "ADF" (65/208/70) is sent as below:

"A" -- "ALT Make" + "065" + "ALT Break"

"D" -- "ALT Make" + "208" + "ALT Break"

"F" -- "ALT Make" + "070" + "ALT Break"



@SETUP0
** Exit Setup



@SETUPE1
Enter Setup

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 barcode 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 barcodes were created by scanning the appropriate barcode below. For PDF417, QR Code, Aztec and Data Matrix, besides setting the code page, you also need to set the character encoding in the “Character Encoding” section in Chapter 6. This feature is only effective when **Emulate ALT+Keypad** is turned on.



@KBWCPG0

**** Code Page 1252 (West European Latin)**



@KBWCPG1

Code Page 1251 (Cyrillic)



@KBWCPG2

Code Page 1250 (Central and East European Latin)



@KBWCPG3

Code Page 1253 (Greek)



@KBWCPG4

Code Page 1254 (Turkish)



@KBWCPG5

Code Page 1255 (Hebrew)



@SETUPE0

**** Exit Setup**



@SETUPE1

Enter Setup



@KBWCPG6

Code Page 1256 (Arabic)



@KBWCPG7

Code Page 1257 (Baltic)



@KBWCPG8

Code Page 1258 (Vietnamese)



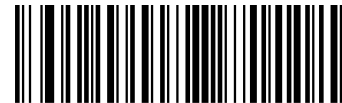
@KBWCPG9

Code Page 936 (Simplified Chinese, GB2312,GBK)



@KBWCPG10

Code Page 950 (Traditional Chinese, Big5)



@KBWCPG11

Code Page 874 (Thai)



@KBWCPG12

Code Page 932 (Japanese, Shift-JIS)



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

Unicode Encoding

Different host program may use different character encodings for handling incoming barcode data. For instance, Microsoft Office Word uses Unicode encoding and therefore you should turn **Unicode Encoding** on, whereas Microsoft Office Excel or Notepad uses Code Page encoding and therefore you should turn **Unicode Encoding** off. This feature is only effective when **Emulate ALT+Keypad** is turned on.



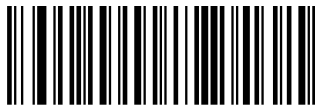
@KBWCPU0
**** Off**



@KBWCPU1
On

Emulate Keypad with Leading Zero

You may turn this feature on to send character sequences sent over the numeric keypad as ISO characters which have a leading zero. For example, ASCII A transmits as "ALT MAKE" 0065 "ALT BREAK". This feature is only effective when **Emulate ALT+Keypad** is enabled.



@KBWALZ1
**** On**



@KBWALZ0
Off



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Function key mapping

When **Ctrl+ASCII Mode** is selected, function characters (0x00 - 0x1F) are sent as ASCII sequences.



@KBWFKM0
**** Disable**



@KBWFKM1
Ctrl+ASCII Mode



@KBWFKM2
Alt+Keypad Mode

Example

If **Ctrl+ASCII Mode** is selected and other parameters of USB HID Keyboard adopt factory defaults, barcode data "A<HT>(i.e. Horizontal Tab)F" (0x41/0x09/0x46) is sent as below:

"A" - Keystroke "A".

<HT> - "Ctrl Make" + Keystroke "I" + "Ctrl Break"

"F" - Keystroke "F"

For some text editors, "Ctrl I" means italic convert. So the output may be "AF".

If **Alt+Keypad Mode** is selected and other parameters of USB HID Keyboard adopt factory defaults, the data above is sent as below:

"A" - Keystroke "A".

<HT> - "Alt Make" + Keystrokes "009" + "Alt Break"

"F" - Keystroke "F"



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

ASCII function key mapping table

ASCII Function	ASCII Value (HEX)	Function Key Mapping Disabled	Ctrl+ASCII
NUL	00	Null	Ctrl+@
SOH	01	Keypad Enter	Ctrl+A
STX	02	Caps Lock	Ctrl+B
ETX	03	ALT	Ctrl+C
EOT	04	Null	Ctrl+D
ENQ	05	CTRL	Ctrl+E
ACK	06	Null	Ctrl+F
BEL	07	Enter	Ctrl+G
BS	08	Left Arrow	Ctrl+H
HT	09	Horizontal Tab	Ctrl+I
LF	0A	Down Arrow	Ctrl+J
VT	0B	Vertical Tab	Ctrl+K
FF	0C	Delete	Ctrl+L
CR	0D	Enter	Ctrl+M
SO	0E	Insert	Ctrl+N
SI	0F	Esc	Ctrl+O
DLE	10	F11	Ctrl+P
DC1	11	Home	Ctrl+Q
DC2	12	PrintScreen	Ctrl+R
DC3	13	Backspace	Ctrl+S
DC4	14	tab+shift	Ctrl+T
NAK	15	F12	Ctrl+U
SYN	16	F1	Ctrl+V
ETB	17	F2	Ctrl+W
CAN	18	F3	Ctrl+X
EM	19	F4	Ctrl+Y
SUB	1A	F5	Ctrl+Z
ESC	11	F6	Ctrl+[
FS	1C	F7	Ctrl+\
GS	1D	F8	Ctrl+]
RS	1E	F9	Ctrl+6
US	1F	F10	Ctrl+-



@SETUPE0
** Exit Setup



@SETUPE1

Enter Setup

ASCII function key mapping table (continued)

The last five characters (0x1B~0x1F) in the table above apply to US keyboard layout only. The following chart provides the equivalents of these five characters for other countries.

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



@SETUPE0

** Exit Setup



@SETUPE1

Enter Setup

Interkeystroke delay

This parameter specifies the delay between emulated keystrokes.



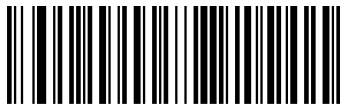
@KBWDLY0

**** No Delay**



@KBWDLY40

Long Delay (40ms)



@KBWDLY20

Short Delay (20ms)



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

Caps lock

The **Caps Lock On** options can invert upper and lower case characters contained in barcode data. This inversion occurs regardless of the state of Caps Lock key on the host device's keyboard. To disable this feature, scan the appropriate **Caps Lock OFF** barcode below based on your keyboard.



@KBWCAP0

**** Caps Lock OFF, Non-Japanese Keyboard**



@KBWCAP1

Caps Lock ON, Non-Japanese Keyboard



@KBWCAP2

Caps Lock OFF, Japanese Keyboard



@KBWCAP3

Caps Lock ON, Japanese Keyboard



Emulate ALT+Keypad ON/ Convert All to Upper Case/ Convert All to Lower Case prevails over **Caps Lock ON**.

E
xample

When the **Caps Lock ON** feature is selected, barcode data "AbC" is transmitted as "aBc".



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Convert case

Scan the appropriate barcode below to convert all bar code data to your desired case.



@KBWCAS0
**** No Case Conversion**



@KBWCAS1
Convert All to Upper Case



@KBWCAS2
Convert All to Lower Case

E
xample

When the **Convert All to Lower Case** feature is enabled, barcode data “AbC” is transmitted as “abc”.



If **Emulate ALT+Keypad ON** is selected, **Convert All to Lower Case** and **Convert All to Upper Case** do not function.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Emulate numeric keypad

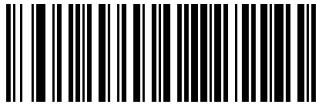


Do Not Emulate Numeric Keypad 1: Sending a number (0-9) is emulated as keystroke(s) on main keyboard.

Emulate Numeric Keypad 1: Sending a number (0-9) is emulated as keystroke(s) on numeric keypad. The state of Num Lock on the simulated numeric keypad is determined by its equivalent on the host device. If Num Lock on the host device is turned off, the output of simulated numeric keypad is function key instead of number.

Do Not Emulate Numeric Keypad 2: Sending "+", "-", "*", and "/" is emulated as keystroke(s) on main keyboard.

Emulate Numeric Keypad 2: Sending "+", "-", "*", and "/" is emulated as keystroke(s) on numeric keypad.



@KBWNUM0

**** Do Not Emulate Numeric Keypad 1**



@KBWNUM1

Emulate Numeric Keypad 1



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup



@KBWNCH0
**** Do Not Emulate Numeric Keypad 2**



@KBWNCH1
Emulate Numeric Keypad 2



Emulate ALT+Keypad ON prevails over **Emulate Numeric Keypad**.

E
xample

Supposing the **Emulate Numeric Keypad 1** feature is enabled:

if Num Lock on the host device is ON, "A4.5" is transmitted as "A4.5";

if Num Lock on the host device is OFF, "A4.5" is transmitted as ".A":

1. "A" is sent on main keyboard;
2. "4" is sent as the function key "Cursor Move to Left";
3. "." is sent on main keyboard;
4. "5" is not sent as it does not correspond to any function key.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Fast mode

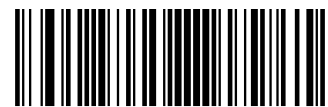
When **Fast Mode On** is selected, the scanner sends characters to the Host faster. If the Host drops characters, turn the Fast Mode off or change the polling rate to a bigger value.



@KBWFAS0
**** Fast Mode Off**



@KBWFAS1
Fast Mode On



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Polling rate

This parameter specifies the polling rate for a USB keyboard. If the Host drops characters, change the polling rate to a bigger value.



@KBWPOR0
1ms



@KBWPOR1
2ms



@KBWPOR2
3ms



@KBWPOR3
**** 4ms**



@KBWPOR4
5ms



@KBWPOR5
6ms



@KBWPOR6
7ms



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup



@KBWPOR7
8ms



@KBWPOR8
9ms



@KBWPOR9
10ms



@SETUPE0
**** Exit Setup**



@SETUPE1

Enter Setup

USB CDC (COM)

If your scanner is connected to the USB port on a host device, the USB CDC (COM) feature allows the host device to receive data in the way as a serial port does. A driver is needed when using this feature.



@INTERF8

USB CDC (COM)



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

HID POS (POS HID barcode ccanner)

Introduction

The HID-POS interface is recommended for new application programs. It can send up to 56 characters in a single USB report and appears more efficient than keyboard emulation.

Features:

- ✧ HID based, no custom driver required.
- ✧ Way more efficient in communication than keyboard emulation.



@INTERF5
USB HID-POS

Accessing the scanner with your program

Use CreateFile to access the scanner as a HID device and then use ReadFile to deliver the scanned data to the application program. Use WriteFile to send data to the scanner.

For detailed information about USB and HID interfaces, go to www.USB.org.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Acquiring scanned data

After a barcode is decoded, the scanner sends an input report as below:

	Bit							
Byte	7	6	5	4	3	2	1	0
0	Report ID = 0x02							
1	Barcode Length							
2-57	Decoded Data (1-56)							
58-61	Reserved							
62	HP Symbology Identifier or N/C: 0x00							
63	-	-	-	-	-	-	-	Decoded data continued

Sending a command to the scanner

This output report is used to send commands to the scanner. All programming commands can be used.

	Bit							
Byte	7	6	5	4	3	2	1	0
0	Report ID = 0x04							
1	Length of command							
2-63	Command (1-62)							



@SETUPE0
** Exit Setup

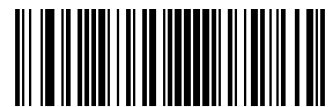


@SETUPE1
Enter Setup

VID/PID

USB uses VID (Vendor ID) and PID (Product ID) to identify and locate a device. The VID is assigned by USB Implementers Forum. HP's vendor ID is 03F0 (Hex). A range of PIDs are used for each HP Inc product family. Every PID contains a base number and interface type (keyboard, COM port, and so on).

Interface	PID (Hex)	PID (Dec)
USB HID Keyboard	0971	2417
HID POS	0A71	2673
USB CDC (COM)	0B71	2929



@SETUPE0
**** Exit Setup**

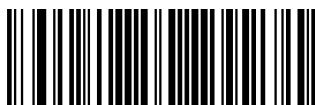


@SETUPE1
Enter Setup

Adaptive wired communication

When this feature is on, the scanner can automatically adapt its communication configuration to the way it is connected to the host device: Automatically enable USB/serial communication when connected to the host device via USB/serial port, respectively.

Note: You must restart the scanner before this setting will take effect.



@AUTOUR0
Off



@AUTOUR1
**** On**



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Chapter 5 Symbolologies

Introduction

Every symbology (barcode type) has its own unique attributes. This chapter provides programming barcodes for configuring the scanner so that it can identify various symbologies. It is recommended to disable those that are rarely used to increase the efficiency of the scanner.

Global Settings

Enabling or disabling all symbologies

If the **Disable All Symbologies** feature is enabled, the scanner will not be able to read any non-programming barcodes except the programming barcodes.



@ALLENA1
Enable All Symbologies



@ALLENA0
Disable All Symbologies

Enabling or disabling 1D symbologies



@ALL1DC1
Enable 1D Symbologies



@ALL1DC0
Disable 1D Symbologies



@SETUPE0
** Exit Setup



@SETUPE1

Enter Setup

Enabling or disabling 2D symbologies



@ALL2DC1

Enable 2D Symbologies



@ALL2DC0

Disable 2D Symbologies

Enabling or disabling postal symbologies



@ALLPST1

Enable All Postal Symbologies



@ALLPST0

Disable All Postal Symbologies



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

1D twin code

1D twin code is two 1D barcodes of a symbology or of different symbologies paralleled vertically. Both barcodes must have similar specifications and be placed closely together.

There are 3 options for reading 1D twin code:

- ✧ **Single 1D Code Only:** Read either 1D code.
- ✧ **Twin 1D Code Only:** Read both 1D codes. Transmission sequence: upper 1D code followed by lower 1D code.
- ✧ **Both Single & Twin:** Read both 1D codes. If successful, transmit as twin 1D code only. Otherwise, try single 1D code only.



@A1DDOU0
**** Single 1D Code Only**



@A1DDOU2
Twin 1D Code Only



@A1DDOU1
Both Single & Twin



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Surrounding GS1 application identifiers (AI's) with parentheses

When **Surround GS1 AI's with Parentheses** is selected, each application identifier (AI) contained in scanned data will be enclosed in parentheses in the output message.



@GS1AIP0

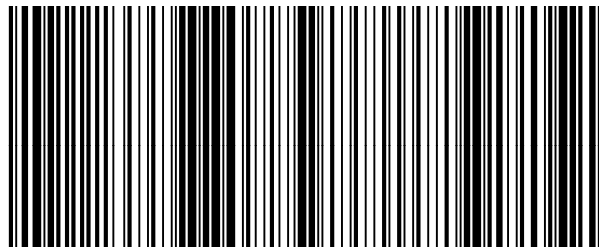
**** Do Not Surround GS1 AI's with Parentheses**



@GS1AIP1

Surround GS1 AI's with Parentheses

E
xample



(01) 0 0614141 99999 6 (10) 10ABCEDF123456

If **Surround GS1 AI's with Parentheses** is selected, the barcode above is output as (01)00614141999996(10)10ABCEDF123456.

If **Do Not Surround GS1 AI's with Parentheses** is selected, the barcode above is output as 01006141419999961010ABCEDF123456.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Code 128

Restoring factory defaults



@128DEF

Restore the Factory Defaults of Code 128

Enabling or disabling Code 128



@128ENA1

**** Enable Code 128**



@128ENA0

Disable Code 128



If the scanner fails to identify Code 128 barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable Code 128** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Setting length range for Code 128

The scanner can be configured to only decode Code 128 barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.



@128MIN

Set the Minimum Length (Default: 1)



@128MAX

Set the Maximum Length (Default: 48)



If minimum length is set to be greater than maximum length, the scanner only decodes Code 128 barcodes with either the minimum or maximum length. If minimum length is same as maximum length, only Code 128 barcodes with that length are to be decoded.

E
xample

Set the scanner to decode Code 128 barcodes containing between 8 and 12 characters:

1. Scan the **Enter Setup** barcode.
2. Scan the **Set the Minimum Length** barcode.
3. Scan the numeric barcode “8” from the “Digit Barcodes” section in Appendix.
4. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcodes “1” and “2” from the “Digit Barcodes” section in Appendix.
7. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
8. Scan the **Exit Setup** barcode.



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

EAN-8

Restoring factory defaults



@EA8DEF

Restore the Factory Defaults of EAN-8

Enabling or disabling EAN-8



@EA8ENA1

**** Enable EAN-8**



@EA8ENA0

Disable EAN-8



If the scanner fails to identify EAN-8 barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable EAN-8** barcode.

Transmitting check character

EAN-8 is 8 digits in length with the last one as its check character used to verify the integrity of the data.



@EA8CHK2

**** Transmit EAN-8 Check Character**



@EA8CHK1

Do Not Transmit EAN-8 Check Character



@SETUPE0

**** Exit Setup**



@SETUPE1

Enter Setup

2-digit add-on code

An EAN-8 barcode can be augmented with a two-digit add-on code to form a new one. In the example below, the part surrounded by blue dotted line is an EAN-8 barcode while the part circled by red dotted line is a two-digit add-on code.



@EA8AD20

**** Disable 2-Digit Add-On Code**



@EA8AD21

Enable 2-Digit Add-On Code



Disable 2-Digit Add-On Code: The scanner decodes EAN-8 and ignores the add-on code when presented with an EAN-8 plus 2-digit add-on barcode. It can also decode EAN-8 barcodes without 2-digit add-on codes.

Enable 2-Digit Add-On Code: The scanner decodes a mix of EAN-8 barcodes with and without 2-digit add-on codes.



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

5-digit add-on code

An EAN-8 barcode can be augmented with a five-digit add-on code to form a new one. In the example below, the part surrounded by blue dotted line is an EAN-8 barcode while the part circled by red dotted line is a five-digit add-on code.



**** Disable 5-Digit Add-On Code**



Enable 5-Digit Add-On Code



Disable 5-Digit Add-On Code: The scanner decodes EAN-8 and ignores the add-on code when presented with an EAN-8 plus 5-digit add-on barcode. It can also decode EAN-8 barcodes without 5-digit add-on codes.

Enable 5-Digit Add-On Code: The scanner decodes a mix of EAN-8 barcodes with and without 5-digit add-on codes.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Add-on code required

When **EAN-8 Add-On Code Required** is selected, the scanner will only read EAN-8 barcodes that contain add-on codes.



@EA8REQ0

**** EAN-8 Add-On Code Not Required**



@EA8REQ1

EAN-8 Add-On Code Required

Converting EAN-8 to EAN-13

Convert EAN-8 to EAN-13: Convert EAN-8 decoded data to EAN-13 format before transmission. After conversion, the data follows EAN-13 format and is affected by EAN-13 programming selections (e.g., Check Character).

Do Not Convert EAN-8 to EAN-13: EAN-8 decoded data is transmitted as EAN-8 data, without conversion.



@EA8EXP0

**** Do Not Convert EAN-8 to EAN-13**



@EA8EXP1

Convert EAN-8 to EAN-13



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

EAN-13

Restoring factory defaults



@E13DEF

Restore the Factory Defaults of EAN-13

Enabling or disabling EAN-13



@E13ENA1

**** Enable EAN-13**



@E13ENA0

Disable EAN-13



If the scanner fails to identify EAN-13 barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable EAN-13** barcode.



