



**Newland AIDC**  
SCANNING MADE SIMPLE



**HR33**

**MARLIN AI WHITE CORDED**

**General Purpose Handheld Scanner**

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# Revision History

| Version | Description      | Date                             |
|---------|------------------|----------------------------------|
| 2.0.0   | Initial release. | November 24 <sup>st</sup> , 2025 |

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## Preface

### Introduction

This manual provides detailed instructions for setting up and using the NLS-HR3000 handheld barcode scanner (hereinafter referred to as “**the HR3000**” or “**the scanner**”).

### Chapter Description

|                                      |                                                                                                               |
|--------------------------------------|---------------------------------------------------------------------------------------------------------------|
| <i>Chapter 1 Getting Started</i>     | : Gives a general description of HR3000 scanner.                                                              |
| <i>Chapter 2 EasySet</i>             | : Introduces a useful tool you can use to set up HR3000 scanner                                               |
| <i>Chapter 3 System Settings</i>     | : Introduces three configuration methods and describes how to configure general parameters of HR3000 scanner. |
| <i>Chapter 4 RS-232 Interface</i>    | : Describes how to configure RS-232 communication parameters.                                                 |
| <i>Chapter 5 USB Interface</i>       | : Describes how to configure USB communication parameters.                                                    |
| <i>Chapter 6 Symbologies</i>         | : Lists all compatible symbologies and describes how to configure the relevant parameters.                    |
| <i>Chapter 7 Prefix &amp; Suffix</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>Chapter 9 Maintenance</i>         | : Explains how to clean and maintain the HR3000.                                                              |
| <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

HR3000 scanner reads a 1D or 2D barcode by capturing its image. Adopting the advanced technology independently developed by Newland Auto-ID Tech and 2d image embedding application barcode engine, it begins a new era of 2d image embedding application barcode engine.

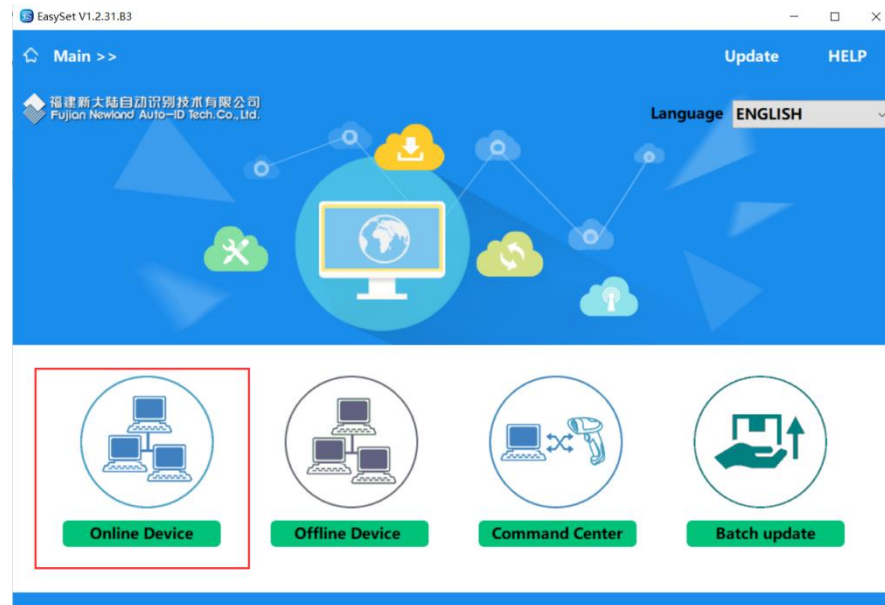
Newland 2D decode IC combines advanced UIMG and IC designation and manufacturing technology, simplifying the difficulties of designation of 2d decode products, establishing remarks of high quality, high reliability and low consumption products.

NLS-HR3000 can read kinds of mainstream 1D barcodes, standard 2D barcodes (all versions of PDF417, QR Code M1/M2/Micro and Data Matrix) and GS1-DataBar™ (RSS) barcodes, including Limited, Stacked, Expanded and so on.

NLS-HR3000 can read barcodes in papers, plastic cards, LCD and other kinds of mediums of printing and displaying. It has great performance. All-in-one design is extremely light and only needs small operation space It can be embedded in varieties of application.

## Chapter 2 Easyset

EasySet supports Windows operating systems. EasySet, developed by Fujian Newland Auto-ID Tech. Co., Ltd., is a configuration tool for Newland's 1D/2D handheld barcode scanner, fixed mount barcode scanners and OEM scan engines. Its main features includes view device & configuration information of online device and send serial commands to online device and receive device response.





## Chapter 3 System Settings

### Introduction

There are three ways to configure the scanner: barcode programming, command programming and EasySet 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.

### EasySet Programming

Besides the two methods mentioned above, you can conveniently perform scanner configuration through EasySet too. EasySet is a Windows-based configuration tool particularly designed for Newland products, enabling users to gain access to decoded data and captured images and to configure scanners. For more information about this tool, refer to the *EasySet User Guide*.



#SETUPE1  
Enter Setup

## Programming Barcode/ Programming Command/Function



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 setting



#SETUPE1

**Enter Setup**

---

## Use of Programming Command

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.**

## 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. You may 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



@ILLSCN1

**\*\* On**



@ILLSCN0

**Off**

## Aiming



@AMLENA1

**\*\* On**



@AMLENA0

**Off**



@AMLENA2

**Always lighting**



#SETUPE0

**\*\* Exit Setup**



#SETUPE1

**Enter Setup**

---

## Good Read LED

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



@GRLENA1

**\*\* On**



@GRLENA0

**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 2,000ms.



@GRLDUR20  
**\*\* Short (20ms)**



@GRLDUR120  
**Medium (120ms)**



@GRLDUR220  
**Long (220ms)**



@GRLDUR320  
**Prolonged (320ms)**



@GRLDUR  
**Custom (1 - 2,000ms)**

**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.



#SETUPE0

---



#SETUPE1

**Enter Setup**

---

## Beep

### 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.



@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 Volume

This parameter is programmable in 1 increments from 1 to 20



@GRBVLL20  
**\*\* Loud**



@GRBVLL7  
**Medium**



@GRBVLL2  
**Low**



@GRBVLL  
**Custom(1-20)**



---

#SETUPE0



#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

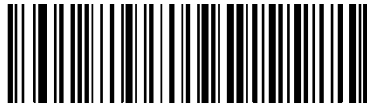
**\*\* Exit Setup**



#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( 20-20000Hz)**

**E**  
*xample*

### 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**

---

## Reminder Beep Volume

This parameter is available for reminder beep volume of the following operations: power on (for all products), power off, batch transmission, pairing the scanner to a cradle, searching paired scanner, the scanner connects on the cradle, the scanner disconnects the cradle, bluetooth connection and transmission.



@SUCVLL20

**\*\* Loud**



@SUCVLL12

**Medium**



@SUCVLL5

**Low**



@SUCVLL0

**Mute**



@SUCVLL

**Custom (0-20)**

**E**  
*sample*

**Set the above operations' beep volume to 10:**

1. Scan the **Enter Setup** barcode.
2. Scan the **Beep Volume** barcode.
3. Scan the numeric barcodes "1", "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**

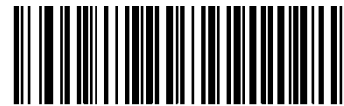
---

## Alert Beep Volume

This setting configures the volume of the alert beep generated by the scanner for the following events: unknown character notification (USB keyboard mode), batch transmission failure (wireless models), paired scanner search failure (wireless models), Bluetooth disconnect alert (wireless models), Bluetooth transmission failure alert (wireless models), data format mismatch error alert, wireless transmission failure.



@ALMVLL20  
**\*\* Loud**



@ALMVLL12  
**Medium**



@ALMVLL5  
**Low**



@ALMVLL0  
**Mute**



@ALMVLL  
**Custom (0-20)**



#SETUPE0

---



#SETUPE1

**Enter Setup**

---

## **BEL Beep**

When enabled, the scanner beeps to indicate a successful read upon receiving the BEL character (0x07).



@BELENA1

**On**



@BELENA0

**\*\* Off**

## **BEL Beep & Good Read LED**



@BELGRL0

**\*\* Off**



@BELGRL1

**On**



#SETUPE0

**\*\* Exit Setup**



#SETUPE1  
**Enter Setup**

---

## Good Read Vibration

You may choose whether or not to let the scanner vibrate when a barcode is successfully read by scanning the appropriate barcode below.



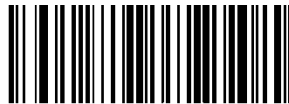
@GRVENA1  
**\*\* On**



@GRVENA0  
**Off**

## Good Read Vibration Duration

This parameter sets the length for the Good Read Vibration. It is programmable in 1ms increments from 1ms to 2,500ms. The default setting is 100ms.



@GRVDUR  
**Set Good Read Vibration Duration**

## Image Flipping



#SETUPE0



#SETUPE1  
**Enter Setup**

---



@MIRROR0  
**\*\* Do Not Flip**



@MIRROR2  
**Flip Vertically**



@MIRROR1  
**Flip Horizontally**



@MIRROR3  
**Flip Horizontally & Vertically**

Example of image not flipped



Example of image flipped horizontally



Example of image flipped vertically



Example of image flipped horizontally &



#SETUPE0  
**\*\* Exit Setup**



#SETUPE1  
**Enter Setup**

---

## Smart Stand Mode

After this feature is turned on, the scanner will switch from its current scan mode to the Sense mode when it is inserted in the stand, and it will operate in its previous scan mode when it is removed from the stand.



@SMTENA0  
**Disable**



@SMTENA1  
**\*\* Enable**

## Reading Modes When the Scanner Is Placed in the Stand

The scanner can be configured to operate in Sensor Mode or Continuous Mode when placed in the stand.



@SMTSCN0  
**\*\* Sensor Mode**



@SMTSCN1  
**Continuous Mode**



#SETUPE0



#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 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 stimulate the trigger unreleased and 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 stimulate the trigger unreleased and 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



#SETUPE0

---



#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 waits for the image stabilization timeout to expire before activating a decode session everytime it detects a change in ambient illumination. Decode session continues until a barcode is decoded or the decode session timeout expires. In this mode, a trigger pull can also activate a decode session. The decode session continues until a barcode is decoded or the trigger is released. When the session ends, the scanner continues to monitor ambient illumination. **Timeout between Decodes (Same Barcode)** can avoid undesired rereading of same barcode in a given period of time. **Sensitivity** can change the Sense Mode's sensibility to changes in ambient illumination.
- ✧ **Continuous Mode:** The scanner automatically starts one decode session after another. To suspend/resume barcode reading, simply press the trigger. **Timeout between Decodes (Same Barcode)** can avoid undesired rereading of same barcode in a given period of time.
- ✧ **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:** When the trigger is pulled and released, scanning is activated until the trigger is released. During pulling the trigger, good read barcodes will beep and output barcode information. As long as unrelease the trigger, it will continues decoding. During pulling the trigger, same code can be read only once.



@SCNMOD0  
**\*\* Level Mode**



@SCNMOD2  
**Sense Mode**



@SCNMOD3  
**Continuous Mode**



#SETUPE0  
**\*\* Exit Setup**



#SETUPE1  
**Enter Setup**

---



@SCNMOD4  
**Pulse Mode**



@SCNMOD7  
**Batch Mode**

## Scan Interval

In Continuous Mode, this parameter defines the time interval between stopping reading after a successful decode and starting the next scan cycle. Default Value: 0 ms



@SCNINV  
**Scan Interval Time**

**E**  
*xample*

**Set the scan interval time to 1,500ms:**

1. Scan the **Enter Setup** barcode.
2. Scan the **Scan Interval Time** 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

---



#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 (Sensor 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**  
*xample*

### 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

---



#SETUPE1

**Enter Setup**

---

## After Successful Reading (Sensor Mode)

When the scanner is configured in Sensor Mode, it can be set to enter either the detection status or scanning status after a successful decode.



@SENAGR0

**\*\*Detection Status**



@SENAGR1

**Scanning Status**

## 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 timeout between decodes for same barcode. It is programmable in 1ms increments from 1ms 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.



#SETUPE0

**\*\* Exit Setup**



#SETUPE1  
**Enter Setup**

---



@RRDDUR  
**Set Reread Timeout**

**E**  
*xample*

**Set the reread timeout to 1,500ms:**

1. Scan the **Enter Setup** barcode.
2. Scan the **Timeout between Decodes (Same Barcode)** 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

---



#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**



@RRDREN0

**\*\* Reread Timeout Reset Off**

## Reread Ignore Code Type

When this option is enabled, if the barcode data is the same as the previously successfully decoded barcode, it is considered the same barcode regardless of the symbology.

When this option is disabled, both the barcode data and the barcode symbology must be identical to the previous successfully decoded barcode in order to be considered the same barcode.



@RRDIST1

**Enable**



@RRDIST0

**\*\* Disable**



#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 after a good read. 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.



@GRDNA1  
**Enable Good Read Delay**



@GRDNA0  
**\*\* \*\* 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**  
*xample*

**Set the good read delay to 500ms:**

1. Scan the **Enter Setup** barcode.
2. Scan the **Good Read Delay** barcode.
3. Scan the numeric barcodes “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



#SETUPE1

**Enter Setup**

---

## 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**  
*xample*

**Set the image decoding timeout to 1,000ms:**

6. Scan the **Enter Setup** barcode.
7. Scan the **Image Decoding Timeout** barcode.
8. Scan the numeric barcodes “1”, “0”, “0” and “0” from the “Digit Barcodes” section in Appendix.
9. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
10. Scan the **Exit Setup** barcode.



#SETUPE0

**\*\* Exit Setup**



#SETUPE1  
**Enter Setup**

## Sensitivity

Sensitivity specifies the degree of acuteness of the scanner's response to changes in images captured.

The higher the sensitivity, the lower requirement in image change to trigger the scanner. You can select an appropriate degree of sensitivity that fits the application environment. The feature is only applicable to the Sense mode. It is programmable from 1 to 20. The default setting is Medium (5).



@SENLVL14  
**Low Sensitivity**



@SENLVL11  
**\*\* Medium Sensitivity**



@SENLVL8  
**High Sensitivity**



@SENLVL5  
**Enhanced Sensitivity**



@SENLVL  
**Custom Sensitivity (1-20)**

**E**  
*xample*

### 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

---

## Scanning Preference

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

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



@EXPLVL0

**\*\* Normal Exposure Mode**



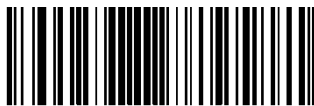
@EXPLVL2

**Mobile Mode**

## Contrast Enhancement

This is a hardware-oriented image preprocessing function of the camera, also referred to as GAMMA processing.

Mode 1: Increase contrast in bright areas while reducing details in dark areas.