@SETUPE0
**** Exit Setup**



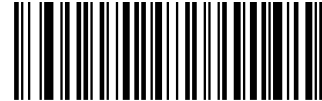
@SETUPE1
Enter Setup

Transmitting check character



@E13CHK2

**** Transmit EAN-13 Check Character**



@E13CHK1

Do Not Transmit EAN-13 Check Character

2-digit add-on code

An EAN-13 barcode can be augmented with a two-digit add-on code to form a new one. In the example below, the part surrounded by blue dotted line is an EAN-13 barcode while the part circled by red dotted line is a two-digit add-on code.



@E13AD20

**** Disable 2-Digit Add-On Code**



@E13AD21

Enable 2-Digit Add-On Code



Disable 2-Digit Add-On Code: The scanner decodes EAN-13 and ignores the add-on code when presented with an EAN-13 plus 2-digit add-on barcode. It can also decode EAN-13 barcodes without 2-digit add-on codes.

Enable 2-Digit Add-On Code: The scanner decodes a mix of EAN-13 barcodes with and without 2-digit add-on codes.



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

5-digit add-on code

An EAN-13 barcode can be augmented with a five-digit add-on code to form a new one. In the example below, the part surrounded by blue dotted line is an EAN-13 barcode while the part circled by red dotted line is a five-digit add-on code.



**** Disable 5-Digit Add-On Code**



Enable 5-Digit Add-On Code



Disable 5-Digit Add-On Code: The scanner decodes EAN-13 and ignores the add-on code when presented with an EAN-13 plus 5-digit add-on barcode. It can also decode EAN-13 barcodes without 5-digit add-on codes.

Enable 5-Digit Add-On Code: The scanner decodes a mix of EAN-13 barcodes with and without 5-digit add-on codes.

Add-on code required

When **EAN-13 Add-On Code Required** is selected, the scanner will only read EAN-13 barcodes that contain add-on codes.



**** EAN-13 Add-On Code Not Required**



EAN-13 Add-On Code Required



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

EAN-13 beginning with 290 add-on code required

This setting programs the scanner to require an add-on code (2-digit or 5-digit) on EAN-13 barcodes that begin with “290”. The following settings can be programmed:

Require Add-On Code: All EAN-13 barcodes that begin with “290” must have a 2-digit or 5-digit add-on code. The EAN-13 barcode with the add-on code is then transmitted. If the required add-on code is not found, the EAN-13 barcode is discarded.

Do Not Require Add-On Code: If you have selected **Require Add-On Code**, and you want to disable this feature, scan **Do Not Require Add-On Code**. EAN-13 barcodes are handled, depending on your selection for the “Add-On Code Required” feature.



@E132900

**** Do Not Require Add-On Code**



@E132901

Require Add-On Code

EAN-13 beginning with 378/379 add-on code required

This setting programs the scanner to require an add-on code (2-digit or 5-digit) on EAN-13 barcodes that begin with a “378” or “379”. The following settings can be programmed:

Require Add-On Code: All EAN-13 barcodes that begin with a “378” or “379” must have a 2-digit or 5-digit add-on code. The EAN-13 barcode with the add-on code is then transmitted. If the required add-on code is not found, the EAN-13 barcode is discarded.

Do Not Require Add-On Code: If you have selected **Require Add-On Code**, and you want to disable this feature, scan **Do Not Require Add-On Code**. EAN-13 barcodes are handled, depending on your selection for the “Add-On Code Required” feature.



@E133780

**** Do Not Require Add-On Code**



@E133781

Require Add-On Code



@SETUPE0

**** Exit Setup**



@SETUPE1

Enter Setup

EAN-13 beginning with 414/419 add-on code required

This setting programs the scanner to require an add-on code (2-digit or 5-digit) on EAN-13 barcodes that begin with a “414” or “419”. The following settings can be programmed:

Require Add-On Code: All EAN-13 barcodes that begin with a “414” or “419” must have a 2-digit or 5-digit add-on code. The EAN-13 barcode with the add-on code is then transmitted. If the required add-on code is not found, the EAN-13 barcode is discarded.

Do Not Require Add-On Code: If you have selected **Require Add-On Code**, and you want to disable this feature, scan **Do Not Require Add-On Code**. EAN-13 barcodes are handled, depending on your selection for the “Add-On Code Required” feature.



@E134140

**** Do Not Require Add-On Code**



@E134141

Require Add-On Code

EAN-13 beginning with 434/439 add-on code required

This setting programs the scanner to require an add-on code (2-digit or 5-digit) on EAN-13 barcodes that begin with a “434” or “439”. The following settings can be programmed:

Require Add-On Code: All EAN-13 barcodes that begin with a “434” or “439” must have a 2-digit or 5-digit add-on code. The EAN-13 barcode with the add-on code is then transmitted. If the required add-on code is not found, the EAN-13 barcode is discarded.

Do Not Require Add-On Code: If you have selected **Require Add-On Code**, and you want to disable this feature, scan **Do Not Require Add-On Code**. EAN-13 barcodes are handled, depending on your selection for the “Add-On Code Required” feature.



@E134340

**** Do Not Require Add-On Code**



@E134341

Require Add-On Code



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

EAN-13 beginning with 977 add-on code required

This setting programs the scanner to require an add-on code (2-digit or 5-digit) on EAN-13 barcodes that begin with “977”. The following settings can be programmed:

Require Add-On Code: All EAN-13 barcodes that begin with “977” must have a 2-digit or 5-digit add-on code. The EAN-13 barcode with the add-on code is then transmitted. If the required add-on code is not found, the EAN-13 barcode is discarded.

Do Not Require Add-On Code: If you have selected **Require Add-On Code**, and you want to disable this feature, scan **Do Not Require Add-On Code**. EAN-13 barcodes are handled, depending on your selection for the “Add-On Code Required” feature.



@E139770

**** Do Not Require Add-On Code**



@E139771

Require Add-On Code

EAN-13 beginning with 978 add-on code required

This setting programs the scanner to require an add-on code (2-digit or 5-digit) on EAN-13 barcodes that begin with “978”. The following settings can be programmed:

Require Add-On Code: All EAN-13 barcodes that begin with “978” must have a 2-digit or 5-digit add-on code. The EAN-13 barcode with the add-on code is then transmitted. If the required add-on code is not found, the EAN-13 barcode is discarded.

Do Not Require Add-On Code: If you have selected **Require Add-On Code**, and you want to disable this feature, scan **Do Not Require Add-On Code**. EAN-13 barcodes are handled, depending on your selection for the “Add-On Code Required” feature.



@E139780

**** Do Not Require Add-On Code**



@E139781

Require Add-On Code



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

EAN-13 beginning with 979 add-on code required

This setting programs the scanner to require an add-on code (2-digit or 5-digit) on EAN-13 barcodes that begin with “979”. The following settings can be programmed:

Require Add-On Code: All EAN-13 barcodes that begin with “979” must have a 2-digit or 5-digit add-on code. The EAN-13 barcode with the add-on code is then transmitted. If the required add-on code is not found, the EAN-13 barcode is discarded.

Do Not Require Add-On Code: If you have selected **Require Add-On Code**, and you want to disable this feature, scan **Do Not Require Add-On Code**. EAN-13 barcodes are handled, depending on your selection for the “Add-On Code Required” feature.



@E139790

**** Do Not Require Add-On Code**



@E139791

Require Add-On Code



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

UPC-E

Restoring factory defaults



@UPEDEF
Restore the Factory Defaults of UPC-E

Enabling or disabling UPC-E



@UPEEN01
** Enable UPC-E0



@UPEEN11
Enable UPC-E1



@UPEEN00
Disable UPC-E0



@UPEEN10
** Disable UPC-E1



If the scanner fails to identify UPC-E0/UPC-E1 barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable UPC-E0/UPC-E1** barcode.



@SETUPE0
** Exit Setup



@SETUPE1
Enter Setup

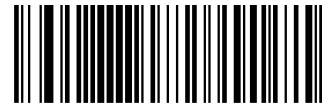
Transmitting check character

UPC-E is 8 digits in length with the last one as its check character used to verify the integrity of the data.



@UPECHK2

**** Transmit UPC-E Check Character**



@UPECHK1

Do Not Transmit UPC-E Check Character

2-digit add-on code

A UPC-E barcode can be augmented with a two-digit add-on code to form a new one. In the example below, the part surrounded by blue dotted line is a UPC-E barcode while the part circled by red dotted line is a two-digit add-on code.



@UPEAD20

**** Disable 2-Digit Add-On Code**



@UPEAD21

Enable 2-Digit Add-On Code



Disable 2-Digit Add-On Code: The scanner decodes UPC-E and ignores the add-on code when presented with a UPC-E plus 2-digit add-on barcode. It can also decode UPC-E barcodes without 2-digit add-on codes.

Enable 2-Digit Add-On Code: The scanner decodes a mix of UPC-E barcodes with and without 2-digit add-on codes.



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

5-digit add-on code

A UPC-E barcode can be augmented with a five-digit add-on code to form a new one. In the example below, the part surrounded by blue dotted line is a UPC-E barcode while the part circled by red dotted line is a five-digit add-on code.



@UPEAD50

**** Disable 5-Digit Add-On Code**



@UPEAD51

Enable 5-Digit Add-On Code



Disable 5-Digit Add-On Code: The scanner decodes UPC-E and ignores the add-on code when presented with a UPC-E plus 5-digit add-on barcode. It can also decode UPC-E barcodes without 5-digit add-on codes.

Enable 5-Digit Add-On Code: The scanner decodes a mix of UPC-E barcodes with and without 5-digit add-on codes.

Add-on code required

When **UPC-E Add-On Code Required** is selected, the scanner will only read **UPC-E** barcodes that contain add-on codes.



@UPEREQ0

**** UPC-E Add-On Code Not Required**



@UPEREQ1

UPC-E Add-On Code Required



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

Transmitting preamble character

Preamble characters (Country Code and System Character) can be transmitted as part of a UPC-E barcode. Select one of the following options for transmitting UPC-E preamble to the host device: transmit system character only, transmit system character and country code ("0" for USA), or transmit no preamble.



@UPEPRE1
** System Character



@UPEPRE0
No Preamble



@UPEPRE2
System Character & Country Code

Converting UPC-E to UPC-A

Convert UPC-E to UPC-A: Convert UPC-E (zero suppressed) decoded data to UPC-A format before transmission. After conversion, the data follows UPC-A format and is affected by UPC-A programming selections (e.g., Preamble, Check Character).

Do Not Convert UPC-E to UPC-A: UPC-E decoded data is transmitted as UPC-E data, without conversion.



@UPEEXP0
** Do Not Convert UPC-E to UPC-A



@UPEEXP1
Convert UPC-E to UPC-A



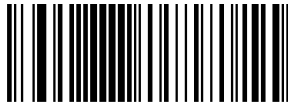
@SETUPE0
** Exit Setup



@SETUPE1
Enter Setup

UPC-A

Restoring factory defaults



@UPADEF

Restore the Factory Defaults of UPC-A

Enabling or disabling UPC-A



@UPAENA1

** Enable UPC-A



@UPAENA0

Disable UPC-A



If the scanner fails to identify UPC-A barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable UPC-A** barcode.

Transmitting check character

UPC-A is 13 digits in length with the last one as its check character used to verify the integrity of the data.



@UPACHK2

** Transmit UPC-A Check Character



@UPACHK1

Do Not Transmit UPC-A Check Character



@SETUPE0

** Exit Setup



@SETUPE1
Enter Setup

2-digit add-on code

A UPC-A barcode can be augmented with a two-digit add-on code to form a new one. In the example below, the part surrounded by blue dotted line is a UPC-A barcode while the part circled by red dotted line is a two-digit add-on code.



**** Disable 2-Digit Add-On Code**



Enable 2-Digit Add-On Code



Disable 2-Digit Add-On Code: The scanner decodes UPC-A and ignores the add-on code when presented with a UPC-A plus 2-digit add-on barcode. It can also decode UPC-A barcodes without 2-digit add-on codes.

Enable 2-Digit Add-On Code: The scanner decodes a mix of UPC-A barcodes with and without 2-digit add-on codes.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

5-digit add-on code

A UPC-A barcode can be augmented with a five-digit add-on code to form a new one. In the example below, the part surrounded by blue dotted line is a UPC-A barcode while the part circled by red dotted line is a five-digit add-on code.



@UPAAD50
**** Disable 5-Digit Add-On Code**



@UPAAD51
Enable 5-Digit Add-On Code



Disable 5-Digit Add-On Code: The scanner decodes UPC-A and ignores the add-on code when presented with a UPC-A plus 5-digit add-on barcode. It can also decode UPC-A barcodes without 5-digit add-on codes.

Enable 5-Digit Add-On Code: The scanner decodes a mix of UPC-A barcodes with and without 5-digit add-on codes.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Add-on code required

When **UPC-A Add-On Code Required** is selected, the scanner will only read **UPC-A** barcodes that contain add-on codes.



@UPAREQ0

**** UPC-A Add-On Code Not Required**



@UPAREQ1

UPC-A Add-On Code Required

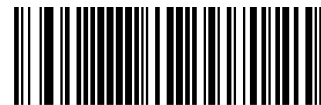
Transmitting preamble character

Preamble characters (Country Code and System Character) can be transmitted as part of a UPC-A barcode. Select one of the following options for transmitting UPC-A preamble to the host device: transmit system character only, transmit system character and country code ("0" for USA), or transmit no preamble.



@UPAPRE0

No Preamble



@UPAPRE1

**** System Character**



@UPAPRE2

System Character & Country Code



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

Coupon

UPC-A/EAN-13 with extended coupon code

The following three types of coupon code + extended coupon code are supported:

- ✧ UPC-A (starting with “5”) + GS1-128
- ✧ UPC-A (starting with “5”) + GS1 Databar
- ✧ EAN-13 (starting with “99”) + GS1-128

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

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

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



@CPNENA0
** Off



@CPNENA1
Allow Concatenation



@CPNENA2
Require Concatenation



When using the UPC-A Coupon feature, please ensure that **System Character** or **System Character & Country Code** is selected for the “Transmit UPC-A Preamble Character” feature.



@SETUPE0
** Exit Setup



@SETUPE1
Enter Setup

Coupon GS1 Databar output

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

When **GS1 Output Off** is selected, coupons that have both UPC and GS1 Databar codes are transmitted depending on your selection for the “UPC-A/EAN-13 with Extended Coupon Code” feature.



@CPNGS10
**** GS1 Output Off**



@CPNGS11
GS1 Output On



When using the UPC-A Coupon feature, please ensure that **System Character** or **System Character & Country Code** is selected for the “Transmit UPC-A Preamble Character” feature.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Interleaved 2 of 5

Restoring factory defaults



@I25DEF

Restore the Factory Defaults of Interleaved 2 of 5

Enabling or disabling Interleaved 2 of 5



@I25ENA1

**** Enable Interleaved 2 of 5**



@I25ENA0

Disable Interleaved 2 of 5



If the scanner fails to identify Interleaved 2 of 5 barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable Interleaved 2 of 5** barcode.



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

Setting length range for Interleaved 2 of 5

The scanner can be configured to only decode Interleaved 2 of 5 barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.



Set the Minimum Length (Default: 6)



Set the Maximum Length (Default: 80)



If minimum length is set to be greater than maximum length, the scanner only decodes Interleaved 2 of 5 barcodes with either the minimum or maximum length. If minimum length is same as maximum length, only Interleaved 2 of 5 barcodes with that length are to be decoded.

Example

Set the scanner to decode Interleaved 2 of 5 barcodes containing between 8 and 12 characters:

1. Scan the **Enter Setup** barcode.
2. Scan the **Set the Minimum Length** barcode.
3. Scan the numeric barcode “8” from the “Digit Barcodes” section in Appendix.
4. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcodes “1” and “2” from the “Digit Barcodes” section in Appendix.
7. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
8. Scan the **Exit Setup** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Check character verification

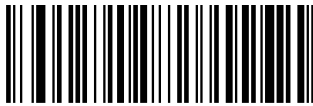
A check character is optional for Interleaved 2 of 5 and can be added as the last character. It is a calculated value used to verify the integrity of the data.

Disable: The scanner transmits Interleaved 2 of 5 barcodes as is.

Do Not Transmit Check Character After Verification: The scanner checks the integrity of all Interleaved 2 of 5 barcodes to verify that the data complies with the check character algorithm. Barcodes passing the check will be transmitted except the last digit, whereas those failing it will not be transmitted.

Transmit Check Character After Verification: The scanner checks the integrity of all Interleaved 2 of 5 barcodes to verify that the data complies with the check character algorithm. Barcodes passing the check will be transmitted, whereas those failing it will not be transmitted.

Since Interleaved 2 of 5 must always have an even number of digits, a zero may need to be added as the first digit when the check character is added. The check character is automatically generated when making Interleaved 2 of 5 barcodes.



@I25CHK0
** Disable



@I25CHK1

Do Not Transmit Check Character After Verification



@I25CHK2

Transmit Check Character After Verification



If the **Do Not Transmit Check Character After Verification** option is enabled, Interleaved 2 of 5 barcodes with a length that is less than the configured minimum length after having the check character excluded will not be decoded. (For example, when the **Do Not Transmit Check Character After Verification** option is enabled and the minimum length is set to 4, Interleaved 2 of 5 barcodes with a total length of 4 characters including the check character cannot be read.)



@SETUPE0
** Exit Setup



@SETUPE1
Enter Setup

ITF-14

ITF-14 is a special kind of Interleaved 2 of 5 with a length of 14 characters and the last character as the check character.

ITF-14 priority principle: For the Interleaved 2 of 5 barcodes with a length of 14 characters and the last character as the check character, the ITF-14 configurations shall take precedence over the Interleaved 2 of 5 settings.

Restoring factory defaults



@I14DEF

Restore the Factory Defaults of ITF-14

Enabling or disabling ITF-14



@I14ENA0

**** Disable ITF-14**



@I14ENA1

Enable ITF-14 But Do Not Transmit Check Character



@I14ENA2

Enable ITF-14 and Transmit Check Character



An example of the ITF-14 priority principle: when ITF-14 is enabled and Interleaved 2 of 5 is disabled, the scanner only decodes Interleaved 2 of 5 barcodes with a length of 14 characters and the last character as the check character.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

ITF-6

ITF-6 is a special kind of Interleaved 2 of 5 with a length of 6 characters and the last character as the check character.

ITF-6 priority principle: For the Interleaved 2 of 5 barcodes with a length of 6 characters and the last character as the check character, the ITF-6 configurations shall take precedence over the Interleaved 2 of 5 settings.

Restoring factory defaults



@IT6DEF
Restore the Factory Defaults of ITF-6

Enabling or disabling ITF-6



@IT6ENA0
** Disable ITF-6



@IT6ENA1
Enable ITF-6 But Do Not Transmit Check Character



@IT6ENA2
Enable ITF-6 and Transmit Check Character



An example of the ITF-6 priority principle: when ITF-6 is enabled and Interleaved 2 of 5 is disabled, the scanner only decodes Interleaved 2 of 5 barcodes with a length of 6 characters and the last character as the check character.