@IPPGAM0

**\*\*Disable**



@IPPGAM1

**Mode 1**



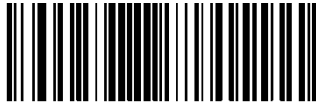
#SETUPE0

**\*\* Exit Setup**



#SETUPE1  
Enter Setup

## Denoising Level



@IPPDEN0  
\*\* Denoising Level 0 (Off)



@IPPDEN2  
Denoising Level 2



@IPPDEN4  
Denoising Level 4



@IPPDEN6  
Denoising Level 6



@IPPDEN8  
Denoising Level 8



@IPPDEN1  
Denoising Level 1



@IPPDEN3  
Denoising Level 3



@IPPDEN5  
Denoising Level 5



@IPPDEN7  
Denoising Level 7



#SETUPE0



#SETUPE1

Enter Setup

---

## 3DNR (3D Noise Reduction)



@IPP3DN0

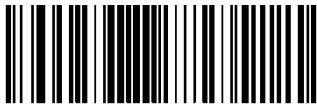
\*\* Disable



@IPP3DN1

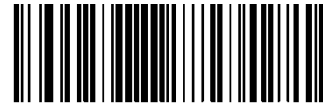
Enable

## Local Contrast Enhancement



@IPPDCl0

\*\* Disable



@IPPDCl1

Enable



#SETUPE0

\*\* Exit Setup



#SETUPE1  
**Enter Setup**

---

## Read Barcode On/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.

## Power-On Reading

When the scanner is configured to Disabled for power-on reading, after power-on, the scanner stays in a non-reading state with illumination and aiming turned off. Only after enabling reading through configuration or OPOS/JPOS Enable, the scanner will enter the reading state.

This function is invalid when the communication interface is configured as USB Keyboard or PS/2 Keyboard.



@SCNPEN1  
**\*\* Enable**



@SCNPEN0  
**Disable**



#SETUPE0



#SETUPE1  
**Enter Setup**

---

## Image Exposure Settings

### Image Exposure Limit



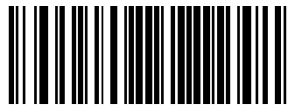
@EXPLEN1  
**Enable**



@EXPLEN0  
**\*\* Disable**

### Custom Image Exposure

Sets the custom image exposure time. The available range is **8–240**. The default is **80**.



@EXPLUM  
**Custom Image Exposure**

**E**  
*xample*

#### Set the custom image exposure to 100:

1. Scan the **Enter Setup** barcode.
2. Scan the **Custom Image Exposure** barcode.
3. Scan the numeric barcodes “1”, “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**

## Exposure Settings

This function determines whether the exposure parameter used by the scanner to take a picture is limited by the maximum exposure time and the minimum exposure time

- ✧ Off : The exposure time range of the photograph is controlled by the scanner firmware,
- ✧ On : The exposure time range of the photograph is between the maximum and minimum exposure time.



@EXPEEN1  
**On**



@EXPEEN0  
**\*\* Off**

## Minimum Exposure Time

Sets the minimum exposure time. The available range is **50–14000**. The default is **50**.



@EXPEMN  
**Minimum Exposure Time**

**E**  
*sample*

### Set the minimum exposure time to 100:

1. Scan the **Enter Setup** barcode.
2. Scan the **Minimum Exposure Time** barcode.
3. Scan the numeric barcodes 1", "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



#SETUPE1

**Enter Setup**

---

## Maximum Exposure Time

Sets the maximum exposure time. The available range is **50–14000**. The default is **2000**.



@EXPEMX

**Maximum Exposure Time**

**E**  
*xample*

**Set the maximum exposure time to 3000:**

1. Scan the **Enter Setup** barcode.
2. Scan the **Maximum Exposure Time** barcode.
3. Scan the numeric barcodes 3, “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**

## Gain Parameter Limit



@EXPGEN1  
**Enable**



@EXPGEN0  
**\*\* Disable**

## Minimum Gain

Sets the minimum gain. The available range is **100–1600**. The default is **400**.



@EXPGMN  
**Minimum Gain**

**E**  
*sample*

### Set the minimum gain to 1000:

1. Scan the **Enter Setup** barcode.
2. Scan the **Minimum Gain** barcode.
3. Scan the numeric barcodes “1”, “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



#SETUPE1

**Enter Setup**

---

## Maximum Gain

Sets the maximum gain. The available range is **100–1600**. The default is **1600**.



@EXPGMX

**Maximum Gain**

**E**  
*xample*

### Set the maximum gain to 1600:

1. Scan the **Enter Setup** barcode.
2. Scan the **Maximum Gain** barcode.
3. Scan the numeric barcodes “1”, “6”, “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**

---

## 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.

**Acuscan:** 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.

**Priori On Aimed Barcode:** The scanner attempts to decode priority the aimed barcode(s). If there is no barcode in the aimed area, the scanner would decode the barcode which is close to the aiming area first.



@CADENA0  
**\*\* Whole Area Decoding**



@CADENA2  
**Acuscan**



@CADENA4  
**Priori On Aimed Barcode**

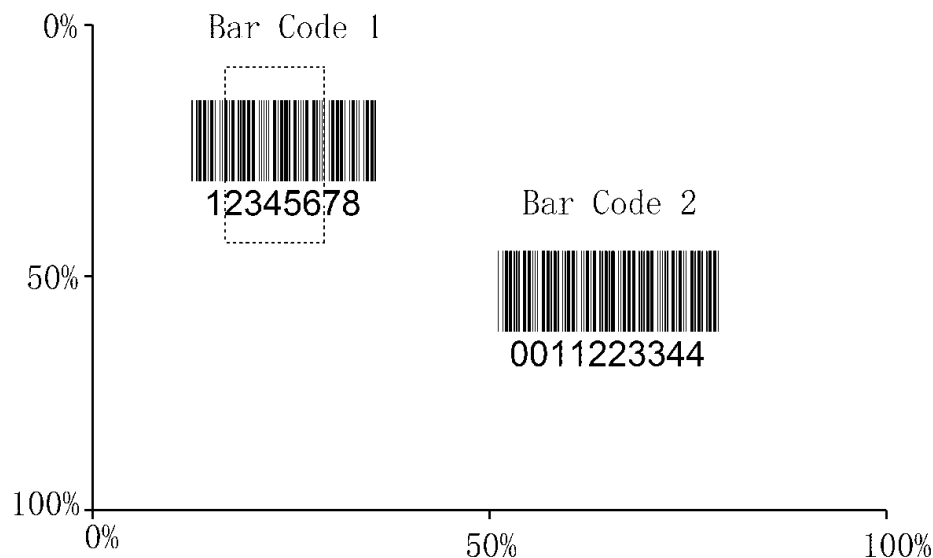


#SETUPE0

---



#SETUPE1

**Enter Setup****E**  
*xample*

**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**

## 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).



**\*\* Bad Read Message OFF**



**Bad Read Message ON**

## Set 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 **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”.



**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**



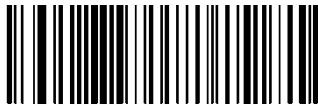
#SETUPE1

**Enter Setup**

---

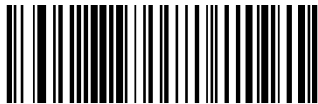
## USB Data Transmission Failure Notification

1. Beep: Sounds a beep when USB data transmission times out.
2. Vibration: Vibrates when USB data transmission times out.
3. Beep + Vibration: Sounds a beep and vibrates when USB data transmission times out.



@USBDFA0

**\*\* Disable Notification**



@USBDFA2

**Vibration**



@USBDFA1

**Beep**



@USBDFA3

**Beep + Vibration**



#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:

1. The scanner is not properly configured so that it fails to decode barcodes.
2. You forget previous configuration and want to avoid its impact.



**\*\*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.



**Save as Custom Defaults**



**Restore All Custom Defaults**



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



#SETUPE0



#SETUPE1

**Enter Setup**

---

## Query Product Information

After scanning the barcode below, the product information (including product name, firmware version, decoder version, hardware version, product serial number, OEM serial number, manufacturing date and data formatter version) 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



#SETUPE1  
**Enter Setup**

---

**Query OEM Serial Number**



@QRYESN  
**Query OEM Serial Number**

**Query Manufacturing Date**



@QRYDAT  
**Query Manufacturing Date**

**Query Data Formatter Version**



@QRYDFM  
**Query Data Formatter Version**



#SETUPE0  
**\*\* Exit Setup**

## Chapter 4 RS-232 Interface

### Introduction

When the scanner is connected to the RS-232 port of a host device, the scanner will automatically enable RS-232 communication. However, you need to set communication parameters (including interface cables auto match, baud rate, parity check, data bit and stop bit) on the scanner to match the host device so that two devices can communicate with each other.





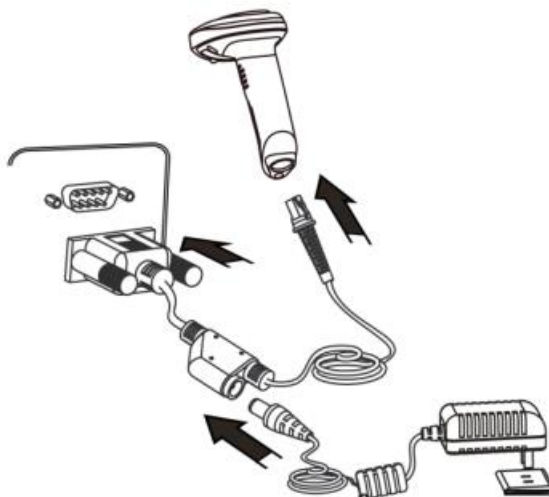
#SETUPE1

Enter Setup

---

## Connect with RS-232 Cable

### Using RS-232 Cable



1. Plug the power adapter into the power jack on the cable
2. Plug the RS-232 connector of the cable into the RS-232 port on the Host.
3. Plug the RJ45 connector of the cable into the data port on the scanner



#SETUPE0

\*\* Exit Setup



#SETUPE1

**Enter Setup**

---

## Datalogic Magellan Interface



@INTERF14

**Datalogic Magellan Interface**



#SETUPE0

---



#SETUPE1

Enter Setup

---

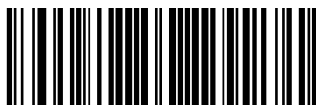
## Interface Cables Auto Match (USB and RS-232 Interface Only)

**Off:** The scanner is connected to the host device according to communication parameters.

**On:** When the scanner is connected to the RS-232 port of a host device, the scanner will automatically enable RS-232 communication. When the scanner is connected to the USB port of a host device, the scanner will automatically enable USB communication.



This feature is only effective after rebooting the scanner



@AUTOUR0

Off



@AUTOUR1

\*\* On



#SETUPE0

\*\* Exit Setup

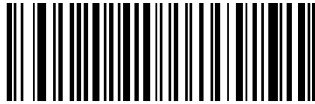


#SETUPE1  
**Enter Setup**

---

## Baud Rate

Baud rate is the number of bits of data transmitted per second. Set the baud rate to match the host requirements.



@232BAD8  
**115200**



@232BAD7  
**57600**



@232BAD6  
**38400**



@232BAD5  
**19200**



@232BAD4  
**14400**



@232BAD3  
**\*\* 9600**



@232BAD2  
**4800**



#SETUPE0

---



#SETUPE1

**Enter Setup**

---



@232BAD1

**2400**



@232BAD0

**1200**



#SETUPE0

**\*\* Exit Setup**



#SETUPE1  
**Enter Setup**

---

## Parity Check

Set the parity type to match the host requirements.

- 1. Odd Parity:** If the data contains an odd number of 1 bits, the parity bit value is set to 0.
- 2. Even Parity:** If the data contains an even number of 1 bits, the parity bit value is set to 0.
- 3. None:** Select this option when no parity bit is required.



@232PAR0  
**\*\* None**



@232PAR1  
**Even Parity**



@232PAR2  
**Odd Parity**



---

#SETUPE0



#SETUPE1

**Enter Setup**

---

## Data Bit

Set the number of data bits to match the host requirements.



@232DAT1

**7 Data Bits**



@232DAT0

**\*\* 8 Data Bits**

## Stop Bit

The stop bit(s) at the end of each transmitted character marks the end of transmission of one character and prepares the receiving device for the next character in the serial data stream. Set the number of stop bits to match the host requirements.



@232STP0

**\*\* 1 Stop Bit**



@232STP1

**2 Stop Bits**



#SETUPE0

**\*\* Exit Setup**



#SETUPE1  
**Enter Setup**

## RS232 Flow Control

There are three types of flow control available: RTS Flow Control, CTS Flow Control, RTS/CTS Flow Control

### CTS Flow Control:

The scanner monitors the CTS signal to determine whether it can transmit data. When the CTS signal is low, it indicates that the receiving device (such as a PC) buffer is full. The scanner will stop transmitting serial data until the CTS signal goes high again.

### RTS Flow Control:

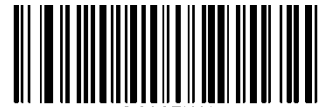
When the scanner is ready to receive data, it sets the RTS signal low. The host device must check this signal before transmitting. If the RTS signal is low, the host should not send data to the scanner. Otherwise, data loss may occur.

### RTS/CTS Flow Control:

Both RTS and CTS signals are used to manage data flow in both directions. When enabled, the scanner and the host must coordinate using RTS and CTS signals to ensure reliable data transmission.



@232FLW0  
**\*\* No Flow Control**



@232FLW1  
**RTS Flow Control**



@232FLW2  
**CTS Flow Control**



@232FLW3  
**RTS/CTS Flow Control**



If you need to use RS232 flow control, ensure that the serial communication cable you are using includes RTS/CTS signal lines.

If the serial communication cable does not have RTS/CTS signal lines, enabling RS232 flow control may cause serial communication failures



#SETUPE0

## Chapter 5 USB Interface

### Introduction

There are four 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: It is compliant with the standard USB CDC 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. It excels virtual keyboard and traditional RS-232 interface in transmission speed.
- ✧ IBM SurePOS: It conforms to IBM (now Toshiba Global Commerce Solutions) 4698 USB scanner interface specifications.

When the scanner is connected to both USB and RS-232 ports on a host device, it will select the USB connection by default.



#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. Then 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.



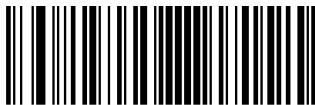
@INTERF3  
**\*\* USB HID Keyboard**



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**



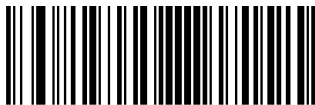
@KBWCTY13  
**Latin America/ South America**



@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**



@KBWCTY29  
**Poland(Programmer)**



@KBWCTY36  
**Slovenia**



#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**  
*xample*

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.