@SETUPE0
** Exit Setup



@SETUPE1
Enter Setup

Matrix 2 of 5

Restoring factory defaults



@M25DEF

Restore the Factory Defaults of Matrix 2 of 5

Enabling or disabling Matrix 2 of 5



@M25ENA1

**** Enable Matrix 2 of 5**



@M25ENA0

Disable Matrix 2 of 5



If the scanner fails to identify Matrix 2 of 5 barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable Matrix 2 of 5** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Setting length range for Matrix 2 of 5

The scanner can be configured to only decode Matrix 2 of 5 barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.



@M25MIN

Set the Minimum Length (Default: 4)



@M25MAX

Set the Maximum Length (Default: 80)



If minimum length is set to be greater than maximum length, the scanner only decodes Matrix 2 of 5 barcodes with either the minimum or maximum length. If minimum length is same as maximum length, only Matrix 2 of 5 barcodes with that length are to be decoded.

Example

Set the scanner to decode Matrix 2 of 5 barcodes containing between 8 and 12 characters:

1. Scan the **Enter Setup** barcode.
2. Scan the **Set the Minimum Length** barcode.
3. Scan the numeric barcode “8” from the “Digit Barcodes” section in Appendix.
4. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcodes “1” and “2” from the “Digit Barcodes” section in Appendix.
7. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
8. Scan the **Exit Setup** barcode.



@SETUPE0

**** Exit Setup**



@SETUPE1

Enter Setup

Check character verification

A check character is optional for Matrix 2 of 5 and can be added as the last character. It is a calculated value used to verify the integrity of the data.

Disable: The scanner transmits Matrix 2 of 5 barcodes as is.

Do Not Transmit Check Character After Verification: The scanner checks the integrity of all Matrix 2 of 5 barcodes to verify that the data complies with the check character algorithm. Barcodes passing the check will be transmitted except the last digit, whereas those failing it will not be transmitted.

Transmit Check Character After Verification: The scanner checks the integrity of all Matrix 2 of 5 barcodes to verify that the data complies with the check character algorithm. Barcodes passing the check will be transmitted, whereas those failing it will not be transmitted.

Since Matrix 2 of 5 must always have an even number of digits, a zero may need to be added as the first digit when the check character is added. The check character is automatically generated when making Matrix 2 of 5 barcodes.



@M25CHK0

**** Disable**



@M25CHK1

Do Not Transmit Check Character After Verification



@M25CHK2

Transmit Check Character After Verification



If the **Do Not Transmit Check Character After Verification** option is enabled, Matrix 2 of 5 barcodes with a length that is less than the configured minimum length after having the check character excluded will not be decoded. (For example, when the **Do Not Transmit Check Character After Verification** option is enabled and the minimum length is set to 4, Matrix 2 of 5 barcodes with a total length of 4 characters including the check character cannot be read.)



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

Code 39

Restoring factory defaults



@C39DEF
Restore the Factory Defaults of Code 39

Enabling or disabling Code 39



@C39ENA1
**** Enable Code 39**



@C39ENA0
Disable Code 39



If the scanner fails to identify Code 39 barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable Code 39** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1

Enter Setup

Setting length range for Code 39

The scanner can be configured to only decode Code 39 barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.



@C39MIN

Set the Minimum Length (Default: 1)



@C39MAX

Set the Maximum Length (Default: 48)



If minimum length is set to be greater than maximum length, the scanner only decodes Code 39 barcodes with either the minimum or maximum length. If minimum length is same as maximum length, only Code 39 barcodes with that length are to be decoded.

Example

Set the scanner to decode Code 39 barcodes containing between 8 and 12 characters:

1. Scan the **Enter Setup** barcode.
2. Scan the **Set the Minimum Length** barcode.
3. Scan the numeric barcode “8” from the “Digit Barcodes” section in Appendix.
4. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcodes “1” and “2” from the “Digit Barcodes” section in Appendix.
7. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
8. Scan the **Exit Setup** barcode.



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

Checking character verification

A check character is optional for Code 39 and can be added as the last character. It is a calculated value used to verify the integrity of the data.

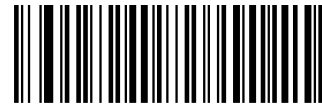
Disable: The scanner transmits Code 39 barcodes as is.

Do Not Transmit Check Character After Verification: The scanner checks the integrity of all Code 39 barcodes to verify that the data complies with the check character algorithm. Barcodes passing the check will be transmitted except the last digit, whereas those failing it will not be transmitted.

Transmit Check Character After Verification: The scanner checks the integrity of all Code 39 barcodes to verify that the data complies with the check character algorithm. Barcodes passing the check will be transmitted, whereas those failing it will not be transmitted.



@C39CHK0
** Disable



@C39CHK1

Do Not Transmit Check Character After Verification



@C39CHK2

Transmit Check Character After Verification



If the **Do Not Transmit Check Character After Verification** option is enabled, Code 39 barcodes with a length that is less than the configured minimum length after having the check character excluded will not be decoded. (For example, when the **Do Not Transmit Check Character After Verification** option is enabled and the minimum length is set to 4, Code 39 barcodes with a total length of 4 characters including the check character cannot be read.)



@SETUPE0
** Exit Setup



@SETUPE1
Enter Setup

Transmitting start/stop character

Code 39 uses an asterisk (*) for both the start and the stop characters. You can choose whether or not to transmit the start/stop characters by scanning the appropriate barcode below.



@C39TSC0

**** Do Not Transmit Start/Stop Character**



@C39TSC1

Transmit Start/Stop Character

Enabling or disabling Code 39 Full ASCII

The scanner can be configured to identify all ASCII characters by scanning the appropriate barcode below.



@C39ASC0

**** Disable Code 39 Full ASCII**



@C39ASC1

Enable Code 39 Full ASCII



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Enabling or disabling Code 32 (Italian Pharma Code)

Code 32 is a variant of Code 39 used by the Italian pharmaceutical industry. Scan the appropriate bar code below to enable or disable Code 32. Code 39 must be enabled and Code 39 check character verification must be disabled for this parameter to function.



@C39E320
**** Disable Code 32**



@C39E321
Enable Code 32

Code 32 Prefix

Scan the appropriate barcode below to enable or disable adding the prefix character "A" to all Code 32 barcodes. Code 32 must be enabled for this parameter to function.



@C39S320
**** Disable Code 32 Prefix**



@C39S321
Enable Code 32 Prefix



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Transmitting Code 32 start/stop character

Code 32 must be enabled for this parameter to function.



@C39T320

**** Do Not Transmit Code 32 Start/Stop Character**



@C39T321

Transmit Code 32 Start/Stop Character

Transmitting Code 32 check character

Code 32 must be enabled for this parameter to function.



@C39C320

**** Do Not Transmit Code 32 Check Character**



@C39C321

Transmit Code 32 Check Character



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Codabar

Restoring factory defaults



@CBADEF
Restore the Factory Defaults of Codabar

Enabling or disabling Codabar



@CBAENA1
**** Enable Codabar**



@CBAENA0
Disable Codabar



If the scanner fails to identify Codabar barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable Codabar** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1

Enter Setup

Setting length range for Codabar

The scanner can be configured to only decode Codabar barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.



@CBAMIN

Set the Minimum Length (Default: 2)



@CBAMAX

Set the Maximum Length (Default: 60)



If minimum length is set to be greater than maximum length, the scanner only decodes Codabar barcodes with either the minimum or maximum length. If minimum length is same as maximum length, only Codabar barcodes with that length are to be decoded.

Example

Set the scanner to decode Codabar barcodes containing between 8 and 12 characters:

1. Scan the **Enter Setup** barcode.
2. Scan the **Set the Minimum Length** barcode.
3. Scan the numeric barcode “8” from the “Digit Barcodes” section in Appendix.
4. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcodes “1” and “2” from the “Digit Barcodes” section in Appendix.
7. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
8. Scan the **Exit Setup** barcode.



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

Check character verification

A check character is optional for Codabar and can be added as the last character. It is a calculated value used to verify the integrity of the data.

Disable: The scanner transmits Codabar barcodes as is.

Do Not Transmit Check Character After Verification: The scanner checks the integrity of all Codabar barcodes to verify that the data complies with the check character algorithm. Barcodes passing the check will be transmitted except the last digit, whereas those failing it will not be transmitted.

Transmit Check Character After Verification: The scanner checks the integrity of all Codabar barcodes to verify that the data complies with the check character algorithm. Barcodes passing the check will be transmitted, whereas those failing it will not be transmitted.



@CBACHK0
** Disable



@CBACHK1

Do Not Transmit Check Character After Verification



@CBACHK2

Transmit Check Character After Verification



If the **Do Not Transmit Check Character After Verification** option is enabled, Codabar barcodes with a length that is less than the configured minimum length after having the check character excluded will not be decoded. (For example, when the **Do Not Transmit Check Character After Verification** option is enabled and the minimum length is set to 4, Codabar barcodes with a total length of 4 characters including the check character cannot be read.)



@SETUPE0
** Exit Setup



@SETUP1

Enter Setup

Start/stop character

You can set the start/stop characters and choose whether or not to transmit the start/stop characters by scanning the appropriate barcode below.



@CBATSC0

**** Do Not Transmit Start/Stop Character**



@CBATSC1

Transmit Start/Stop Character



@CBASCF0

**** ABCD/ABCD as the Start/Stop Character**



@CBASCF1

ABCD/TN*E as the Start/Stop Character



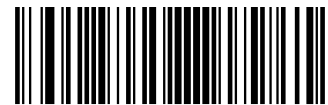
@CBASCF2

abcd/abcd as the Start/Stop Character



@CBASCF3

abcd/tn*e as the Start/Stop Character



@SETUP0

**** Exit Setup**



@SETUPE1
Enter Setup

Code 93

Restoring factory defaults



@C93DEF
Restore the Factory Defaults of Code 93

Enabling or disabling Code 93



@C93ENA1
Enable Code 93



@C93ENA0
**** Disable Code 93**



If the scanner fails to identify Code 93 barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable Code 93** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Setting length range for Code 93

The scanner can be configured to only decode Code 93 barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.



@C93MIN

Set the Minimum Length (Default: 1)



@C93MAX

Set the Maximum Length (Default: 48)



If minimum length is set to be greater than maximum length, the scanner only decodes Code 93 barcodes with either the minimum or maximum length. If minimum length is same as maximum length, only Code 93 barcodes with that length are to be decoded.

E *xample*

Set the scanner to decode Code 93 barcodes containing between 8 and 12 characters:

1. Scan the **Enter Setup** barcode.
2. Scan the **Set the Minimum Length** barcode.
3. Scan the numeric barcode “8” from the “Digit Barcodes” section in Appendix.
4. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcodes “1” and “2” from the “Digit Barcodes” section in Appendix.
7. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
8. Scan the **Exit Setup** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Check character verification

Check characters are optional for Code 93 and can be added as the last two characters, which are calculated values used to verify the integrity of the data.

Disable: The scanner transmits Code 93 barcodes as is.

Do Not Transmit Check Character After Verification: The scanner checks the integrity of all Code 93 barcodes to verify that the data complies with the check character algorithm. Barcodes passing the checks will be transmitted except the last two digits, whereas those failing them will not be transmitted.

Transmit Check Character After Verification: The scanner checks the integrity of all Code 93 barcodes to verify that the data complies with the check character algorithm. Barcodes passing the checks will be transmitted, whereas those failing them will not be transmitted.



@C93CHK0
Disable



@C93CHK1

**** Do Not Transmit Check Character After Verification**



@C93CHK2

Transmit Check Character After Verification



If the **Do Not Transmit Check Character After Verification** option is enabled, Code 93 barcodes with a length that is less than the configured minimum length after having the two check characters excluded will not be decoded. (For example, when the **Do Not Transmit Check Character After Verification** option is enabled and the minimum length is set to 4, Code 93 barcodes with a total length of 4 characters including the two check characters cannot be read.)



@SETUPE0
** Exit Setup



@SETUPE1
Enter Setup

China Post 25

Restoring factory defaults



@CHPDEF

Restore the Factory Defaults of China Post 25

Enabling or disabling China Post 25



@CHPENA1

Enable China Post 25



@CHPENAO

**** Disable China Post 25**



If the scanner fails to identify China Post 25 barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable China Post 25** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

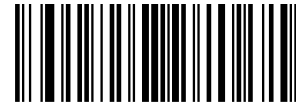
Setting length range for China Post 25

The scanner can be configured to only decode China Post 25 barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.



@CHPMIN

Set the Minimum Length (Default: 1)



@CHPMAX

Set the Maximum Length (Default: 48)



If minimum length is set to be greater than maximum length, the scanner only decodes China Post 25 barcodes with either the minimum or maximum length. If minimum length is same as maximum length, only China Post 25 barcodes with that length are to be decoded.

E
sample

Set the scanner to decode China Post 25 barcodes containing between 8 and 12 characters:

1. Scan the **Enter Setup** barcode.
2. Scan the **Set the Minimum Length** barcode.
3. Scan the numeric barcode “8” from the “Digit Barcodes” section in Appendix.
4. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcodes “1” and “2” from the “Digit Barcodes” section in Appendix.
7. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
8. Scan the **Exit Setup** barcode.



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

Check character verification

A check character is optional for China Post 25 and can be added as the last character. It is a calculated value used to verify the integrity of the data.

Disable: The scanner transmits China Post 25 barcodes as is.

Do Not Transmit Check Character After Verification: The scanner checks the integrity of all China Post 25 barcodes to verify that the data complies with the check character algorithm. Barcodes passing the check will be transmitted except the last digit, whereas those failing it will not be transmitted.

Transmit Check Character After Verification: The scanner checks the integrity of all China Post 25 barcodes to verify that the data complies with the check character algorithm. Barcodes passing the check will be transmitted, whereas those failing it will not be transmitted.



@CHPCHK0
**** Disable**



@CHPCHK1

Do Not Transmit Check Character After Verification



@CHPCHK2

Transmit Check Character After Verification



If the **Do Not Transmit Check Character After Verification** option is enabled, China Post 25 barcodes with a length that is less than the configured minimum length after having the check character excluded will not be decoded. (For example, when the **Do Not Transmit Check Character After Verification** option is enabled and the minimum length is set to 4, China Post 25 barcodes with a total length of 4 characters including the check character cannot be read.)



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

GS1-128 (UCC/EAN-128)

Restoring factory defaults



@GS1DEF
Restore the Factory Defaults of GS1-128

Enabling or disabling GS1-128



@GS1ENA1
**** Enable GS1-128**



@GS1ENA0
Disable GS1-128



If the scanner fails to identify GS1-128 barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable GS1-128** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1

Enter Setup

Setting length range for GS1-128

The scanner can be configured to only decode GS1-128 barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.



@GS1MIN

Set the Minimum Length (Default: 1)



@GS1MAX

Set the Maximum Length (Default: 48)



If minimum length is set to be greater than maximum length, the scanner only decodes GS1-128 barcodes with either the minimum or maximum length. If minimum length is same as maximum length, only GS1-128 barcodes with that length are to be decoded.

E
Example

Set the scanner to decode GS1-128 barcodes containing between 8 and 12 characters:

1. Scan the **Enter Setup** barcode.
2. Scan the **Set the Minimum Length** barcode.
3. Scan the numeric barcode “8” from the “Digit Barcodes” section in Appendix.
4. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcodes “1” and “2” from the “Digit Barcodes” section in Appendix.
7. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
8. Scan the **Exit Setup** barcode.



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

GS1 Databar (RSS)

Restoring factory defaults



@RSSDEF

Restore the Factory Defaults of GS1 Databar

Enabling or disabling GS1 Databar



@RSSENA1

**** Enable GS1 Databar**



@RSSENA0

Disable GS1 Databar



If the scanner fails to identify GS1 Databar barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable GS1 Databar** barcode.

Transmitting application identifier “01”



@RSSTA1

**** Transmit Application Identifier “01”**



@RSSTA0

Do Not Transmit Application Identifier “01”



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

GS1 Composite (EAN-UCC Composite)

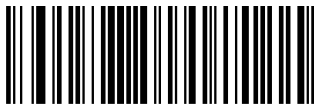
Restoring factory defaults



@CPTDEF

Restore the Factory Defaults of GS1 Composite

Enabling or disabling GS1 Composite



@CPTENA1

Enable GS1 Composite



@CPTENA0

**** Disable GS1 Composite**



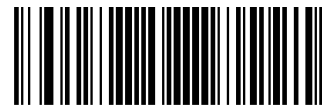
If the scanner fails to identify GS1 Composite barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable GS1 Composite** barcode.

Enabling or disabling UPC/EAN Composite



@CPTUPC1

Enable UPC/EAN Composite



@CPTUPC0

**** Disable UPC/EAN Composite**



@SETUPE0
**** Exit Setup**



@SETUPE1

Enter Setup



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

Code 11

Restoring factory defaults



@C11DEF

Restore the Factory Defaults of Code 11

Enabling or disabling Code 11



@C11ENA1

Enable Code 11



@C11ENA0

**** Disable Code 11**



If the scanner fails to identify Code 11 barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable Code 11** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Setting length range for Code 11

The scanner can be configured to only decode Code 11 barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.



@C11MIN

Set the Minimum Length (Default: 4)



@C11MAX

Set the Maximum Length (Default: 48)



If minimum length is set to be greater than maximum length, the scanner only decodes Code 11 barcodes with either the minimum or maximum length. If minimum length is same as maximum length, only Code 11 barcodes with that length are to be decoded.

E
sample

Set the scanner to decode Code 11 barcodes containing between 8 and 12 characters:

1. Scan the **Enter Setup** barcode.
2. Scan the **Set the Minimum Length** barcode.
3. Scan the numeric barcode “8” from the “Digit Barcodes” section in Appendix.
4. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcodes “1” and “2” from the “Digit Barcodes” section in Appendix.
7. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
8. Scan the **Exit Setup** barcode.



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

Check character verification

Check characters are optional for Code 11 and can be added as the last one or two characters, which are calculated values used to verify the integrity of the data.

If the **Disable** option is enabled, the scanner transmits Code 11 barcodes as is.



@C11CHK0
Disable



@C11CHK1
** One Check Character, MOD11



@C11CHK2
Two Check Characters, MOD11/MOD11



@C11CHK3
Two Check Characters, MOD11/MOD9



@C11CHK4
One Check Character, MOD11 (Len<=10)
Two Check Characters, MOD11/MOD11(Len>10)



@C11CHK5
One Check Character, MOD11 (Len<=10)
Two Check Characters, MOD11/MOD9 (Len>10)



@SETUPE0
** Exit Setup



@SETUPE1
Enter Setup

Transmitting check character



@C11TCK0

Do Not Transmit Code 11 Check Character



@C11TCK1

**** Transmit Code 11 Check Character**



If you select a check character algorithm and the **Do Not Transmit Check Character** option, Code 11 barcodes with a length that is less than the configured minimum length after having the check character(s) excluded will not be decoded. (For example, when the **One Check Character, MOD11** and **Do Not Transmit Check Character** options are enabled and the minimum length is set to 4, Code 11 barcodes with a total length of 4 characters including the check character cannot be read.)



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

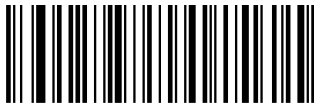
ISBN

Restoring factory defaults



@ISBDEF
Restore the Factory Defaults of ISBN

Enabling or disabling ISBN



@ISBENA1
Enable ISBN



@ISBENA0
**** Disable ISBN**



If the scanner fails to identify ISBN barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable ISBN** barcode.

Setting ISBN format



@ISBT101
**** ISBN-10**



@ISBT100
ISBN-13



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

ISSN

Restoring factory defaults



@ISSDEF
Restore the Factory Defaults of ISSN

Enabling or disabling ISSN



@ISSENA1
Enable ISSN



@ISSENA0
**** Disable ISSN**



If the scanner fails to identify ISSN barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable ISSN** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Industrial 25

Restoring factory defaults



@L25DEF

Restore the Factory Defaults of Industrial 25

Enabling or disabling Industrial 25



@L25ENA1

Enable Industrial 25



@L25ENA0

**** Disable Industrial 25**



If the scanner fails to identify Industrial 25 barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable Industrial 25** barcode.



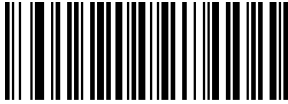
@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Setting length range for Industrial 25

The scanner can be configured to only decode Industrial 25 barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.



@L25MIN

Set the Minimum Length (Default: 6)



@L25MAX

Set the Maximum Length (Default: 48)



If minimum length is set to be greater than maximum length, the scanner only decodes Industrial 25 barcodes with either the minimum or maximum length. If minimum length is same as maximum length, only Industrial 25 barcodes with that length are to be decoded.

E
sample

Set the scanner to decode Industrial 25 barcodes containing between 8 and 12 characters:

1. Scan the **Enter Setup** barcode.
2. Scan the **Set the Minimum Length** barcode.
3. Scan the numeric barcode “8” from the “Digit Barcodes” section in Appendix.
4. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcodes “1” and “2” from the “Digit Barcodes” section in Appendix.
7. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
8. Scan the **Exit Setup** barcode.



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

Check character verification

A check character is optional for Industrial 25 and can be added as the last character. It is a calculated value used to verify the integrity of the data.

Disable: The scanner transmits Industrial 25 barcodes as is.

Do Not Transmit Check Character After Verification: The scanner checks the integrity of all Industrial 25 barcodes to verify that the data complies with the check character algorithm. Barcodes passing the check will be transmitted except the last digit, whereas those failing it will not be transmitted.

Transmit Check Character After Verification: The scanner checks the integrity of all Industrial 25 barcodes to verify that the data complies with the check character algorithm. Barcodes passing the check will be transmitted, whereas those failing it will not be transmitted.



@L25CHK0
** Disable



@L25CHK1

Do Not Transmit Check Character After Verification



@L25CHK2

Transmit Check Character After Verification



If the **Do Not Transmit Check Character After Verification** option is enabled, Industrial 25 barcodes with a length that is less than the configured minimum length after having the check character excluded will not be decoded. (For example, when the **Do Not Transmit Check Character After Verification** option is enabled and the minimum length is set to 4, Industrial 25 barcodes with a total length of 4 characters including the check character cannot be read.)



@SETUPE0
** Exit Setup



@SETUPE1
Enter Setup

Standard 25

Restoring factory defaults



@S25DEF
Restore the Factory Defaults of Standard 25

Enabling or disabling Standard 25



@S25ENA1
Enable Standard 25



@S25ENA0
**** Disable Standard 25**



If the scanner fails to identify Standard 25 barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable Standard 25** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Setting length range for Standard 25

The scanner can be configured to only decode Standard 25 barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.



@S25MIN

Set the Minimum Length (Default: 6)



@S25MAX

Set the Maximum Length (Default: 48)



If minimum length is set to be greater than maximum length, the scanner only decodes Standard 25 barcodes with either the minimum or maximum length. If minimum length is same as maximum length, only Standard 25 barcodes with that length are to be decoded.

E *sample*

Set the scanner to decode Standard 25 barcodes containing between 8 and 12 characters:

1. Scan the **Enter Setup** barcode.
2. Scan the **Set the Minimum Length** barcode.
3. Scan the numeric barcode “8” from the “Digit Barcodes” section in Appendix.
4. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcodes “1” and “2” from the “Digit Barcodes” section in Appendix.
7. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
8. Scan the **Exit Setup** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Check character verification

A check character is optional for Standard 25 and can be added as the last character. It is a calculated value used to verify the integrity of the data.

Disable: The scanner transmits Standard 25 barcodes as is.

Do Not Transmit Check Character After Verification: The scanner checks the integrity of all Standard 25 barcodes to verify that the data complies with the check character algorithm. Barcodes passing the check will be transmitted except the last digit, whereas those failing it will not be transmitted.

Transmit Check Character After Verification: The scanner checks the integrity of all Standard 25 barcodes to verify that the data complies with the check character algorithm. Barcodes passing the check will be transmitted, whereas those failing it will not be transmitted.



@S25CHK0
** Disable



@S25CHK1

Do Not Transmit Check Character After Verification



@S25CHK2

Transmit Check Character After Verification



If the **Do Not Transmit Check Character After Verification** option is enabled, Standard 25 barcodes with a length that is less than the configured minimum length after having the check character excluded will not be decoded. (For example, when the **Do Not Transmit Check Character After Verification** option is enabled and the minimum length is set to 4, Standard 25 barcodes with a total length of 4 characters including the check character cannot be read.)



@SETUPE0
** Exit Setup



@SETUPE1
Enter Setup

Plessey

Restoring factory defaults



@PLYDEF

Restore the Factory Defaults of Plessey

Enabling or disabling Plessey



@PLYENA1

Enable Plessey



@PLYENA0

**** Disable Plessey**



If the scanner fails to identify Plessey barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable Plessey** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

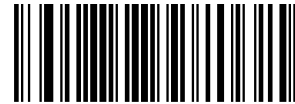
Setting length range for Plessey

The scanner can be configured to only decode Plessey barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.



@PLYMIN

Set the Minimum Length (Default: 4)



@PLYMAX

Set the Maximum Length (Default: 48)



If minimum length is set to be greater than maximum length, the scanner only decodes Plessey barcodes with either the minimum or maximum length. If minimum length is same as maximum length, only Plessey barcodes with that length are to be decoded.

E
sample

Set the scanner to decode Plessey barcodes containing between 8 and 12 characters:

1. Scan the **Enter Setup** barcode.
2. Scan the **Set the Minimum Length** barcode.
3. Scan the numeric barcode “8” from the “Digit Barcodes” section in Appendix.
4. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcodes “1” and “2” from the “Digit Barcodes” section in Appendix.
7. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
8. Scan the **Exit Setup** barcode.



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

Check character verification

Check characters are optional for Plessey and can be added as the last two characters, which are calculated values used to verify the integrity of the data.

Disable: The scanner transmits Plessey barcodes as is.

Do Not Transmit Check Character After Verification: The scanner checks the integrity of all Plessey barcodes to verify that the data complies with the check character algorithm. Barcodes passing the checks will be transmitted except the last two digits, whereas those failing them will not be transmitted.

Transmit Check Character After Verification: The scanner checks the integrity of all Plessey barcodes to verify that the data complies with the check character algorithm. Barcodes passing the checks will be transmitted, whereas those failing them will not be transmitted.



@PLYCHK0
** Disable



@PLYCHK1

Do Not Transmit Check Character After Verification



@PLYCHK2

Transmit Check Character After Verification



If the **Do Not Transmit Check Character After Verification** option is enabled, Plessey barcodes with a length that is less than the configured minimum length after having the check characters excluded will not be decoded. (For example, when the **Do Not Transmit Check Character After Verification** option is enabled and the minimum length is set to 4, Plessey barcodes with a total length of 4 characters including the check characters cannot be read.)



@SETUPE0
** Exit Setup



@SETUPE1
Enter Setup

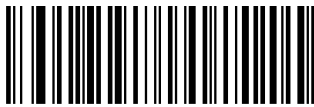
MSI-Plessey

Restoring factory defaults



@MSIDEF
Restore the Factory Defaults of MSI-Plessey

Enabling or disabling MSI-Plessey



@MSIENA1
Enable MSI-Plessey



@MSIENA0
**** Disable MSI-Plessey**



If the scanner fails to identify MSI-Plessey barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable MSI-Plessey** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Setting length range for MSI-Plessey

The scanner can be configured to only decode MSI-Plessey barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.



Set the Minimum Length (Default: 4)



Set the Maximum Length (Default: 48)



If minimum length is set to be greater than maximum length, the scanner only decodes MSI-Plessey barcodes with either the minimum or maximum length. If minimum length is same as maximum length, only MSI-Plessey barcodes with that length are to be decoded.

E *Example*

Set the scanner to decode MSI-Plessey barcodes containing between 8 and 12 characters:

1. Scan the **Enter Setup** barcode.
2. Scan the **Set the Minimum Length** barcode.
3. Scan the numeric barcode “8” from the “Digit Barcodes” section in Appendix.
4. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcodes “1” and “2” from the “Digit Barcodes” section in Appendix.
7. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
8. Scan the **Exit Setup** barcode.



@SETUPE0
**** Exit Setup**



@SETUP E1
Enter Setup

Check character verification

Check characters are optional for MSI-Plessey and can be added as the last one or two characters, which are calculated values used to verify the integrity of the data.

If the **Disable** option is enabled, the scanner transmits MSI-Plessey barcodes as is.



@MSIC HK0
Disable



@MSIC HK1
** One Check Character, MOD10



@MSIC HK2
Two Check Characters, MOD10/MOD10



@MSIC HK3
Two Check Characters, MOD10/MOD11



@SETUP E0
** Exit Setup



@SETUPE1
Enter Setup

Transmitting check character



@MSITCK1

**** Transmit MSI-Plessey Check Character**



@MSITCK0

Do Not Transmit MSI-Plessey Check Character



If you select a check character algorithm and the **Do Not Transmit Check Character** option, MSI-Plessey barcodes with a length that is less than the configured minimum length after having the check character(s) excluded will not be decoded. (For example, when the **One Check Character, MOD10** and **Do Not Transmit Check Character** options are enabled and the minimum length is set to 4, MSI-Plessey barcodes with a total length of 4 characters including the check character cannot be read.)



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

AIM 128

Restoring factory defaults



@AIMDEF
Restore the Factory Defaults of AIM 128

Enabling or disabling AIM 128



@AIMENA1
Enable AIM 128



@AIMENA0
**** Disable AIM 128**



If the scanner fails to identify AIM 128 barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable AIM 128** barcode.



@SETUPE0
**** Exit Setup**

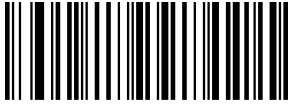


@SETUPE1

Enter Setup

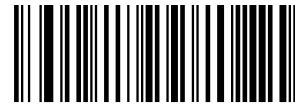
Setting length range for AIM 128

The scanner can be configured to only decode AIM 128 barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.



@AIMMIN

Set the Minimum Length (Default: 1)



@AIMMAX

Set the Maximum Length (Default: 48)



If minimum length is set to be greater than maximum length, the scanner only decodes AIM 128 barcodes with either the minimum or maximum length. If minimum length is same as maximum length, only AIM 128 barcodes with that length are to be decoded.



Set the scanner to decode AIM 128 barcodes containing between 8 and 12 characters:

1. Scan the **Enter Setup** barcode.
2. Scan the **Set the Minimum Length** barcode.
3. Scan the numeric barcode “8” from the “Digit Barcodes” section in Appendix.
4. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcodes “1” and “2” from the “Digit Barcodes” section in Appendix.
7. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
8. Scan the **Exit Setup** barcode.



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

ISBT 128

Restoring factory defaults



@IBTDEF
Restore the Factory Defaults of ISBT 128

Enabling or disabling ISBT 128



@IBTENA1
Enable ISBT 128



@IBTENA0
**** Disable ISBT 128**



If the scanner fails to identify ISBT 128 barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable ISBT 128** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Code 49

Restoring factory defaults



@C49DEF

Restore the Factory Defaults of Code 49

Enabling or disabling Code 49



@C49ENA1

Enable Code 49



@C49ENA0

**** Disable Code 49**



If the scanner fails to identify Code 49 barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable Code 49** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Setting length range for Code 49

The scanner can be configured to only decode Code 49 barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.



@C49MIN

Set the Minimum Length (Default: 1)



@C49MAX

Set the Maximum Length (Default: 80)



If minimum length is set to be greater than maximum length, the scanner only decodes Code 49 barcodes with either the minimum or maximum length. If minimum length is same as maximum length, only Code 49 barcodes with that length are to be decoded.

Example

Set the scanner to decode Code 49 barcodes containing between 8 and 12 characters:

1. Scan the **Enter Setup** barcode.
2. Scan the **Set the Minimum Length** barcode.
3. Scan the numeric barcode “8” from the “Digit Barcodes” section in Appendix.
4. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcodes “1” and “2” from the “Digit Barcodes” section in Appendix.
7. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
8. Scan the **Exit Setup** barcode.



@SETUPE0
** Exit Setup



@SETUPE1
Enter Setup

Code 16K

Restoring factory defaults



@16KDEF

Restore the Factory Defaults of Code 16K

Enabling or disabling Code 16K



@16KENA1

Enable Code 16K



@16KENA0

**** Disable Code 16K**



If the scanner fails to identify Code 16K barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable Code 16K** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Setting length range for Code 16K

The scanner can be configured to only decode Code 16K barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.



@16KMIN

Set the Minimum Length (Default: 1)



@16KMAX

Set the Maximum Length (Default: 80)



If minimum length is set to be greater than maximum length, the scanner only decodes Code 16K barcodes with either the minimum or maximum length. If minimum length is same as maximum length, only Code 16K barcodes with that length are to be decoded.



Set the scanner to decode Code 16K barcodes containing between 8 and 12 characters:

1. Scan the **Enter Setup** barcode.
2. Scan the **Set the Minimum Length** barcode.
3. Scan the numeric barcode “8” from the “Digit Barcodes” section in Appendix.
4. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcodes “1” and “2” from the “Digit Barcodes” section in Appendix.
7. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
8. Scan the **Exit Setup** barcode.



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

COOP 25

Restoring factory defaults



@COPDEF

Restore the Factory Defaults of COOP 25

Enabling or disabling COOP 25



@COPENA1

Enable COOP 25



@COPENA0

**** Disable COOP 25**



If the scanner fails to identify COOP 25 barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable COOP 25** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Setting length range for Code 16K

The scanner can be configured to only decode COOP 25 barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.



@COPMIN

Set the Minimum Length (Default: 4)



@COPMAX

Set the Maximum Length (Default: 80)



If minimum length is set to be greater than maximum length, the scanner only decodes COOP 25 barcodes with either the minimum or maximum length. If minimum length is same as maximum length, only COOP 25 barcodes with that length are to be decoded.

Example

Set the scanner to decode COOP 25 barcodes containing between 8 and 12 characters:

1. Scan the **Enter Setup** barcode.
2. Scan the **Set the Minimum Length** barcode.
3. Scan the numeric barcode "8" from the "Digit Barcodes" section in Appendix.
4. Scan the **Save** barcode from the "Save/Cancel Barcodes" section in Appendix.
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcodes "1" and "2" from the "Digit Barcodes" section in Appendix.
7. Scan the **Save** barcode from the "Save/Cancel Barcodes" section in Appendix.
8. Scan the **Exit Setup** barcode.



@SETUPE0

**** Exit Setup**



@SETUP1

Enter Setup

Transmitting check character after verification



@COPCHK0

**** Disable**



@COPCHK1

Do Not Transmit Check Character After Verification



@COPCHK2

Transmit Check Character After Verification



@SETUP0

**** Exit Setup**



@SETUPE1
Enter Setup

PDF417

Restoring factory defaults



@PDFDEF
Restore the Factory Defaults of PDF417

Enabling or disabling PDF417



@PDFENA1
**** Enable PDF417**



@PDFENA0
Disable PDF417



If the scanner fails to identify PDF417 barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable PDF417** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Setting length range for PDF417

The scanner can be configured to only decode PDF417 barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.



@PDFMIN

Set the Minimum Length (Default: 1)



@PDFMAX

Set the Maximum Length (Default: 2710)



Minimum length is not allowed to be greater than maximum length. If you only want to read PDF417 barcodes with a specific length, set both minimum and maximum lengths to be that desired length.

Example

Set the scanner to decode PDF417 barcodes containing between 8 and 12 characters:

1. Scan the **Enter Setup** barcode.
2. Scan the **Set the Minimum Length** barcode.
3. Scan the numeric barcode “8” from the “Digit Barcodes” section in Appendix.
4. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcodes “1” and “2” from the “Digit Barcodes” section in Appendix.
7. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
8. Scan the **Exit Setup** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

PDF417 twin code

PDF417 twin code is 2 PDF417 barcodes paralleled vertically or horizontally. They must both be either regular or inverse barcodes. They must have similar specifications and be placed closely together.

There are 3 options for reading PDF417 twin codes:

- ✧ **Single PDF417 Only:** Read either PDF417 code.
- ✧ **Twin PDF417 Only:** Read both PDF417 codes.
- ✧ **Both Single & Twin:** Read both PDF417 codes. If successful, transmit as twin PDF417 only. Otherwise, try single PDF417 only.



**** Single PDF417 Only**



Twin PDF417 Only



Both Single & Twin



@SETUPE0
**** Exit Setup**



@SETUPE1

Enter Setup

PDF417 inverse

Regular barcode: Dark bars on a bright background.

Inverse barcode: Bright bars on a dark background.



@PDFINV0

**** Decode Regular PDF417 Barcodes Only**



@PDFINV1

Decode Inverse PDF417 Barcodes Only



@PDFINV2

Decode Both

Character encoding



@PDFENC0

**** Default Character Encoding**



@PDFENC1

UTF-8



@SETUPE0

**** Exit Setup**



@SETUPE1

Enter Setup

PDF417 ECI output



@PDFECI0

Disable PDF417 ECI Output



@PDFECI1

**** Enable PDF417 ECI Output**



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

Micro PDF417

Restoring factory defaults



@MPDDEF

Restore the Factory Defaults of Micro PDF417

Enabling or disabling Micro PDF417



@MPDENA1

Enable Micro PDF417



@MPDENA0

**** Disable Micro PDF417**



If the scanner fails to identify Micro PDF417 barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable Micro PDF417** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

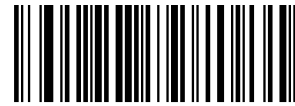
Setting length range for Micro PDF417

The scanner can be configured to only decode Micro PDF417 barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.



@MPDMIN

Set the Minimum Length (Default: 1)



@MPDMAX

Set the Maximum Length (Default: 366)



Minimum length is not allowed to be greater than maximum length. If you only want to read Micro PDF417 barcodes with a specific length, set both minimum and maximum lengths to be that desired length.

E
xample

Set the scanner to decode Micro PDF417 barcodes containing between 8 and 12 characters:

1. Scan the **Enter Setup** barcode.
2. Scan the **Set the Minimum Length** barcode.
3. Scan the numeric barcode “8” from the “Digit Barcodes” section in Appendix.
4. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcodes “1” and “2” from the “Digit Barcodes” section in Appendix.
7. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
8. Scan the **Exit Setup** barcode.