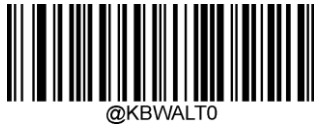
#SETUPE0  
**\*\* Exit Setup**



#SETUPE1  
Enter Setup

## Emulate ALT+Keypad

When **Emulate ALT+Keypad** is turned on, any character is sent via the numeric keypad and overlook USB country keyboard type. This mode need to set **Code Page Option** and **Unicode Output**. **Code Page** determines the target language. **Unicode Output** determines the ASCII input to the host device.



\*\* Emulate ALT+Keypad OFF



Emulate ALT+Keypad ON



ASCII characters between 0x00~0x1F will be input in way of Function Key Mapping Set.



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



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

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

Break" "Ð" -- "ALT Make" + "208"

+ "ALT Break"

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



#SETUPE0  
\*\* 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. The default setting is Code Page 1252(West European, Latin)



@KBWCPG0

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



@KBWCPG1

**Code Page 1251 (Cyrillic)**



@KBWCPG2

**Code Page 1250  
(Central and East European Latin)**



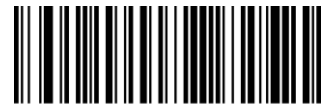
@KBWCPG3

**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)**



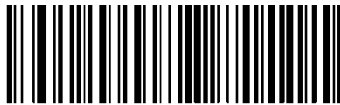
@KBWCPG7  
**Code Page 1257 (Baltic)**



@KBWCPG8  
**Code Page 1258 (Vietnamese)**



@KBWCPG9  
**Code Page 936**  
**(Simplified Chinese, GB2312,GBK)**



@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. The default setting is Off



@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. The default setting is Off.



@KBWFKM0  
**\*\* Disable**



@KBWFKM1  
**Ctrl+ASCII Mode**



@KBWFKM2  
**Alt+Keypad Mode**

**E**  
*xample*

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                | Print Screen                  | 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            | 1B                | 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

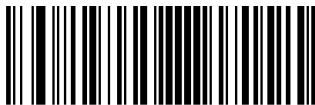
### ASCII Function Key Mapping Table (Continued)

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**

## Inter-Keystroke Delay

This parameter specifies the delay between emulated keystrokes. Scanning below barcodes to delay longer when the host device needs slower data transmission. The default setting is No Delay.



@KBWDLY0  
**\*\* No Delay**



@KBWDLY20  
**Short Delay (20ms)**



@KBWDLY40  
**Long Delay (40ms)**



@KBWDLY  
**Key Delay Setting (0-100)**



#SETUPE0  
**\*\* Exit Setup**



#SETUPE1  
Enter Setup

## Caps Lock

The **Caps Lock ON** option 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.

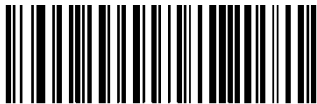


@KBWCAP0  
\*\* Caps Lock OFF (Non-Japanese keyboard)



@KBWCAP1

Caps Lock ON (Non-Japanese keyboard)



@KBWCAP2  
Caps Lock OFF (Japanese keyboard)



@KBWCAP3

Caps Lock ON (Japanese keyboard)



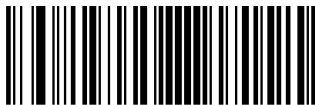
Emulate ALT+Keypad ON/ Convert All to Upper Case/ Convert All to Lower Case prevails over Caps Lock ON.



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 barcode 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** and **Emulate Numeric Keypad 2** features are 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 follows:

1. "A" is sent as is because it is not included in numeric keypad;
2. "4" is sent as the function key "Cursor Move to Left";
3. "." is sent;
4. "5" is not sent as it does not correspond to any function key.

Finally the host device will get ".A"



#SETUPE0  
**\*\* Exit Setup**



#SETUPE1  
**Enter Setup**

**Character”+”, ”-“, ”\*”, ”/” Adopt Numeric Keypad**



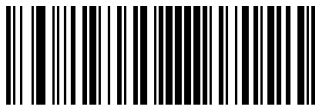
@KBWNCH0  
**\*\* Off**



@KBWNCH1  
**On**



#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**



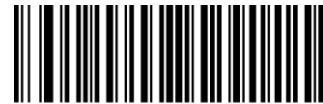
#SETUPE1  
**Enter Setup**

## Polling Rate

This parameter specifies the polling rate for a USB keyboard. The smaller value rate is, the faster characters transmission from scanner to the host. If the host drops characters, change the polling rate to a bigger value.



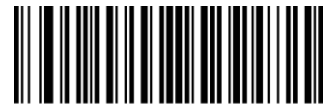
@KBWPOR0  
**\*\* 1ms**



@KBWPOR1  
**2ms**



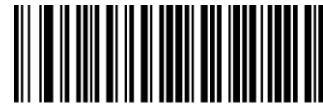
@KBWPOR2  
**3ms**



@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

If your scanner is connected to the USB port on a host device, the USB CDC feature allows the host device to receive data in the way as a serial port does. A driver is needed when using this feature. You may download it from our website at [www.newlandaidc.com](http://www.newlandaidc.com).



@INTERF8  
**USB CDC**



#SETUPE0  
**\*\* Exit Setup**



#SETUPE1  
**Enter Setup**

## HID POS (POS HID Barcode Scanner)

### 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:

1. HID based, no custom driver required.
2. More efficient in communication than keyboard emulation and traditional RS-232 interface.



@INTERF5  
**USB HID-POS**

### Access 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](http://www.USB.org).



#SETUPE0  
**\*\* Exit Setup**



#SETUPE1  
Enter Setup

## Acquire 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    | Newland Symbology Identifier or N/C: 0x00 |   |   |   |   |   |   |                        |
| 63    | -                                         | - | - | - | - | - | - | Decoded data continued |

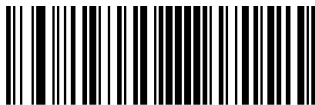
## Send Command to the Scanner

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

## IBM SurePOS (Tabletop)



@INTERF6  
IBM SurePOS (Tabletop)

## IBM SurePOS (Handheld)



@INTERF7  
IBM SurePOS (Handheld)

## 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. Newland's vendor ID is 1EAB (Hex). A range of PIDs are used for each Newland product family. Every PID contains a base number and interface type (keyboard, COM port, etc.).

| Product | Interface              | PID (Hex) | PID (Dec) |
|---------|------------------------|-----------|-----------|
| HR3000  | USB HID Keyboard       | 3922      | 14626     |
|         | USB CDC                | 3906      | 14598     |
|         | HID POS                | 3910      | 14608     |
|         | IBM SurePOS (Tabletop) | 3920      | 14624     |
|         | IBM SurePOS (Handheld) | 3921      | 14625     |



#SETUPE0  
\*\* Exit Setup

## Chapter 6 Symbologies

### 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

#### Enable/Disable 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.



@ALLNA1

**Enable All Symbologies**



@ALLNA0

**Disable All Symbologies**

#### Enable/Disable 1D Symbologies



@ALL1DC1

**Enable 1D Symbologies**



@ALL1DC0

**Disable 1D Symbologies**



#SETUPE1  
Enter Setup

---

### Enable/Disable 2D Symbologies



@ALL2DC1  
Enable 2D Symbologies

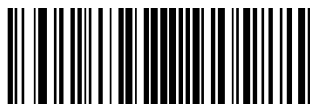


@ALL2DC0  
Disable 2D Symbologies

### Enable/Disable Postal Symbologies



@ALLPST1  
Enable 2D Symbologies



@ALLPST0  
Disable 2D Symbologies



#SETUPE1  
\*\* Exit Setup



#SETUPE1  
Enter Setup

---

## GS1 Digital Link URI

### Output Format



@GS1URI0

**\*\* Default Output**



@GS1URI2

**GS1 Digital Link URI**



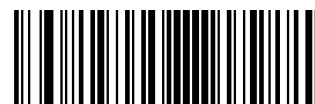
@GS1URI1

**Bracketed AI Data**

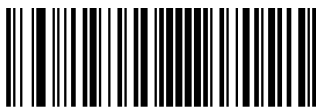


@GS1URI3

**Human-Readable Interpretation**



#SETUPE0



#SETUPE1  
**Enter Setup**

---

## Custom URL Prefix

Scan the “Custom URL Prefix” barcode.