@SETUPE0

** Exit Setup



@SETUPE1
Enter Setup

QR Code

Restoring factory defaults



@QRCDEF

Restore the Factory Defaults of QR Code

Enabling or disabling QR Code



@QRCENA1

**** Enable QR Code**



@QRCENA0

Disable QR Code



If the scanner fails to identify QR Code barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable QR Code** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Setting length range for QR Code

The scanner can be configured to only decode QR Code barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.



@QRCMIN

Set the Minimum Length (Default: 1)



@QRCMAX

Set the Maximum Length (Default: 7089)



Minimum length is not allowed to be greater than maximum length. If you only want to read QR Code barcodes with a specific length, set both minimum and maximum lengths to be that desired length.

Example

Set the scanner to decode QR Code barcodes containing between 8 and 12 characters:

1. Scan the **Enter Setup** barcode.
2. Scan the **Set the Minimum Length** barcode.
3. Scan the numeric barcode “8” from the “Digit Barcodes” section in Appendix.
4. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcodes “1” and “2” from the “Digit Barcodes” section in Appendix.
7. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
8. Scan the **Exit Setup** barcode.



@SETUPE0

** Exit Setup



@SETUPE1
Enter Setup

QR twin code

QR twin code is 2 QR barcodes paralleled vertically or horizontally. They must both be either regular or inverse barcodes. They must have similar specifications and be placed closely together.

There are 3 options for reading QR twin codes:

- ✧ **Single QR Only:** Read either QR code.
- ✧ **Twin QR Only:** Read both QR codes. Transmission sequence: left (upper) QR code followed by right (lower) QR code.
- ✧ **Both Single & Twin:** Read both QR codes. If successful, transmit as twin QR only. Otherwise, try single QR only.



@QRCDU0
**** Single QR Only**



@QRCDU1
Twin QR Only



@QRCDU2
Both Single & Twin



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

QR inverse

Regular barcode: Dark bars on a bright background.

Inverse barcode: Bright bars on a dark background.



@QRCINV0

**** Decode Regular QR Barcodes Only**



@QRCINV1

Decode Inverse QR Barcodes Only



@QRCINV2

Decode Both

Character encoding



@QRCENC0

**** Default Character Encoding**



@QRCENC1

UTF-8



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

QR ECI output



@QRCECI0
Disable QR ECI Output



@QRCECI1
**** Enable QR ECI Output**



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Micro QR Code

Restoring factory defaults



@MQRDEF
Restore the Factory Defaults of Micro QR

Enabling or disabling Micro QR



@MQRENA1
**** Enable Micro QR**



@MQRENA0
Disable Micro QR



If the scanner fails to identify Micro QR barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable Micro QR** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1

Enter Setup

Setting length range for Micro QR

The scanner can be configured to only decode Micro QR barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.



@MQRMIN

Set the Minimum Length (Default: 1)



@MQRMAX

Set the Maximum Length (Default: 35)



Minimum length is not allowed to be greater than maximum length. If you only want to read Micro QR barcodes with a specific length, set both minimum and maximum lengths to be that desired length.

E
sample

Set the scanner to decode Micro QR Code barcodes containing between 8 and 12 characters:

1. Scan the **Enter Setup** barcode.
2. Scan the **Set the Minimum Length** barcode.
3. Scan the numeric barcode “8” from the “Digit Barcodes” section in Appendix.
4. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcodes “1” and “2” from the “Digit Barcodes” section in Appendix.
7. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
8. Scan the **Exit Setup** barcode.



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

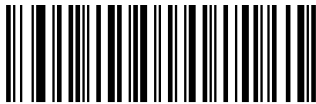
Aztec

Restoring factory defaults



@AZTDEF
Restore the Factory Defaults of Aztec Code

Enabling or disabling Aztec Code



@AZTENA1
Enable Aztec Code



@AZTENA0
**** Disable Aztec Code**



If the scanner fails to identify Aztec Code barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable Aztec Code** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1

Enter Setup

Setting length range for Aztec Code

The scanner can be configured to only decode Aztec barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.



@AZTMIN

Set the Minimum Length (Default: 1)



@AZTMAX

Set the Maximum Length (Default: 3832)



Minimum length is not allowed to be greater than maximum length. If you only want to read Aztec barcodes with a specific length, set both minimum and maximum lengths to be that desired length.

Example

Set the scanner to decode Aztec barcodes containing between 8 and 12 characters:

1. Scan the **Enter Setup** barcode.
2. Scan the **Set the Minimum Length** barcode.
3. Scan the numeric barcode “8” from the “Digit Barcodes” section in Appendix.
4. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcodes “1” and “2” from the “Digit Barcodes” section in Appendix.
7. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
8. Scan the **Exit Setup** barcode.



@SETUPE0

**** Exit Setup**



@SETUPE1

Enter Setup

Reading multiple barcodes on an image

There are three options:

- ✧ **Mode 1:** Read one barcode only.
- ✧ **Mode 2:** Read fixed number of barcodes only.
- ✧ **Mode 3:** Composite Reading. Read fixed number of barcodes first. If unsuccessful, read one barcode only.



@AZTMOD1

**** Mode 1**



@AZTMOD2

Mode 2



@AZTMOD3

Mode 3



@SETUPE0

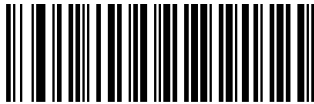
**** Exit Setup**



@SETUPE1

Enter Setup

Setting the number of barcodes



@AZTMUL1

** 1



@AZTMUL2

2



@AZTMUL3

3



@AZTMUL4

4



@AZTMUL5

5



@AZTMUL6

6



@AZTMUL7

7



@AZTMUL8

8



@SETUPE0

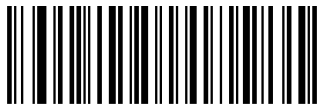
** Exit Setup



@SETUPE1

Enter Setup

Character encoding



@AZTENC0

** Default Character Encoding



@AZTENC1

UTF-8

Aztec ECI output



@AZTECI0

Disable Aztec ECI Output



@AZTECI1

** Enable Aztec ECI Output



@SETUPE0

** Exit Setup



@SETUPE1
Enter Setup

Data Matrix

Restoring factory defaults



@DMCDEF

Restore the Factory Defaults of Data Matrix

Enabling or disabling Data Matrix



@DMCENA1

**** Enable Data Matrix**



@DMCENA0

Disable Data Matrix



If the scanner fails to identify Data Matrix barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable Data Matrix** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Setting length range for Data Matrix

The scanner can be configured to only decode Data Matrix barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.



@DMCMIN

Set the Minimum Length (Default: 1)



@DMCMAX

Set the Maximum Length (Default: 3116)



Minimum length is not allowed to be greater than maximum length. If you only want to read Data Matrix barcodes with a specific length, set both minimum and maximum lengths to be that desired length.

Example

Set the scanner to decode Data Matrix barcodes containing between 8 and 12 characters:

1. Scan the **Enter Setup** barcode.
2. Scan the **Set the Minimum Length** barcode.
3. Scan the numeric barcode “8” from the “Digit Barcodes” section in Appendix.
4. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcodes “1” and “2” from the “Digit Barcodes” section in Appendix.
7. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
8. Scan the **Exit Setup** barcode.



@SETUPE0

** Exit Setup



@SETUPE1
Enter Setup

Data Matrix twin code

Data Matrix twin code is 2 Data Matrix barcodes paralleled vertically or horizontally. They must both be either regular or inverse barcodes. They must have similar specifications and be placed closely together.

There are 3 options for reading Data Matrix twin codes:

- ✧ **Single Data Matrix Only:** Read either Data Matrix code.
- ✧ **Twin Data Matrix Only:** Read both Data Matrix codes. Transmission sequence: left (upper) Data Matrix code followed by right (lower) Data Matrix code.
- ✧ **Both Single & Twin:** Read both Data Matrix codes. If successful, transmit as twin Data Matrix only. Otherwise, try single Data Matrix only.



@DMCDOU0

**** Single Data Matrix Only**



@DMCDOU1

Twin Data Matrix Only



@DMCDOU2

Both Single & Twin



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Rectangular barcode

Data Matrix has two formats:

Square barcodes having the same amount of modules in length and width: 10*10, 12*12.... 144*144.

Rectangular barcodes having different amounts of models in length and width: 6*16, 6*14...14*22.



@DMCREC1
**** Enable Rectangular Barcode**



@DMCREC0
Disable Rectangular Barcode

Data Matrix inverse

Regular barcode: Dark bars on a bright background.

Inverse barcode: Bright bars on a dark background.



@DMCINV0
**** Decode Regular Data Matrix Barcodes Only**



@DMCINV1
Decode Inverse Data Matrix Barcodes Only



@DMCINV2
Decode Both



@SETUPE0
**** Exit Setup**



@SETUP1
Enter Setup

Character encoding



@DMCENC0

**** Default Character Encoding**



@DMCENC1

UTF-8

Data Matrix ECI output



@DMCEC0

Disable Data Matrix ECI Output



@DMCEC1

**** Enable Data Matrix ECI Output**



@SETUP0
**** Exit Setup**



@SETUPE1
Enter Setup

Maxicode

Restoring factory defaults



@MXCDEF
Restore the Factory Defaults of Maxicode

Enabling or disabling Maxicode



@MXCENA1
Enable Maxicode



@MXCENA0
**** Disable Maxicode**



If the scanner fails to identify Maxicode barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable Maxicode** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Setting length range for Maxicode

The scanner can be configured to only decode Maxicode barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.



Set the Minimum Length (Default: 1)



Set the Maximum Length (Default:150)



Minimum length is not allowed to be greater than maximum length. If you only want to read Maxicode barcodes with a specific length, set both minimum and maximum lengths to be that desired length.

Example

Set the scanner to decode Maxicode barcodes containing between 8 and 12 characters:

1. Scan the **Enter Setup** barcode.
2. Scan the **Set the Minimum Length** barcode.
3. Scan the numeric barcode “8” from the “Digit Barcodes” section in Appendix.
4. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcodes “1” and “2” from the “Digit Barcodes” section in Appendix.
7. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
8. Scan the **Exit Setup** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Chinese Sensible Code

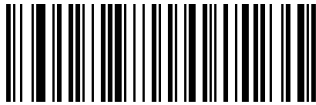
Restoring factory defaults



@CSCDEF

Restore the Factory Defaults of Chinese Sensible Code

Enabling or disabling Chinese Sensible Code



@CSCENA1

Enable Chinese Sensible Code



@CSCENA0

**** Disable Chinese Sensible Code**



If the scanner fails to identify Chinese Sensible Code barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable Chinese Sensible Code** barcode.



@SETUPE0

**** Exit Setup**



@SETUPE1

Enter Setup

Setting length range for Chinese Sensible Code

The scanner can be configured to only decode Chinese Sensible Code barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.



@CSCMIN

Set the Minimum Length (Default: 1)



@CSCMAX

Set the Maximum Length (Default: 7827)



Minimum length is not allowed to be greater than maximum length. If you only want to read Chinese Sensible Code barcodes with a specific length, set both minimum and maximum lengths to be that desired length.



Set the scanner to decode Chinese Sensible Code barcodes containing between 8 and 12 characters:

1. Scan the **Enter Setup** barcode.
2. Scan the **Set the Minimum Length** barcode.
3. Scan the numeric barcode “8” from the “Digit Barcodes” section in Appendix.
4. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcodes “1” and “2” from the “Digit Barcodes” section in Appendix.
7. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
8. Scan the **Exit Setup** barcode.



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

Chinese Sensible twin code

Chinese Sensible twin code is 2 Chinese Sensible barcodes paralleled vertically or horizontally. They must both be either regular or inverse barcodes. They must have similar specifications and be placed closely together.

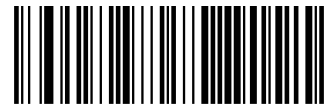
There are 3 options for reading Chinese Sensible twin codes:

- ✧ **Single Chinese Sensible Code Only:** Read either Chinese Sensible code.
- ✧ **Twin Chinese Sensible Code Only:** Read both Chinese Sensible codes. Transmission sequence: left (upper) Chinese Sensible code followed by right (lower) Chinese Sensible code.
- ✧ **Both Single & Twin:** Read both Chinese Sensible codes. If successful, transmit as twin Chinese Sensible Code only. Otherwise, try single Chinese Sensible Code only.



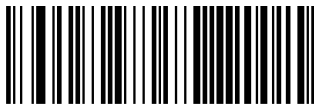
@CSCDOU0

**** Single Chinese Sensible Code Only**



@CSCDOU1

Twin Chinese Sensible Code Only



@CSCDOU2

Both Single & Twin



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Chinese Sensible Code inverse

Regular barcode: Dark bars on a bright background.

Inverse barcode: Bright bars on a dark background.



@CSCINV0

**** Decode Regular Chinese Sensible Barcodes Only**



@CSCINV1

Decode Inverse Chinese Sensible Barcodes Only



@CSCINV2

Decode Both



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

GM Code

Restoring factory defaults



@GMCDEF
Restore the Factory Defaults of GM

Enabling or disabling GM



@GMCENA1
Enable GM



@GMCENA0
**** Disable GM**



If the scanner fails to identify GM barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable GM** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Setting length range for GM

The scanner can be configured to only decode GM barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.



Set the Minimum Length (Default: 1)



Set the Maximum Length (Default: 2751)



Minimum length is not allowed to be greater than maximum length. If you only want to read GM barcodes with a specific length, set both minimum and maximum lengths to be that desired length.



Set the scanner to decode GM barcodes containing between 8 and 12 characters:

1. Scan the **Enter Setup** barcode.
2. Scan the **Set the Minimum Length** barcode.
3. Scan the numeric barcode “8” from the “Digit Barcodes” section in Appendix.
4. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcodes “1” and “2” from the “Digit Barcodes” section in Appendix.
7. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
8. Scan the **Exit Setup** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Code One

Restoring factory defaults



@ONEDEF
Restore the Factory Defaults of Code One

Enabling or disabling Code One



@ONEENA1
Enable Code One



@ONEENA0
**** Disable Code One**



If the scanner fails to identify Code One barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable Code One** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1

Enter Setup

Setting length range for Code One

The scanner can be configured to only decode Code One barcodes with lengths that fall between (inclusive) the minimum and maximum lengths. To accomplish it, you need to set the minimum and maximum lengths.



@ONEMIN

Set the Minimum Length (Default: 1)



@ONEMAX

Set the Maximum Length (Default: 3550)



Minimum length is not allowed to be greater than maximum length. If you only want to read Code One barcodes with a specific length, set both minimum and maximum lengths to be that desired length.

E
sample

Set the scanner to decode Code One barcodes containing between 8 and 12 characters:

1. Scan the **Enter Setup** barcode.
2. Scan the **Set the Minimum Length** barcode.
3. Scan the numeric barcode “8” from the “Digit Barcodes” section in Appendix.
4. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
5. Scan the **Set the Maximum Length** barcode.
6. Scan the numeric barcodes “1” and “2” from the “Digit Barcodes” section in Appendix.
7. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
8. Scan the **Exit Setup** barcode.



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

DotCode

Restoring factory defaults



@DOTDEF
Restore the Factory Defaults of DotCode

Enabling or disabling DotCode



@DOTENA1
Enable DotCode



@DOTENA0
** Disable DotCode



If the scanner fails to identify DotCode barcodes, you may first try this solution by scanning the Enter Setup barcode and then Enable DotCode barcode.



@SETUPE0
** Exit Setup



@SETUPE1
Enter Setup

USPS Postnet

Restoring factory defaults



@PNTDEF
Restore the Factory Defaults of USPS Postnet

Enabling or disabling USPS Postnet



@PNTENA1
Enable USPS Postnet



@PNTENA0
**** Disable USPS Postnet**



If the scanner fails to identify USPS Postnet barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable USPS Postnet** barcode.

Transmitting check character



@PNTCHK1
Do Not Transmit USPS Postnet Check Character



@PNTCHK2
**** Transmit USPS Postnet Check Character**



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

USPS Intelligent Mail

Restoring factory defaults



@ILGDEF
Restore the Factory Defaults of USPS Intelligent Mail

Enabling or disabling USPS Intelligent Mail



@ILGENA1
Enable USPS Intelligent Mail



@ILGENA0
** Disable USPS Intelligent Mail



If the scanner fails to identify USPS Intelligent Mail barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable USPS Intelligent Mail** barcode.



@SETUPE0
** Exit Setup



@SETUPE1
Enter Setup

Royal Mail

Restoring factory defaults



@ROYDEF

Restore the Factory Defaults of Royal Mail

Enabling or disabling Royal Mail



@ROYENA1

Enable Royal Mail



@ROYENA0

**** Disable Royal Mail**



If the scanner fails to identify Royal Mail barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable Royal Mail** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

USPS Planet

Restoring factory defaults



@PLADEF

Restore the Factory Defaults of USPS Planet

Enabling or disabling USPS Planet



@PLAENA1

Enable USPS Planet



@PLAENA0

**** Disable USPS Planet**



If the scanner fails to identify USPS Planet barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable USPS Planet** barcode.

Transmitting check character



@PLACHK1

Do Not Transmit USPS Planet Check Character



@PLACHK2

**** Transmit USPS Planet Check Character**



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

KIX Post

Restoring factory defaults



@KIXDEF

Restore the Factory Defaults of KIX Post

Enabling or disabling KIX Post



@KIXENA1

Enable KIX Post



@KIXENA0

**** Disable KIX Post**



If the scanner fails to identify KIX Post barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable KIX Post** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Australian Postal

Restoring factory defaults



@APLDEF

Restore the Factory Defaults of Australian Postal

Enabling or disabling Australian Postal



@APLENA1

Enable Australian Postal



@APLENA0

**** Disable Australian Postal**



If the scanner fails to identify Australian Postal barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable Australian Postal** barcode.



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

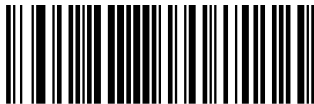
Japan Post

Restoring factory defaults



@JPPDEF
Restore the Factory Defaults of Japan Post

Enabling or disabling Japan Post



@JPPENA1
Enable Japan Post



@JPPENA0
**** Disable Japan Post**



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Specific OCR-B

Restoring factory defaults



@SOBDEF
Restore the Factory Defaults of Specific OCR-B

Enabling or disabling Specific OCR-B



@SOBENA1
Enable Specific OCR-B



@SOBENA0
** Disable Specific OCR-B



If the scanner fails to identify Specific OCR-B barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable Specific OCR-B** barcode.



@SETUPE0
** Exit Setup



@SETUPE1
Enter Setup

Chinese ID Card OCR

Restoring factory defaults



@IDCDEF

Restore the Factory Defaults of Chinese ID Card OCR

Enabling or disabling Chinese ID Card OCR



@IDCENA1

Enable Chinese ID Card OCR



@IDCENA0

**** Disable Chinese ID Card OCR**



If the scanner fails to identify Chinese ID Card OCR barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable Chinese ID Card OCR** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Passport OCR

Restoring factory defaults



@PASDEF
Restore the Factory Defaults of Passport OCR

Enabling or disabling Passport OCR



@PASENA1
Enable Passport OCR



@PASENA0
**** Disable Passport OCR**



If the scanner fails to identify Passport OCR barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable Passport OCR** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

China Travel Permit OCR

Restoring factory defaults



@CTPDEF

Restore the Factory Defaults of China Travel Permit OCR

Enabling or disabling China Travel Permit OCR



@CTPENAI

Enable China Travel Permit OCR



@CTPENAO

**** Disable China Travel Permit OCR**



If the scanner fails to identify China Travel Permit OCR barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable China Travel Permit OCR** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Chapter 6 Data formatter

Introduction

You may use the Data Formatter to modify the scanner's output. For example, you can use the Data Formatter to insert characters at certain points in barcode data or to suppress/ replace/ send certain characters in barcode data as it is scanned.

Normally, when you scan a barcode, it gets outputted automatically; however, when you create a format, you must use a "send" command (see the "Send Commands" section in this chapter) within the format programming to output data. Multiple data formats can be programmed into the scanner. The maximum size of all data formats created is 2048 characters. By default, the data formatter is disabled. Enable it when required. 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.



@DFMDEF
Default Data Format

Adding a data format

Data format is used to edit barcode data. When you create a data format, you must select one of the four labels (Format_0, Format_1, Format_2 and Format_3) for your data format, specify the application scope of data format (such as barcode type and data length) and include formatter commands. Multiple data formats may be created using the same label. When scanned data does not match your data format requirements, you will hear the non-match error beep (if the non-match error beep is ON).

There are two methods to program a data format: Programming with barcodes and programming with serial commands.

Programming with barcodes

The following explains how to program a data format by scanning the specific barcodes. Scanning any irrelevant barcode or failing to follow the setting procedure will result in programming failure. To find the alphanumeric barcodes needed to create a data format, see the "Digit Barcodes" section in Appendix.

Step 1: Scan the **Enter Setup** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1

Enter Setup

Step 2: Scan the **Add Data Format** barcode.



@DFMADD

Add Data Format

Step 3: Select a label (Format_0 or Format_1 or Format_2 or Format_3).

Scan a numeric barcode **0** or **1** or **2** or **3** to label this data format Format_0 or Format_1 or Format_2 or Format_3.

Step 4: Select formatter command type.

Specify what type of formatter commands will be used. Scan a numeric barcode “6” to select formatter command type 6. (See the “Formatter Command Type 6” section in this chapter for more information)

Step 5: Set interface type

Scan **999** for any interface type.

Step 6: Set Symbology ID Number

Refer to the “Symbology ID Number” section in Appendix and find the ID number of the symbology to which you want to apply the data format. Scan three numeric barcodes for the symbology ID number. If you wish to create a data format for all symbologies, scan **999**.

Step 7: Set barcode data length

Specify what length of data will be acceptable for this symbology. Scan the four numeric barcodes that represent the data length. 9999 is a universal number, indicating all lengths. For example, 32 characters should be entered as 0032.

Step 8: Enter formatter command

Refer to the “Formatter Command Type 6” section in this chapter. Scan the alphanumeric barcodes that represent the command you need to edit data. For example, when a command is F141, you should scan F141.

Step 9: Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix to save your data format.



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

Example: Program a Format_0 data format using formatter command type 6, Code 128 containing 10 characters applicable, send all characters followed by "A".

- | | |
|---|---|
| 1. Scan the Enter Setup barcode | Enter the Setup mode |
| 2. Scan the Add Data Format barcode | Add a data format |
| 3. Scan the 0 barcode | Select Format_0 as the label |
| 4. Scan the 6 barcode | Select formatter command type 6 |
| 5. Scan the 9 barcode three times | All interface types applicable |
| 6. Scan the barcodes 002 | Only Code 128 applicable |
| 7. Scan the barcodes 0010 | Only a length of 10 characters applicable |
| 8. Scan the alphanumeric barcodes F141 | Send all characters followed by "A" (HEX: 41) |
| 9. Scan the Save barcode | Save the data format |

To streamline the programming process, you may as well generate a batch barcode by inputting the command (e.g. **@DFMADD069990020010F141;**) used to create a data format. See the "Use Batch Barcode" section in Chapter 9 to learn how to put a batch barcode into use.

When creating multiple data formats sharing a label, the formats are separated from each other by a vertical bar (|) in the batch command, e.g. **@DFMADD069990029999F141|069990039999F142|169990049999F143;**.



@SETUPE0
** Exit Setup



@SETUPE1
Enter Setup

Programming with serial commands

A data format can also be created by serial commands (HEX) sent from the host device. **All commands must be entered in uppercase letters.**

The syntax consists of the following elements:

Prefix: "~<SOH>0000" (HEX: **7E 01 30 30 30 30**), 6 characters.

Storage type: "@" (HEX: **40**) or "#" (HEX: **23**), 1 character. "@" means permanent setting which will not be lost by removing power from the scanner or rebooting it; "#" means temporary setting which will be lost by removing power from the scanner or rebooting it.

Add Data Format Command: "DFMADD" (HEX: **44 46 4D 41 44 44**), 6 character.

Data format label: "0" (HEX: **30**) or "1" (HEX: **31**) or "2" (HEX: **32**) or "3" (HEX: **33**), 1 character. "0", "1", "2" and "3" represent Format_0, Format_1, Format_2 and Format_3 respectively.

Formatter command type: "6" (HEX: **36**), 1 character.

Interface type: "999" (HEX: **39 39 39**), 3 characters.

Symbology ID Number: The ID number of the symbology to which you want to apply the data format, 3 characters. 999 indicates all symbologies.

Data length: The length of data that will be acceptable for this symbology, 4 characters. 9999 indicates all lengths. For example, 32 characters should be entered as 0032.

Formatter commands: The command string used to edit data. For more information, see the "Formatter Command Type 6" section in this chapter.

Suffix: "<ETX>" (HEX: **3B 03**), 2 characters.

Example: Program a Format_0 data format using formatter command type 6, Code 128 containing 10 characters applicable, send all characters followed by "A".

Enter: **7E 01 30 30 30 30 40 44 46 4D 41 44 44 30 36 39 39 39 30 30 33 39 39 39 39 46 31 34 31 3B 03**
(~<SOH>0000@DFMADD069990020010F141;<ETX>)

Response: **02 01 30 30 30 30 40 44 46 4D 41 44 44 30 36 39 39 39 30 30 33 39 39 39 39 46 31 34 31 06 3B 03**
(<STX><SOH>0000@DFMADD069990020010F141<ACK>;<ETX>)

When creating multiple data formats sharing a label, the formats are separated from each other by a vertical bar (|) in the serial command.

Example: ~<SOH>0000@DFMADD069990020010F141|069990039999F142|069990049999F143;<ETX>



@SETUPE0
** Exit Setup



@SETUPE1
Enter Setup

Enabling or disabling Data Formatter

When Data Formatter is disabled, the data format you have enabled becomes invalid.



@DFMENAO
** Disable Data Formatter

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

Enable Data Formatter, Required, Keep Prefix/Suffix: Scanned data that meets your data format requirements is modified accordingly and gets outputted along with prefixes and suffixes (if prefix and suffix are enabled). Any data that does not match your data format requirements generates an error beep (if Non-Match Error Beep is turned ON) and the data in that barcode is not transmitted.

Enable Data Formatter, Required, Drop Prefix/Suffix: Scanned data that meets your data format requirements is modified accordingly and gets outputted without prefixes and suffixes (even if prefix and suffix are enabled). Any data that does not match your data format requirements generates an error beep (if Non-Match Error Beep is turned ON) and the data in that barcode is not transmitted.

Enable Data Formatter, Not Required, Keep Prefix/Suffix: Scanned data that meets your data format requirements is modified accordingly and gets outputted along with prefixes and suffixes (if prefix and suffix are enabled). Barcode data that does not match your data format requirements is transmitted as read along with prefixes and suffixes (if prefix and suffix are enabled).

Enable Data Formatter, Not Required, Drop Prefix/Suffix: Scanned data that meets your data format requirements is modified accordingly and gets outputted without prefixes and suffixes (even if prefix and suffix are enabled). Barcode data that does not match your data format requirements is transmitted as read along with prefixes and suffixes (if prefix and suffix are enabled).



@SETUPE0
** Exit Setup



@SETUPE1
Enter Setup



@DFMENA1

Enable Data Formatter, Required, Keep Prefix/Suffix



@DFMENA2

Enable Data Formatter, Required, Drop Prefix/Suffix



@DFMENA3

Enable Data Formatter, Not Required, Keep Prefix/Suffix



@DFMENA4

Enable Data Formatter, Not Required, Drop Prefix/Suffix

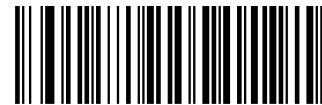
Non-match error beep

If non-match error beep is turned ON, the scanner generates an error beep when a barcode is encountered that does not match your required data format.



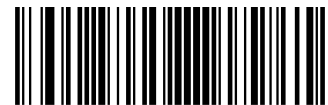
@DFMTON0

Non-Match Error Beep Off



@DFMTON1

**** Non-Match Error Beep On**



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Data format selection

After enabling the Data Formatter, you can select a data format you want to use by scanning the appropriate barcode below.



@DFMUSE0
**** Format_0**



@DFMUSE2
Format_2



@DFMUSE1
Format_1



@DFMUSE3
Format_3



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Changing the data format for a single scan

You can switch between data formats for a single scan. The next barcode is scanned using the data format selected here, then reverts to the format you have selected above.

For example, you may have set your scanner to use the data format you saved as Format_3. You can switch to Format_1 for a single trigger pull by scanning the **Single Scan – Format_1** barcode below. The next barcode that is scanned uses Format_1, then reverts back to Format_3.

Note: This setting will be lost by removing power from the scanner, or turning off/ rebooting the device.



@DFMSIN0
Single Scan – Format_0



@DFMSIN2
Single Scan – Format_2



@DFMSIN1
Single Scan – Format_1



@DFMSIN3
Single Scan – Format_3



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Clearing the data format

There are two methods to remove data format created from your scanner:

Delete one data format: Scan the **Clear One** barcode, a numeric barcode (0-3) and the **Save** barcode. For example, to delete Format_2, you should scan the **Clear One** barcode, the **2** barcode and the **Save** barcode

Delete all data formats: Scan the **Clear All** barcode.



@DFMCAL
Clear All



@DFMCLR
Clear One

Querying the data format

You may scan the appropriate barcode below to get the information of data format(s) created by you or preset by manufacturer. For instance, if you have added Format_0 as per the example in the “Add a Data Format” section in this chapter, scanning the **Query Current Data Formats** barcode, you will get the result: **Data Format0:069990020010F141;**.



@DFMQCU
Query Current Data Formats



@DFMQFA
Query Preset Data Formats



@SETUPE0
** Exit Setup



@SETUPE1
Enter Setup

Formatter command Type 6

When working with the Data Formatter, 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 the hex value of ASCII characters involved in the commands, refer to the "ASCII Table" in Appendix.

Send commands

F1 Send all characters

Syntax=F1xx (xx: The insert character's hex value)

Include in the output message all of the characters from the input message, starting from current cursor position, followed by an insert character.

F2 Send a number of characters

Syntax=F2nnxx (nn: The numeric value (00-99) for the number of characters; xx: The insert character's hex value)

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."

F2 Example: Send a number of characters



1234567890ABCDEFGHIJ

Send the first 10 characters from the barcode 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**

<CR>



@SETUPE0
** Exit Setup



@SETUPE1
Enter Setup

F3 Send all characters up to a particular character

Syntax=F3ssxx (ss: The particular character's hex value; xx: The insert character's hex value)

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 particular character "ss," followed by character "xx." The cursor is moved forward to the "ss" character.

F3 Example: Send all characters up to a particular character



1234567890ABCDEFGHIJ

Using the barcode 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>



@SETUPE0
** Exit Setup



@SETUPE1
Enter Setup

B9 Send all characters up to a particular string

Syntax=B9nnns...s (nnnn: The length of the particular string; s...s: The hex value of each character in the particular string)

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 particular string “s...s.” The cursor is moved forward to the beginning of the “s...s” string.

B9 Example: Send all characters up to a particular string



Using the barcode above, send all characters up to but not including “AB.”

Command string: **B900024142**

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

0002 is the length of the particular string (2 characters)

41 is the hex value for a “A” (character in the string)

42 is the hex value for a “B” (character in the string)

The data is output as: **1234567890**

E9 Send all but the last characters

Syntax=E9nn (nn: The numeric value (00-99) for the number of characters that will not be sent at the end of the message)

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.

F4 Insert a character multiple times

Syntax=F4xxnn (xx: The insert character’s hex value; nn: The numeric value (00-99) for the number of times it should be sent)

Send “xx” character “nn” times in the output message, leaving the cursor in the current position.



@SETUPE0
** Exit Setup



@SETUPE1
Enter Setup

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



1234567890ABCDEFGHIJ

Send all characters except for the last 8 from the barcode 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>**

B3 Insert symbology name

Insert the name of the barcode's symbology in the output message, without moving the cursor.

B4 Insert barcode length

Insert the barcode's length in the output message, without moving the cursor. The length is expressed as a numeric string and does not include leading zeros.



@SETUPE0
** Exit Setup



@SETUPE1
Enter Setup

B3 and B4 Example: Insert the symbology name and length



1234567890ABCDEFGHIJ

Send the symbology name and length before the barcode data from the barcode 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 barcode 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

F5 Move the cursor forward a number of characters

Syntax=F5nn (nn: The numeric value (00-99) for the number of characters the cursor should be moved ahead)

Move the cursor ahead "nn" characters from current cursor position.



@SETUPE0
** Exit Setup



@SETUPE1

Enter Setup

F5 Example: Move the cursor forward and send the data



1234567890ABCDEFGHIJ

Move the cursor forward 3 characters, then send the rest of the barcode data from the barcode 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>

F6 Move the cursor backward a number of characters

Syntax=F6nn (nn: The numeric value (00-99) for the number of characters the cursor should be moved back)

Move the cursor back "nn" characters from current cursor position.

F7 Move the cursor to the beginning

Syntax=F7

Move the cursor to the first character in the input message.

EA Move the cursor to the end

Syntax=EA

Move the cursor to the last character in the input message.



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

Search commands

F8 Search forward for a character

Syntax=F8xx (xx: The search character's hex value)

Search the input message forward for "xx" character from the current cursor position, leaving the cursor pointing to the "xx" character.

F8 Example: Send barcode data that starts after a particular character



Search for the letter "D" in barcodes and send all the data that follows, including the "D". Using the barcode 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>

F9 Search backward for a character

Syntax=F9xx(xx: The search character's hex value)

Search the input message backward for "xx" character from the current cursor position, leaving the cursor pointing to the "xx" character.



@SETUPE0
** Exit Setup



@SETUPE1
Enter Setup

B0 Search forward for a string

Syntax=B0nnnnS (nnnn: The string length (up to 9999); S: The ASCII hex value of each character in the string)

Search forward for "S" string from the current cursor position, leaving cursor pointing to "S" string. For example, B0000454657374 will search forward for the first occurrence of the 4-character string "Test."

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



Search for the letters "FGH" in barcodes and send all the data that follows, including "FGH." Using the barcode 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>

B1 Search backward for a string

Syntax=B1nnnnS (nnnn: The string length (up to 9999); S: The ASCII hex value of each character in the string)

Search backward for "S" string from the current cursor position, leaving cursor pointing to "S" string. For example, B1000454657374 will search backward for the first occurrence of the 4-character string "Test."



@SETUPE0
** Exit Setup



@SETUPE1
Enter Setup

E6 Search forward for a non-matching character

Syntax=E6xx (xx: The search character's hex value)

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.

E6 Example: Remove zeros at the beginning of barcode data



This example shows a barcode that has been zero filled. You may want to ignore the zeros 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 barcode 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: **123abc**

<CR>

E7 Search backward for a non-matching character

Syntax=E7xx(xx: The search character's hex value)

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.



@SETUPE0
** Exit Setup



@SETUPE1

Enter Setup

Miscellaneous commands

FB Suppress characters

Syntax=FBnnxyy..zz (nn: The numeric value (00-15) for the number of suppressed characters; xyy..zz: The hex value of the characters to be suppressed)

Suppress all occurrences of up to 15 different characters, starting at the current cursor position, as the cursor is advanced by other commands.

FB Example: Remove spaces in barcode data



12 34_5*6 78

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

Command string: **FB0120F10D**

FB is the “Suppress characters” command

01 is the number of the characters 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: **1234_5*678**

<CR>

E4 Replace characters

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

Replace up to 15 characters in the output message, without moving the cursor.



@SETUPE0

** Exit Setup



@SETUPE1
Enter Setup

E4 Example: Replace zeros with CRs in barcode data



12304560780AB

If the barcode 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 zeros in the barcode 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: **123**

456

78

AB

<CR>



@SETUPE0
** Exit Setup



@SETUPE1

Enter Setup

BA Replace a string with another

Syntax = BAnnNN₁SS₁NN₂SS₂

nn: The count of replacements to be made, if nn=00 or nn>=the number of occurrences of a string to be replaced, then replace all occurrences of that string.

NN₁: The length of the string to be replaced, NN₁>0.

SS₁: The ASCII hex value of each character in the string to be replaced.

NN₂: The length of replacement string, NN₂>=0. To replace string "SS₁" with NUL (i.e. delete string "SS₁"), you should set NN₂ to 00 and leave out SS₂.

SS₂: The ASCII hex value of each character in the replacement string.

From the current cursor position, search forward for the occurrence of "SS₁" string (of length "NN₁") and replace the string with "SS₂" string (of length "NN₂") in the output message until every "SS₁" string is replaced or the count of replacements made reaches "nn" times, without moving the cursor.

BA Example: Replace "23"s with "ABC"s in barcode data



1234Abc23R0123U

If the barcode has a string of characters that the host application does not want included, you can use the BA command to replace the string with something else. In this example, you will replace the "23"s in the barcode above with "ABC"s.

Command string: **BA0002323303414243F100**

BA is the "Replace a string with another" command

00 is the count of replacements to be made, 00 means to replace all occurrences of that string

02 is the length of the string to be replaced

32 is the hex value for 2 (character in the string to be replaced)

33 is the hex value for 3 (character in the string to be replaced)

03 is the length of the replacement string



@SETUPE0

** Exit Setup



@SETUPE1
Enter Setup

41 is the hex value for A (character in the replacement string)

42 is the hex value for B (character in the replacement string)

43 is the hex value for C (character in the replacement string)

F1 is the "Send all characters" command

00 is the hex value for a NUL

The data is output as: **1ABC4AbcABCR01ABCU**

BA Example: Remove only the first occurrence of "23"s in barcode data

If the barcode has a string of characters that the host application wants removed, you can use the BA command to replace the string with NUL. In this example, you will remove the first occurrence of "23" in the barcode above.