Sequentially scan the hexadecimal values corresponding to each character of the prefix string to be configured.

Finally, scan the “Save Setting” barcode to complete the configuration.

### Note:

The total length of the custom URL prefix string must not exceed **64 characters**.

Each character must be in the range **0x20 to 0x7E**.



@GS1URL  
**Custom URL Prefix**

**E**  
*xample*

**Set a Custom URL Prefix to “WEB” (hexadecimal values 0x57/0x45/0x42):**

1. Scan the **Enter Setup** barcode.
2. Scan the **Custom URL Prefix** barcode.
3. Scan the numeric barcodes “5”, “7”, “4”, “5”, “4” and “2” 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.



#SETUPE1  
**\*\* Exit Setup**



#SETUPE1

Enter Setup

---

## Surround GS1 Application Identifiers (AIs) with Parentheses

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



@GS1AIP0

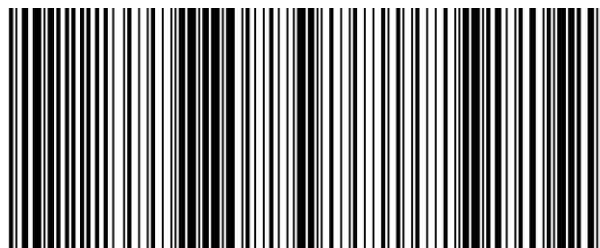
**\*\* Do Not Surround GS1 AIs with Parentheses**



@GS1AIP1

**Surround GS1 AIs with Parentheses**

**E**  
*xample*



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

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

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



#SETUPE0



#SETUPE1  
Enter Setup

---

## Output GS1 Application Identifiers (AIs)

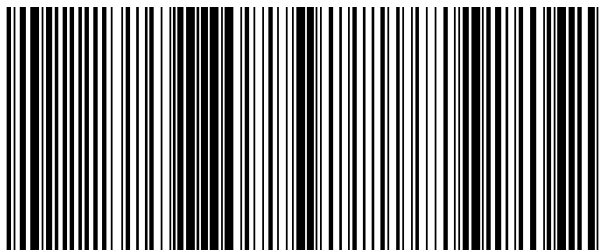


@GS10AI0  
Do Not Output GS1 AIs



@GS10AI1  
\*\* Output GS1 AIs

**E**  
*xample*



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

If **Output GS1 AIs** is selected, the barcode above is output as

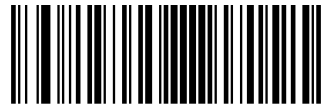
01006141419999961010ABCEDF123456

If **Do Not Output GS1 AIs** is selected, the barcode above is output as

0061414199999610ABCEDF123456



#SETUPE1  
\*\* Exit Setup



#SETUPE1  
Enter Setup

---

### GS1-128(UCC/EAN-128)



@GS1OA10  
Do Not Output GS1 Als



@GS1OA11  
\*\* Output GS1 Als

### GS1 Composite



@GS1OAC0  
Do Not Output GS1 Als



@GS1OAC1  
\*\* Output GS1 Als

### GS1 Databar(RSS)



@GS1OAR0  
Do Not Output GS1 Als



@GS1OAR1  
\*\* Output GS1 Als



#SETUPE0



#SETUPE1  
Enter Setup

---

### GS1 QR



@GS10AQ0  
Do Not Output GS1 Als



@GS10AQ1  
\*\* Output GS1 Als

### GS1 Data Matrix



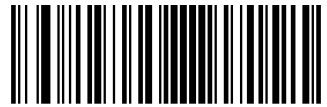
@GS10AD0  
Do Not Output GS1 Als



@GS10AD1  
\*\* Output GS1 Als



#SETUPE1  
\*\* Exit Setup



#SETUPE1  
Enter Setup

---

## Output GS1 Check Character

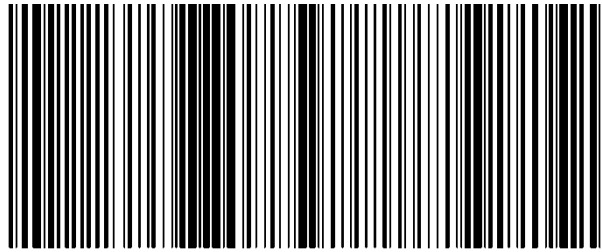


@GS1OCK0  
Disable



@GS1OCK1  
\*\* Enable

**E**  
*xample*



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

When the **Output GS1 Check Character function** is enabled, the barcode data output is as follows:

01006141419999961010ABCEDF123456.

When the **Output GS1 Check Character function** is disabled, the barcode data output is as follows:

0100614141999991010ABCEDF123456.



#SETUPE0



#SETUPE1  
Enter Setup

---

### GS1-128(UCC/EAN-13)



@GS1OC10  
Do Not Output GS1 Check Character



@GS1OC11  
\*\* Output GS1 Check Character

### GS1 Composite



@GS1OCC0  
Do Not Output GS1 Check Character



@GS1OCC1  
\*\* Output GS1 Check Character

### GS1 Databar(RSS)



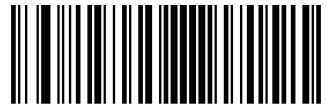
@GS1OCR0  
Do Not Output GS1 Check Character



@GS1OCR1  
\*\* Output GS1 Check Character



#SETUPE1  
\*\* Exit Setup



#SETUPE1  
Enter Setup

---

## GS1 QR



@GS1OCQ0

Do Not Output GS1 Check Character



@GS1OCQ1

\*\* Output GS1 Check Character

## GS1 Data Matrix



@GS1OCD0

Do Not Output GS1 Check Character



@GS1OCD1

\*\* Output GS1 Check Character



#SETUPE0



#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**



#SETUPE1  
**\*\* Exit Setup**



#SETUPE1  
**Enter Setup**

---

## Code 128

### Restore Factory Defaults



@128DEF

**Restore the Factory Defaults of Code 128**

### Enable/Disable 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



#SETUPE1  
Enter Setup

## Set 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: 127)



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.

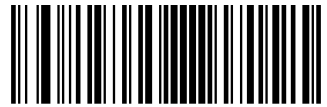


**Set the scanner to decode Code 128 barcodes containing between 8 and 12 characters:**

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.



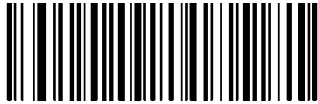
#SETUPE1  
\*\* Exit Setup



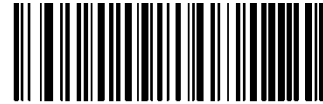
#SETUPE1  
Enter Setup

---

## FNC1 Transmit



@128FNC0  
Disable



@128FNC1  
\*\* Enable



#SETUPE0



#SETUPE1  
Enter Setup

## EAN-8

### Restore Factory Defaults



@EA8DEF

Restore the Factory Defaults of EAN-8

### Enable/Disable 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.

### Transmit 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**



#SETUPE1

**\*\* 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



#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.



@EA8AD50  
**\*\* Disable 5-Digit Add-On Code**



@EA8AD51  
**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.



#SETUPE1  
**\*\* 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**

### Convert 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



#SETUPE1  
**Enter Setup**

---

## **EAN-13**

### **Restore Factory Defaults**



@E13DEF  
**Restore the Factory Defaults of EAN-13**

### **Enable/Disable 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.



#SETUPE1  
**\*\* Exit Setup**



#SETUPE1  
Enter Setup

## Transmit 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**



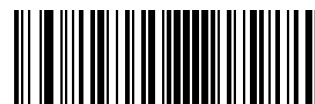
@E13AD21

**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



#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.



@E13AD50  
**\*\* Disable 5-Digit Add-On Code**



@E13AD51  
**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.



#SETUPE1  
**\*\* 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.



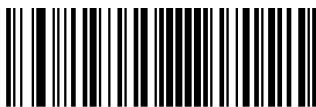
@E133780

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

@E133781



#SETUPE0



#SETUPE1  
**Enter Setup**

---

**Require Add-On Code**



#SETUPE1  
**\*\* 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



#SETUPE0

Enter Setup



#SETUPE1

Require Add-On Code



#SETUPE1

\*\* 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:

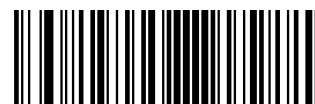
**Require Add-On Code:** All EAN-13 barcodes that begin with “978” must have a 2-digit or 5-digit add-on code. The EAN-13 barcode with the add-on code is then transmitted. If the required add-on code is not found, the EAN-13 barcode is discarded.

**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.

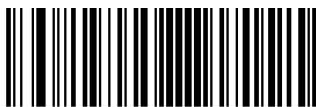


@E139780

\*\* Do Not Require Add-On Code



#SETUPE0



#SETUPE1  
**Enter Setup**

---



@E139781  
**Require Add-On Code**



#SETUPE1  
**\*\* 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



#SETUPE1  
Enter Setup

## UPC-E

### Restore Factory Defaults



@UPEDEF

Restore the Factory Defaults of UPC-E

### Enable/Disable UPC-E



@UPEENA1

\*\* Enable UPC-E



@UPEENA0

Disable UPC-E



@UPEEN01

\*\* Enable UPC-E0



@UPEEN00

Disable UPC-E0



@UPEEN11

Enable UPC-E1



@UPEEN10

\*\*Disable UPC-E1



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



@SETUPE0

\*\* Exit Setup



#SETUPE1  
Enter Setup

## Transmit 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**



**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



#SETUPE0  
**\*\* Exit Setup**



#SETUPE1

Enter Setup

### 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.



@UPAREQ0

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



@UPAREQ1

**UPC-E Add-On Code Required**

### Transmit 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**



#SETUPE0

**\*\* Exit Setup**



#SETUPE1  
Enter Setup

---

### Convert 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

### Restore Factory Defaults



@UPADEF

**Restore the Factory Defaults of UPC-A**

### Enable/Disable 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.

### Transmit 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.



@UPAAD20  
**\*\* Disable 2-Digit Add-On Code**



@UPAAD21  
**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**

### Transmit 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:

1. UPC-A (starting with "5") + GS1-128
2. UPC-A (starting with "5") + GS1 Databar
3. 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

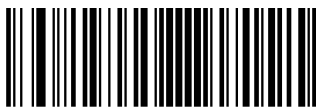


When using the UPC-A Coupon feature, please ensure that **System Character** or **System Character & Country Code** is selected for the "Transmit UPC-A Preamble Character" feature.



#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**



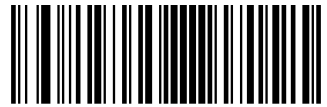
@CPNGS11  
**GS1 Output On**



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

### Restore Factory Defaults



@I25DEF

**Restore the Factory Defaults of Interleaved 2 of 5**

### Enable/Disable 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

## Set 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.



@I25MIN

Set the Minimum Length (Default: 1)



@I25MAX

Set the Maximum Length (Default: 127)



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.



**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**

---

## Safety Level

Interleaved 2 of 5 is prone to misdecoding. If misreads occur, try increasing the security level.



@I25SEC0

**\*\* level 1**



@I25SEC1

**level 2**



@I25SEC2

**level 3**



@I25SEC3

**level 4**



The higher the security level, the lower the probability of decoding errors. However, decoding speed will be reduced accordingly. Conversely, lower security levels increase decoding speed.



#SETUPE0

**\*\* Exit Setup**



#SETUPE1

Enter Setup

---

## Febraban



@I25FBB0

**\*\* Disable Febraban**



@I25FBB1

**Enable Febraban, Do Not Expand**



@I25FBB2

**Enable Febraban, Expand**

## Transmit Delay per Character

**Transmit Delay per Character** applies to both Expanded and Unexpanded Febraban. This feature is available only when USB HID Keyboard is enabled.



@FEBSN0

**\*\* Disable Transmit Delay per Character**



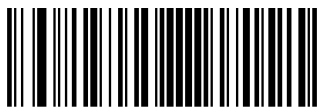
@FEBSN1

**Enable Transmit Delay per Character**



#SETUPE0

**\*\* Exit Setup**



#SETUPE1

## Enter Setup

---

You may select an appropriate delay value from the options below as per your actual needs.



@FEBSDT0

**0ms**



@FEBSDT5

**5ms**



@FEBSDT10

**10ms**



@FEBSDT15

**15ms**



@FEBSDT20

**20ms**



@FEBSDT25

**25ms**



@FEBSDT30

**30ms**



@FEBSDT35

**35ms**



#SETUPE0

**\*\* Exit Setup**



#SETUPE1

Enter Setup

---



@FEBSDT40

40ms



@FEBSDT45

45ms



@FEBSDT50

50ms



@FEBSDT55

55ms



@FEBSDT60

60ms



@FEBSDT65

65ms



@FEBSDT70

\*\* 70ms



@FEBSDT75

75ms



#SETUPE0

\*\* Exit Setup



#SETUPE1  
**Enter Setup**

---

### **Transmit Delay per 12 Characters**

**Transmit Delay per 12 Characters** applies to Expanded Febraban only. This feature is available only when USB HID Keyboard is enabled.



@FEBMEN0

**\*\* Disable Transmit Delay per 12 Characters**



@FEBMEN1

**Enable Transmit Delay per 12 Characters**

You may select an appropriate delay value from the options below as per your actual needs.



@FEBMDT0  
**0ms**



@FEBMDT1  
**300ms**



@FEBMDT2  
**400ms**



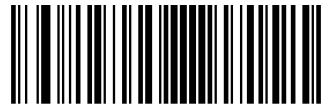
@FEBMDT3  
**500ms**



@FEBMDT4  
**600ms**



#SETUPE0  
**\*\* Exit Setup**



#SETUPE1  
**Enter Setup**

---



@FEBMDT5  
**700ms**



@FEBMDT6  
**800ms**



@FEBMDT7  
**900ms**



#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.

### Restore Factory Defaults



@I14DEF

Restore the Factory Defaults of ITF-14

### Enable/Disable 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.

### Restore Factory Defaults



@IT6DEF

**Restore the Factory Defaults of ITF-6**

### Enable/Disable 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

### Restore Factory Defaults



@M25DEF  
**Restore the Factory Defaults of Matrix 2 of 5**

### Enable/Disable Matrix 2 of 5



@M25ENA1  
**Enable Matrix 2 of 5**



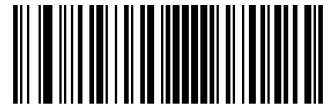
@M25ENA0  
**\*\* Disable Matrix 2 of 5**



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**

## Set 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.



**Set the Minimum Length (Default: 1)**



**Set the Maximum Length (Default: 127)**



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.