Command string: **BA0102323300F100**

BA is the "Replace a string with another" command

01 is the count of replacements to be made

02 is the length of the string to be replaced

32 is the hex value for 2 (character in the string to be replaced)

33 is the hex value for 3 (character in the string to be replaced)

00 is the length of the replacement string, 00 means to replace the string to be replaced with NUL

F1 is the "Send all characters" command

00 is the hex value for a NUL

The data is output as: **14Abc23R0123U**



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

EF Insert a delay

Syntax=EFnnnn (nnnn: The delay in 5ms increments, up to 9999)

Inserts a delay of up to 49,995 milliseconds (in multiples of 5), starting from the current cursor position. This command can only be used with USB HID Keyboard.

EF Example: Insert a delay of 1s between the 5th and 6th character

Send the first 5 characters in a barcode, wait for 1s, then send the rest of the barcode data.

Command string: **F20500EF0200E900**

F2 is the "Send a number of characters" command

05 is the number of characters to send

00 is the hex value for a Null character

EF is the "Insert a delay" command

0200 is the delay value (5msX200=1000ms=1s)

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

00 is the number of characters that will not be sent at the end of the message



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

B5 Insert key strokes

Syntax=B5nnssxx (nn: The number of keys pressed (without key modifiers); ss: the key modifier from the table below; xx: the key number from the “Unicode Key Maps” in Appendix.)

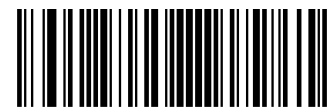
Insert a key stroke or combination of key strokes. Key strokes are dependent on your keyboard (see the “Unicode Key Maps” in Appendix). This command can only be used with USB HID Keyboard.

Key Modifiers	
No Key Modifier	00
Shift Left	01
Shift Right	02
Alt Left	04
Alt Right	08
Control Left	10
Control Right	20

For example, B501001F inserts an “a” on a U.S. style keyboard. B5 = the command, 01 = number of keys pressed (without the key modifier), 00 is No Key Modifier, and 1F is the “a” key. If an “A” were to be inserted, B501011F or B501021F would be entered.

If there are two keystrokes, the syntax would change from Syntax=B5nnssxx for one keystroke to Syntax=B5nnssxxssxx. An example that would insert “aA” is as follows: B502001F011F.

Note: Key modifiers can be added together when needed. Example: Shift Left + Alt Left + Control Left =15.



@SETUPE0
** Exit Setup



@SETUPE1
Enter Setup

Chapter 7 Prefixes and suffixes

Introduction

A 1D barcode could contain digits, letters, symbols, etc. A 2D barcode could contain more data, such as Chinese characters and other multi-byte characters. However, in real applications, they do not and should not have all information we need, such as barcode type, data acquisition time and delimiter, in order to keep the barcodes short and flexible.

Prefix and suffix are how to fulfill the needs mentioned above. They can be added, removed and modified while the original barcode data remains intact.



Barcode processing procedure:

1. Edit data with Data Formatter
2. Append prefix/suffix
3. Pack data
4. Append terminating character



@SETUPE0
** Exit Setup



@SETUPE1
Enter Setup

Global settings

Enabling or disabling all prefixes and suffixes

Disable All Prefixes/Suffixes: Transmit barcode data with no prefix/suffix.

Enable All Prefixes/Suffixes: Allow to append Code ID prefix, AIM ID prefix, custom prefix/suffix and terminating character to the barcode data before the transmission.



Disable All Prefixes/Suffixes



Enable All Prefixes/Suffixes

Prefix sequence



**** Code ID+ Custom +AIM ID**



Custom + Code ID + AIM ID



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Custom prefix

Enabling or disabling a custom prefix

If custom prefix is enabled, you can append to the data a user-defined prefix that cannot exceed 10 characters. For example, if the custom prefix is “AB” and the barcode data is “123”, the Host will receive “AB123”.



@CPRENA0
** Disable Custom Prefix

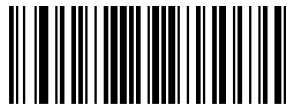


@CPRENA1
Enable Custom Prefix

Setting a custom prefix

To set a custom prefix, scan the **Set Custom Prefix** barcode then the numeric barcodes corresponding to the hexadecimal value of a desired prefix then the **Save** barcode.

Note: A custom prefix cannot exceed 10 characters.



@CPRSET
Set Custom Prefix

E
xample

Set the custom prefix to “CODE” (HEX: 0x43/0x4F/0x44/0x45):

1. Scan the **Enter Setup** barcode.
2. Scan the **Set Custom Prefix** barcode.
3. Scan the numeric barcodes “4”, “3”, “4”, “F”, “4”, “4”, “4” and “5” from the “Digit Barcodes” section in Appendix.
4. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
5. Scan the **Enable Custom Prefix** barcode.
6. Scan the **Exit Setup** barcode.



@SETUPE0
** Exit Setup



@SETUPE1
Enter Setup

AIM ID prefix

AIM (Automatic Identification Manufacturers) ID defines symbology identifier (For the details, see the “AIM ID Table” section in Appendix). If AIM ID prefix is enabled, the scanner will add the symbology identifier before the scanned data after decoding.



@AIDENA0
**** Disable AIM ID Prefix**



@AIDENA1
Enable AIM ID Prefix



AIM ID is not user programmable.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Code ID prefix

Code ID can also be used to identify barcode type. Unlike AIM ID, Code ID is user programmable. Code ID can only consist of one or two English letters.



@CIDENA0
**** Disable Code ID Prefix**



@CIDENA1
Enable Code ID Prefix

Restoring all default Code IDs

For the information of default Code IDs, see the "Code ID Table" section in Appendix.



@CIDDEF
Restore All Default Code IDs



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

Modifying Code IDs

See the examples below to learn how to modify a Code ID and restore the default Code IDs of all symbologies.

E *xample*

Modify PDF417 Code ID to be “p” (HEX: 0x70):

1. Scan the **Enter Setup** barcode.
2. Scan the **Modify PDF417 Code ID** barcode.
3. Scan the numeric barcodes “7” and “0” from the “Digit Barcodes” section in Appendix.
4. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
5. Scan the **Exit Setup** barcode.

Restore the default Code IDs of all symbologies:

1. Scan the **Enter Setup** barcode.
2. Scan the **Restore All Default Code IDs** barcode.
3. Scan the **Exit Setup** barcode.



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup

1D symbologies:



@CID002
Modify Code 128 Code ID



@CID003
Modify GS1-128 Code ID



@CID004
Modify EAN-8 Code ID



@CID005
Modify EAN-13 Code ID



@CID006
Modify UPC-E Code ID



@CID007
Modify UPC-A Code ID



@CID008
Modify Interleaved 2 of 5 Code ID



@SETUPE0
**** Exit Setup**



@SETUP1
Enter Setup



@CID009
Modify ITF-14 Code ID



@CID010
Modify ITF-6 Code ID



@CID011
Modify Matrix 2 of 5 Code ID



@CID013
Modify Code 39 Code ID



@CID015
Modify Codabar Code ID



@CID017
Modify Code 93 Code ID



@CID019
Modify China Post 25 Code ID



@CID020
Modify AIM 128 Code ID



@SETUP0
**** Exit Setup**



@SETUPE1
Enter Setup



@CID021
Modify ISBT 128 Code ID



@CID022
Modify COOP 25 Code ID



@CID023
Modify ISSN Code ID



@CID024
Modify ISBN Code ID



@CID025
Modify Industrial 25 Code ID



@CID026
Modify Standard 25 Code ID



@CID027
Modify Plessey Code ID



@CID028
Modify Code 11 Code ID



@SETUPE0
**** Exit Setup**



@SETUPE1

Enter Setup



@CID029

Modify MSI-Plessy Code ID



@CID030

Modify GS1 Composite Code ID



@CID031

Modify GS1 Databar Code ID



@CID132

Modify Code 49 Code ID



@CID133

Modify Code 16K Code ID



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

2D symbologies:



@CID032
Modify PDF417 Code ID



@CID034
Modify Aztec Code ID



@CID036
Modify Maxicode Code ID



@CID041
Modify GM Code ID



@CID033
Modify QR Code ID



@CID035
Modify Data Matrix Code ID



@CID039
Modify Chinese Sensible Code ID



@SETUPE0
**** Exit Setup**



@SETUPE1
Enter Setup



@CID043
Modify Micro QR Code ID



@CID042
Modify Micro PDF417 Code ID



@CID048
Modify Code One Code ID



@SETUPE0
**** Exit Setup**



@SETUPE1

Enter Setup

Postal symbologies:



@CID096

Modify USPS Postnet Code ID



@CID098

Modify Royal Mail Code ID



@CID100

Modify KIX Post Code ID



@CID102

Modify Japan Post Code ID



@CID097

Modify USPS Intelligent Mail Code ID



@CID099

Modify USPS Planet Code ID



@CID101

Modify Australian Postal Code ID



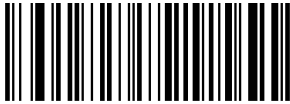
@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

OCR:



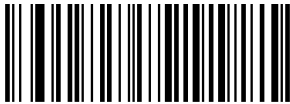
@CID064

Modify Specific OCR-B Code ID



@CID065

Modify Chinese ID Card OCR Code ID



@CID066

Modify Passport OCR Code ID



@CID068

Modify China Travel Permit OCR Code ID



@SETUPE0
**** Exit Setup**

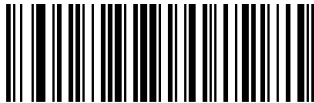


@SETUPE1
Enter Setup

Custom suffixes

Enabling or disabling custom suffixes

If custom suffix is enabled, you can append to the data a user-defined suffix that cannot exceed 10 characters. For example, if the custom suffix is “AB” and the barcode data is “123”, the Host will receive “123AB”.



@CSUENA0
** Disable Custom Suffix



@CSUENA1
Enable Custom Suffix

Setting custom suffixes

To set a custom suffix, scan the **Set Custom Suffix** barcode then the numeric barcodes corresponding to the hexadecimal value of a desired suffix then the **Save** barcode.

Note: A custom suffix cannot exceed 10 characters.



Set Custom Suffix

E
xample

Set the custom suffix to “CODE” (HEX: 0x43/0x4F/0x44/0x45):

1. Scan the **Enter Setup** barcode.
2. Scan the **Set Custom Suffix** barcode.
3. Scan the numeric barcodes “4”, “3”, “4”, “F”, “4”, “4”, “4” and “5” from the “Digit Barcodes” section in Appendix.
4. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
5. Scan the **Enable Custom Suffix** barcode.
6. Scan the **Exit Setup** barcode.



@SETUPE0
** Exit Setup



@SETUPE1
Enter Setup

Data packing

Introduction

Data packing is designed for a specific group of users who want to have the data packed before transmission. Data packing influences data format, so it is advised to disable this feature when it is not required.

Data packing options

Disable Data Packing: Transmit decoded data in raw format (unpacked).

Enable Data Packing, Format 1: Transmit decoded data with the packet format 1 defined below.

Packet format 1: [STX + ATTR + LEN] + [AL_TYPE + DATA] + [LRC]

STX: 0x02

ATTR: 0x00

LEN: Barcode data length is expressed in 2 bytes ranging from 0x0000 (0) to 0xFFFF (65535).

AL_TYPE: 0x36

DATA: Raw barcode data.

LRC: Check digit.

LRC calculation algorithm: computation sequence: 0xFF+LEN+AL_TYPE+DATA; computation method is XOR, byte by byte.

Enable Data Packing, Format 2: Transmit decoded data with the packet format 2 defined below.

Packet format 2: [STX + ATTR + LEN] + [AL_TYPE] + [Symbology_ID + DATA] + [LRC]

STX: 0x02

ATTR: 0x00

LEN: Barcode data length is expressed in 2 bytes ranging from 0x0000 (0) to 0xFFFF (65535).

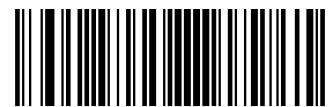
AL_TYPE: 0x3B

Symbology_ID: The ID number of symbology, 1 byte.

DATA: Raw barcode data.

LRC: Check digit.

LRC calculation algorithm: computation sequence: 0xFF+LEN+AL_TYPE+Symbology_ID+DATA; computation method is XOR, byte by byte.

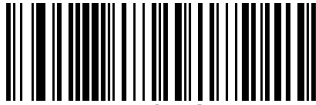


@SETUPE0
** Exit Setup



@SETUPE1

Enter Setup



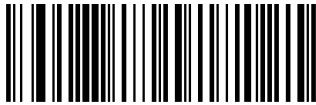
@PACKAG0

**** Disable Data Packing**



@PACKAG1

Enable Data Packing, Format 1



@PACKAG2

Enable Data Packing, Format 2



@SETUPE0

**** Exit Setup**

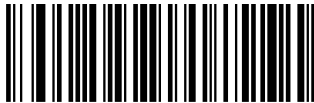


@SETUPE1
Enter Setup

Terminating character suffix

Enabling or disabling a terminating character suffix

A terminating character such as carriage return (CR) or carriage return/line feed pair (CRLF) can only be used to mark the end of data, which means nothing can be added after it.



@TSUENA0

**** Disable Terminating Character Suffix**



@TSUENA1

Enable Terminating Character Suffix

Setting a terminating character suffix

To set a terminating character suffix, scan the **Set Terminating Character Suffix** barcode then the numeric barcodes corresponding to the hexadecimal value of a desired terminating character then the **Save** barcode.

Note: A terminating character suffix cannot exceed 2 characters.



@TSUSET

Set Terminating Character Suffix



@TSUSET0D

Set Terminating Character to CR (0x0D)



@TSUSET0D0A

Set Terminating Character to CRLF (0x0D,0x0A)



@SETUPE0
**** Exit Setup**



@SETUPE1

Enter Setup

E
example

Set the terminating character suffix to 0x0A:

1. Scan the **Enter Setup** barcode.
2. Scan the **Set Terminating Character Suffix** barcode.
3. Scan the numeric barcodes "0" and "A" from the "Digit Barcodes" section in Appendix.
4. Scan the **Save** barcode from the "Save/Cancel Barcodes" section in Appendix.
5. Scan the **Enable Terminating Character Suffix** barcode.
6. Scan the **Exit Setup** barcode.



@SETUPE0

**** Exit Setup**



@SETUPE1
Enter Setup

Chapter 8 USA Driver License Parsing

The HP Barcode Scanner N-Series Configuration Utility can be used to configure settings for the USA Driver License Parsing function. In the HP Barcode Scanner N-Series Configuration Utility, select the **3. DATA FORMATTING** tab, and then select the **USA Driver License Parsing** tab to see the available settings.

To enable editing of barcode data, select **Advanced Formatting/Label Edit Script Enable**.

To enable highlighting of required elements, select **Element Extraction Enable**.

To edit elements according to the needs of your setup, select the **Driver License Information** button.



@SETUPE0
** Exit Setup



@SETUPE1
Enter Setup

Chapter 9 Batch programming

Introduction

Batch programming enables users to integrate a batch of commands into a single batch barcode.

Listed below are batch programming rules:

1. Command format: Command + Parameter Value.
2. Each command is terminated by a semicolon (;). Note that there is no space between a command and its terminator semicolon.
3. Use the barcode generator software to generate a 2D batch barcode.

Example: Create a batch barcode for internal **Illumination Always On, Sense Mode, Decode Session Timeout = 2s**:

1. Input the commands:

@ILLSCN2;SCNMOD2;ORTSET2000;

2. Generate a batch barcode.

When setting up the scanner with the above configuration, scan the **Enable Batch Barcode** barcode and then the batch barcode generated.



@BATCHS
Enable Batch Barcode



@SETUPE0
** Exit Setup



@SETUPE1
Enter Setup

Creating a batch command

A batch command may contain a number of individual commands each of which is terminated by a semicolon (;).

For more information, see the “Use of programming commands” section in Chapter 3.

Creating a batch barcode

Batch barcodes can be produced in the format of PDF417, QR Code or Data Matrix.

Example: Create a batch barcode for internal **Illumination Always On, Sense Mode, Decode Session Timeout = 2s**:

1. Input the following commands:

```
@ILLSCN2;SCNMOD2;ORTSET2000;
```

2. Generate a PDF417 batch barcode.



@SETUPE0
** Exit Setup



@SETUPE1
Enter Setup

Using a batch barcode

To put a batch barcode into use, scan the following barcodes. (Use the example above.)



@SETUPE1
Enter Setup



@BATCHS
Enable Batch Barcode



Batch Barcode



@SETUPE0
Exit Setup



@SETUPE0
**** Exit Setup**

Appendix

Digit barcodes

0~9





@DIGIT6

6



@DIGIT7

7



@DIGIT8

8



@DIGIT9

9

A~F



@DIGITA

A



@DIGITB

B



@DIGITC

C



@DIGITD

D



@DIGITE

E



@DIGITF

F

Save and Cancel barcodes

After reading numeric barcode(s), you need to scan the **Save** barcode to save the data. If you scan the wrong digit(s), you can either scan the **Cancel** barcode and then start the configuration all over again, or scan the **Delete the Last Digit** barcode and then the correct digit, or scan the **Delete All Digits** barcode and then the digits you want.

For instance, after reading the **Maximum Length** barcode and numeric barcodes “1”, “2” and “3”, you scan:

- ✧ **Delete the Last Digit:** The last digit “3” will be removed.
- ✧ **Delete All Digits:** All digits “123” will be removed.
- ✧ **Cancel:** The maximum length configuration will be cancelled. And the scanner is still in the setup mode.



Factory defaults table

Parameter	Factory Default	Remark
System Settings		
Barcode Programming	Disabled (Exit Setup)	
Programming Barcode Data	Do not transmit	
Internal Illumination	Normal	
External Illumination	Off	
Aiming	Normal	
Good Read LED	On	
Good Read LED Duration	Short (20ms)	
Power On Beep	On	
Good Read Beep	On	
Good Read Beep Duration	Medium (80ms)	
Good Read Beep Frequency	Medium (2730Hz)	
Good Read Beep Volume	Level 20	
Scan Mode	Level Mode	
Decode Session Timeout	3,000ms.	1-3,600,000ms; 0: Infinite
Image Stabilization Timeout (Sense Mode)	200ms	0-3,000ms
Illumination Brightness Control	Level 3	
Reread Timeout	Enabled	
	1,500ms	1-3,600,000ms
Reread Timeout Reset	Off	
Image Decoding Timeout	500ms	1-3000ms
Good Read Delay	Disabled, 500ms	1-3,600,000ms
Sensitivity	Enhanced Sensitivity	
Exposure	Level 2	
Trigger Commands	Disabled	
Start Scanning Command	<SOH> T <EOT>	
Stop Scanning Command	<SOH> P <EOT>	
Scanning Preference	Normal Mode	
Read Barcode	On	
Decode Area	Whole Area Decoding	
Specify Decoding Area	40% top, 60% bottom, 40% left, 60% right	
Image Flipping	Do Not Flip	
Bad Read Message	Off	

	NG	1-7 characters
Time Period from Idle to Sleep	15ms	
Default Interface	USB HID Keyboard	
USB Interface		
USB Country Keyboard	US keyboard	USB HID Keyboard
Beep on Unknown Character	Off	USB HID Keyboard
Emulate ALT+Keypad	Off	USB HID Keyboard
Code Page	Code Page 1252 (West European Latin)	USB HID Keyboard
Unicode Encoding	Off	USB HID Keyboard
Emulate Keypad with Leading Zero	On	USB HID Keyboard
Function Key Mapping	Disable	USB HID Keyboard
Inter-Keystroke Delay	No Delay	USB HID Keyboard
Caps Lock	Caps Lock OFF, non-Japanese Keyboard	USB HID Keyboard
Convert Case	No Case Conversion	USB HID Keyboard
Emulate Numeric Keypad 1	Off	USB HID Keyboard
Emulate Numeric Keypad 2	Off	USB HID Keyboard
Fast Mode	Off	USB HID Keyboard
Polling Rate	4ms	USB HID Keyboard
Adaptive Wired Communication	On	
Symbologies		
Global Settings		
1D Twin Code	Single 1D Code Only	
Surround GS1 AI's with Parentheses	Do Not Surround GS1 AI's with Parentheses	
Code 128		
Code 128	Enabled	
Maximum Length	48	
Minimum Length	1	
EAN-8		
EAN-8	Enabled	
Check Character	Transmit	
2-Digit Add-On Code	Disabled	
5-Digit Add-On Code	Disabled	
Add-On Code	Not Required	
Convert EAN-8 to EAN-13	Disabled	
EAN-13		
EAN-13	Enabled	

Check Character	Transmit	
2-Digit Add-On Code	Disabled	
5-Digit Add-On Code	Disabled	
Add-On Code	Not Required	
EAN-13 Beginning with 290 Add-On Code Required	Do Not Require Add-On Code	
EAN-13 Beginning with 378/379 Add-On Code Required	Do Not Require Add-On Code	
EAN-13 Beginning with 414/419 Add-On Code Required	Do Not Require Add-On Code	
EAN-13 Beginning with 434/439 Add-On Code Required	Do Not Require Add-On Code	
EAN-13 Beginning with 977 Add-On Code Required	Do Not Require Add-On Code	
EAN-13 Beginning with 978 Add-On Code Required	Do Not Require Add-On Code	
EAN-13 Beginning with 979 Add-On Code Required	Do Not Require Add-On Code	
EAN-13 Beginning with 290 Add-On Code Required	Do Not Require Add-On Code	
UPC-E		
UPC-E0	Enabled	
UPC-E1	Disabled	
Check Character	Transmit	
2-Digit Add-On Code	Disabled	
5-Digit Add-On Code	Disabled	
Add-On Code	Not Required	
Transmit Preamble Character	System Character	
Convert UPC-E to UPC-A	Disabled	
UPC-A		
UPC-A	Enabled	
Check Character	Transmit	
2-Digit Add-On Code	Disabled	
5-Digit Add-On Code	Disabled	
Add-On Code	Not Required	
Transmit Preamble Character	System Character	
Coupon		

UPC-A/EAN-13 with Extended Coupon Code	Off	
Coupon GS1 DataBar Output	Off	
Interleaved 2 of 5		
Interleaved 2 of 5	Enabled	
Maximum Length	80	
Minimum Length	6	No less than 4
Check Character Verification	Disabled	
ITF-14		
ITF-14	Disabled	
ITF-6		
ITF-6	Disabled	
Matrix 2 of 5		
Matrix 2 of 5	Enabled	
Maximum Length	80	
Minimum Length	4	No less than 4
Check Character Verification	Disabled	
Code 39		
Code 39	Enabled	
Maximum Length	48	
Minimum Length	1	
Check Character Verification	Disabled	
Start/Stop Character	Do not transmit	
Code 39 Full ASCII	Disabled	
Code 32 Pharmaceutical (PARAF)	Disabled	
Code 32 Prefix	Disabled	
Code 32 Start/Stop Character	Do not transmit	
Code 32 Check Character	Do not transmit	
Codabar		
Codabar	Enabled	
Maximum Length	60	
Minimum Length	2	
Check Character Verification	Disabled	
Start/Stop Character	Do not transmit	
	ABCD/ABCD	
Code 93		

Code 93	Disabled	
Maximum Length	48	
Minimum Length	1	
Check Character Verification	Do Not Transmit Check Character After Verification	
China Post 25		
China Post 25	Disabled	
Maximum Length	48	
Minimum Length	1	
Check Character Verification	Disabled	
GS1-128 (UCC/EAN-128)		
GS1-128	Enabled	
Maximum Length	48	
Minimum Length	1	
GS1 Databar		
GS1 Databar	Enabled	
Application Identifier "01"	Transmit	
EAN-UCC Composite		
GS1 Composite	Disabled	
UPC/EAN Composite	Disabled	
Code 11		
Code 11	Disabled	
Maximum Length	48	
Minimum Length	4	No less than 4
Check Character Verification	One Check Character, MOD11	
Check Character	Transmit	
ISBN		
ISBN	Disabled	
Set ISBN Format	ISBN-10	
ISSN		
ISSN	Disabled	
Industrial 25		
Industrial 25	Disabled	
Maximum Length	48	
Minimum Length	6	No less than 4
Check Character Verification	Disabled	
Standard 25		

Standard 25	Disabled	
Maximum Length	48	
Minimum Length	6	No less than 4
Check Character Verification	Disabled	
Plessey		
Plessey	Disabled	
Maximum Length	48	
Minimum Length	4	No less than 4
Check Character Verification	Disabled	
MSI-Plessey		
MSI-Plessey	Disabled	
Maximum Length	48	
Minimum Length	4	No less than 4
Check Character Verification	One Check Character, MOD10	
Check Character	Transmit	
AIM 128		
AIM 128	Disabled	
Maximum Length	48	
Minimum Length	1	
ISBT 128		
ISBT 128	Disabled	
Code 49		
Code 49	Disabled	
Maximum Length	80	
Minimum Length	1	
Code 16K		
Code 16K	Disabled	
Maximum Length	80	
Minimum Length	1	
COOP 25		
COOP 25	Disabled	
Maximum Length	80	
Minimum Length	4	
Check Character Verification	Disabled	
PDF417		
PDF417	Enabled	

Maximum Length	2710	
Minimum Length	1	
PDF417 Twin Code	Single PDF417 Only	
PDF417 Inverse	Decode Regular PDF417 Barcodes Only	
Character Encoding	Default Character Encoding	
PDF417 ECI Output	Enabled	
Micro PDF417		
Micro PDF417	Disabled	
Maximum Length	366	
Minimum Length	1	
QR Code		
QR Code	Enabled	
Maximum Length	7089	
Minimum Length	1	
QR Twin Code	Single QR Only	
QR Inverse	Decode Regular QR Barcodes Only	
Character Encoding	Default Character Encoding	
QR ECI Output	Enabled	
Micro QR Code		
Micro QR	Enabled	
Maximum Length	35	
Minimum Length	1	
Aztec		
Aztec Code	Disabled	
Maximum Length	3832	
Minimum Length	1	
Read Multi-barcodes on an Image	Mode 1	
Character Encoding	Default Character Encoding	
Aztec ECI Output	Enabled	
Data Matrix		
Data Matrix	Enabled	
Maximum Length	3116	
Minimum Length	1	
Data Matrix Twin Code	Single Data Matrix Only	
Rectangular Barcode	Enabled	
Data Matrix Inverse	Decode Regular Data Matrix Barcodes Only	

Character Encoding	Default Character Encoding	
Data Matrix ECI Output	Enabled	
Maxicode		
Maxicode	Disabled	
Maximum Length	150	
Minimum Length	1	
Chinese Sensible Code		
Chinese Sensible Code	Disabled	
Maximum Length	7827	
Minimum Length	1	
Chinese Sensible Twin Code	Single Chinese Sensible Code Only	
Chinese Sensible Code Inverse	Decode Regular Chinese Sensible Barcodes Only	
GM Code		
GM	Disabled	
Maximum Length	2751	
Minimum Length	1	
Code One		
Code One	Disabled	
DotCode		
DotCode	Disabled	
Maximum Length	3550	
Minimum Length	1	
USPS Postnet		
USPS Postnet	Disabled	
Check Character	Transmit	
USPS Intelligent Mail		
USPS Intelligent Mail	Disabled	
Royal Mail		
Royal Mail	Disabled	
USPS Planet		
USPS Planet	Disabled	
Check Character	Transmit	
KIX Post		
KIX Post	Disabled	
Australian Postal		
Australian Postal	Disabled	

Specific OCR-B		
Specific OCR-B	Disabled	
Chinese ID Card OCR		
Chinese ID Card OCR	Disabled	
Passport OCR		
Passport OCR	Disabled	
Japan Post		
Japan Post	Disabled	
China Travel Permit OCR		
China Travel Permit OCR	Disabled	
Data Formatter		
Data Formatter	Disabled	
Non-Match Error Beep	On	
Data Format Selection	Format_0	
Prefix & Suffix		
All Prefixes/Suffixes	Disabled	
Prefix Sequence	Code ID+ Custom +AIM ID	
Custom Prefix	Disabled	
AIM ID Prefix	Disabled	
Code ID Prefix	Disabled	
Custom Suffix	Disabled	
Data Packing	Disable Data Packing	
Terminating Character Suffix	Disabled 0x0D (Carriage Return)	

AIM ID table

Symbology	AIM ID	Possible AIM ID Modifiers (m)
Code128	]C0	
GS1-128 (UCC/EAN-128)	]C1	
EAN-8	]E4	
EAN-8 with Addon	]E3	
EAN-13	]E0	
EAN-13 with Addon	]E3	
UPC-E	]E0	
UPC-E with Addon	]E3	
UPC-A	]E0	
UPC-A with Addon	]E3	
Interleaved 2 of 5,	]Im	0, 1, 3
ITF-14	]Im	1, 3
ITF-6	]Im	1, 3
Matrix 2 of 5	]X0	
Code 39, Code 32	]Am	0, 1, 3, 4, 5, 7
Codabar	]Fm	0, 2, 4
Code 93	]G0	
China Post 25	]X0	
AIM 128	]C2	
ISBT 128	]C4	
ISSN	]X0	
ISBN	]X0	
Industrial 25	]S0	
Standard 25	]R0	
Plessey	]P0	
Code 11	]Hm	0, 1, 3
MSI Plessey	]Mm	0, 1
GS1 Composite	]em	0-3
GS1 Databar (RSS)	]e0	
Code 49	]T0	
Code 16K	]K0	
COOP 25	]X0	

Symbology	AIM ID	Possible AIM ID Modifiers (m)
PDF417	]Lm	0-2
QR Code	]Qm	0-6
Aztec	]zm	0-9, A-C
Data Matrix	]dm	0-6
Maxicode	]Um	0-3
Chinese Sensible Code	]X0	
GM	]gm	(0~9)
Micro PDF417	]L0	
Micro QR	]Q1	
Code One	]X0	
DotCode	]Jm	0~5
USPS Postnet	]X0	
USPS Intelligent Mail	]X0	
Royal Mail	]X0	
USPS Planet	]X0	
KIX Post	]X0	
Australian Postal	]X0	
Japan Post	]X0	
Specific OCR-B	]o2	
Chinese ID Card OCR	]o2	
Passport OCR	]o2	
China Travel Permit OCR	]o2	

Note: “m” represents the AIM modifier character. Refer to ISO/IEC 15424:2008 Information technology – Automatic identification and data capture techniques – Data Carrier Identifiers (including Symbology Identifiers) for AIM modifier character details.

Code ID table

Symbology	Code ID
Code128	j
GS1-128 (UCC/EAN-128)	j
EAN-8	d
EAN-13	d
UPC-E	c
UPC-A	c
Interleaved 2 of 5,	e
ITF-14	e
ITF-6	e
Matrix 2 of 5	v
Code 39, Code 32	b
Codabar	a
Code 93	i
China Post 25	X
AIM 128	X
ISBT 128	X
ISSN	g
ISBN	B
Industrial 25	l
Standard 25	f
Plessey	n
Code 11	H
MSI Plessey	m
GS1 Composite	y
GS1 Databar (RSS)	R
Code 49	X
Code 16K	X
COOP 25	X
PDF417	r
QR Code	s
Aztec	z
Data Matrix	u

Symbology	Code ID
MaxiCode	x
Chinese Sensible Code	h
GM Code	x
Micro PDF417	R
Micro QR	X
Code One	X
DotCode	X
USPS Postnet	P
USPS Intelligent Mail	M
Royal Mail	x
USPS Planet	L
KIX Post	K
Australian Postal	A
Japan Post	J
Specific OCR-B	S
Chinese ID Card OCR	S
Passport OCR	O
China Travel Permit OCR	S

Symbology ID number table

Symbology	ID Number
Code 128	002
GS1-128 (UCC/EAN-128)	003
EAN-8	004
EAN-13	005
UPC-E	006
UPC-A	007
Interleaved 2 of 5,	008
ITF-14	009
ITF-6	010
Matrix 2 of 5	011
Code 39, Code 32	013
Codabar	015
Code 93	017
China Post 25	019
AIM 128	020
ISBT 128	021
COOP 25	022
ISSN	023
ISBN	024
Industrial 25	025
Standard 25	026
Plessey	027
Code11	028
MSI-Plessey	029
GS1 Composite	030
GS1 Databar (RSS)	031
PDF417	032
QR Code	033
Aztec	034
Data Matrix	035
Maxicode	036
Chinese Sensible Code	039

Symbology	ID Number
GM Code	040
Micro PDF417	042
Micro QR	043
Code One	048
DotCode	050
Specific OCR-B	064
Chinese ID Card OCR	065
Passport OCR	066
China Travel Permit OCR	068
USPS Postnet	096
USPS Intelligent Mail	097
Royal Mail	098
USPS Planet	099
KIX Post	100
Australian Postal	101
Japan Post	102
Code 49	132
Code 16K	133

ASCII table

Hex	Dec	Char
00	0	NUL (Null char.)
01	1	SOH (Start of Header)
02	2	STX (Start of Text)
03	3	ETX (End of Text)
04	4	EOT (End of Transmission)
05	5	ENQ (Enquiry)
06	6	ACK (Acknowledgment)
07	7	BEL (Bell)
08	8	BS (Backspace)
09	9	HT (Horizontal Tab)
0a	10	LF (Line Feed)
0b	11	VT (Vertical Tab)
0c	12	FF (Form Feed)
0d	13	CR (Carriage Return)
0e	14	SO (Shift Out)
0f	15	SI (Shift In)
10	16	DLE (Data Link Escape)
11	17	DC1 (XON) (Device Control 1)
12	18	DC2 (Device Control 2)
13	19	DC3 (XOFF) (Device Control 3)
14	20	DC4 (Device Control 4)
15	21	NAK (Negative Acknowledgment)
16	22	SYN (Synchronous Idle)
17	23	ETB (End of Trans. Block)
18	24	CAN (Cancel)
19	25	EM (End of Medium)
1a	26	SUB (Substitute)
1b	27	ESC (Escape)
1c	28	FS (File Separator)
1d	29	GS (Group Separator)

Hex	Dec	Char
1e	30	RS (Request to Send)
1f	31	US (Unit Separator)
20	32	SP (Space)
21	33	! (Exclamation Mark)
22	34	" (Double Quote)
23	35	# (Number Sign)
24	36	\$ (Dollar Sign)
25	37	% (Percent)
26	38	& (Ampersand)
27	39	` (Single Quote)
28	40	((Left/ Opening Parenthesis)
29	41	) (Right/ Closing Parenthesis)
2a	42	* (Asterisk)
2b	43	+ (Plus)
2c	44	, (Comma)
2d	45	- (Minus/ Dash)
2e	46	. (Dot)
2f	47	/ (Forward Slash)
30	48	0
31	49	1
32	50	2
33	51	3
34	52	4
35	53	5
36	54	6
37	55	7
38	56	8
39	57	9
3a	58	: (Colon)
3b	59	; (Semi-colon)
3c	60	< (Less Than)
3d	61	= (Equal Sign)

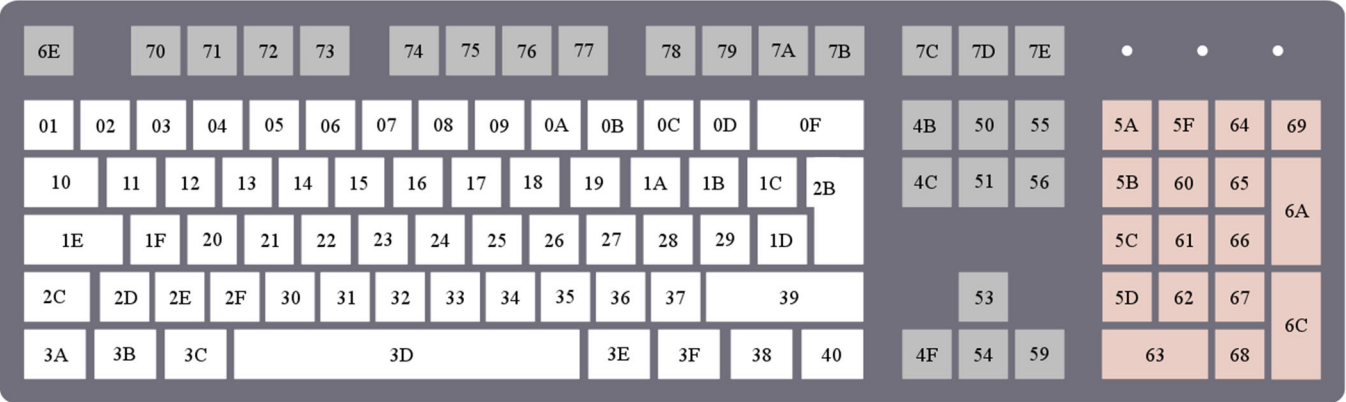
Hex	Dec	Char
3e	62	> (Greater Than)
3f	63	? (Question Mark)
40	64	@ (AT Symbol)
41	65	A
42	66	B
43	67	C
44	68	D
45	69	E
46	70	F
47	71	G
48	72	H
49	73	I
4a	74	J
4b	75	K
4c	76	L
4d	77	M
4e	78	N
4f	79	O
50	80	P
51	81	Q
52	82	R
53	83	S
54	84	T
55	85	U
56	86	V
57	87	W
58	88	X
59	89	Y
5a	90	Z
5b	91	[(Left/ Opening Bracket)
5c	92	\ (Back Slash)
5d	93	] (Right/ Closing Bracket)

Hex	Dec	Char
5e	94	^ (Caret/ Circumflex)
5f	95	_ (Underscore)
60	96	' (Grave Accent)
61	97	a
62	98	b
63	99	c
64	100	d
65	101	e
66	102	f
67	103	g
68	104	h
69	105	i
6a	106	j
6b	107	k
6c	108	l
6d	109	m
6e	110	n
6f	111	o
70	112	p
71	113	q
72	114	r
73	115	s
74	116	t
75	117	u
76	118	v
77	119	w
78	120	x
79	121	y
7a	122	z
7b	123	{ (Left/ Opening Brace)
7c	124	(Vertical Bar)
7d	125	} (Right/ Closing Brace)
7e	126	~ (Tilde)
7f	127	DEL (Delete)

Unicode key maps

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

104 Key U.S. Style Keyboard



105 Key European Style Keyboard