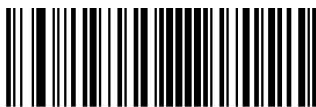


**Set the scanner to decode Matrix 2 of 5 barcodes containing between 8 and 12 characters:**

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

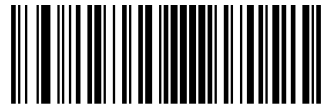
**Transmit Check Character After Verification**



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

### Restore Factory Defaults



@C39DEF  
**Restore the Factory Defaults of Code 39**

### Enable/Disable 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**

---

### Set 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: 127)**



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.



**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

## Check 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**

---

### **Transmit 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**

### **Enable/Disable 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**

### **Enable/Disable 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**

---

### **Transmit 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**

### **Transmit Code 32 Check Character**

Code 32 must be enabled for this parameter to function.



@C39C320

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

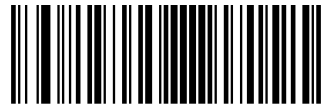


@C39C321

**Transmit Code 32 Check Character**



#SETUPE0  
**\*\* Exit Setup**



#SETUPE1  
**Enter Setup**

---

## Codabar

### Restore Factory Defaults



@CBADEF

**Restore the Factory Defaults of Codabar**

### Enable/Disable Codabar



@CBAENA1

**\*\* Enable Codabar**



@CBAENA0

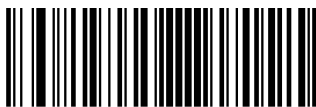
**Disable Codabar**



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**

## Set 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: 1)**



@CBAMAX

**Set the Maximum Length (Default: 127)**



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.



### 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**



#SETUPE1  
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**



#SETUPE0  
**\*\* Exit Setup**



#SETUPE1

**Enter Setup**

## Code 93

### Restore Factory Defaults



@C93DEF

**Restore the Factory Defaults of Code 93**

### Enable/Disable 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**

## Set 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: 127)**



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.



### 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**

## China Post 25

### Restore Factory Defaults



@CHPDEF

**Restore the Factory Defaults of China Post 25**

### Enable/Disable China Post 25



@CHPEN A1

**Enable China Post 25**



@CHPEN A0

**\*\* 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

## Set 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: 127)



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.



**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

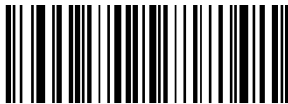
\*\* Exit Setup



#SETUPE1  
Enter Setup

## Deutsche 14

### Restore Factory Defaults



@D14DEF

**\*\* Restore the Factory Defaults of Deutsche14**

### Enable/Disable Deutsche14



@D14ENA0

**\*\* Disable Deutsche14**



@D14ENA1

**Enables Decoding without Transmitting the  
Check Digit.**



@D14ENA2

**Enables Decoding and Transmits the Check  
Digit.**



#SETUPE0  
**\*\* Exit Setup**



#SETUPE1

Enter Setup

## Deutsche 12

### Restore Factory Defaults



@D12DEF

**\*\* Restore the Factory Defaults of Deutsche12**

### Enable/Disable Deutsche12



@D12ENA0

**Disable Deutsche12**



@D12ENA2

**Enables Decoding and Transmits the Check Digit.**



@D12ENA1

**Enables Decoding without Transmitting the Check Digit.**



#SETUPE0

**\*\* Exit Setup**



#SETUPE1  
**Enter Setup**

---

## GS1-128 (UCC/EAN-128)

### Restore Factory Defaults



@GS1DEF

**Restore the Factory Defaults of GS1-128**

### Enable/Disable GS1-128



@GS1ENA1

**\*\* Enable GS1-128**



@GS1ENA0

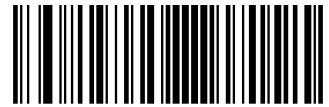
**Disable GS1-128**



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



#SETUPE0  
**\*\* Exit Setup**



#SETUPE1  
**Enter Setup**

## Set 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.



**Set the Minimum Length (Default: 1)**



**Set the Maximum Length (Default: 127)**



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.



**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**

---

## FNC1 Transmit



@GS1FNC0  
**Disable**



@GS1FNC1  
**\*\* Enable**



#SETUPE0  
**\*\* Exit Setup**



#SETUPE1  
**Enter Setup**

## GS1 Databar (RSS)

### Restore Factory Defaults



@RSSDEF

**Restore the Factory Defaults of GS1 Databar**

### Enable/Disable 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.

### Transmit Application Identifier "01"



@RSSTA1

**\*\* Transmit Application Identifier "01"**



@RSSTA0

**Do Not Transmit Application Identifier "01"**



#SETUPE0

**\*\* Exit Setup**



#SETUPE1  
Enter Setup

---

## GS1 DataBar Omnidirectional (RSS14)



@RSSE141  
\*\* Enable



@RSSE140  
Disable

## GS1 DataBar Limited



@RSSENL1  
\*\* Enable



@RSSENL0  
Disable

## GS1 DataBar Expand



@RSSENE1  
\*\* Enable



@RSSENE0  
Disable



#SETUPE0  
\*\* Exit Setup



#SETUPE1

**Enter Setup**

---

## GS1 Composite (EAN·UCC Composite)

### Restore Factory Defaults



@CPTDEF

**Restore the Factory Defaults of GS1 Composite**

### Enable/Disable GS1 Composite



@CPTENA1

**Enable GS1 Composite**



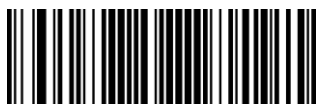
@CPTENA0

**\*\* 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.

### Enable/Disable UPC/EAN Composite



@CPTUPC1

**Enable UPC/EAN Composite**



@CPTUPC0

**\*\* Disable UPC/EAN Composite**



#SETUPE0

**\*\* Exit Setup**



#SETUPE1  
**Enter Setup**

---

## Code 11

### Restore Factory Defaults



@C11DEF  
**Restore the Factory Defaults of Code 11**

### Enable/Disable 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

## Set 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: 1)



@C11MAX

Set the Maximum Length (Default: 127)



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.



### 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

## Transmit Check Character



@C11TCK0

**\*\* Do Not Transmit Code 11 Check Character**



@C11TCK1

**Transmit Code 11 Check Character**

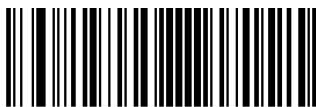


If you select a check character algorithm and the **Do Not Transmit Check Character** option, Code 11 barcodes with a length that is less than the configured minimum length after having the check character(s) excluded will not be decoded. (For example, when the **One Check Character**, **MOD11** and **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

### Restore Factory Defaults



@ISBDEF  
**Restore the Factory Defaults of ISBN**

### Enable/Disable 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.



#SETUPE0  
**\*\* Exit Setup**



#SETUPE1

**Enter Setup**

---

## Set ISBN Format



@ISBT101

**ISBN-10**



@ISBT100

**\*\* ISBN-13**

## 2-Digit Add-on Code



@ISBAD20

**\*\* Disabled 2-Digit Add-on Code**



@ISBAD21

**Enable 2-Digit Add-on Code**



#SETUPE0

**\*\* Exit Setup**



#SETUPE1  
Enter Setup

---

### 5-Digit Add-on Code



@ISBAD50

**\*\* Disabled 5-Digit Add-on Code**



@ISBAD51

**Enabled 5-Digit Add-on Code**



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

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

### Add-on Code Required



@ISBREQ0

**\*\* Not Required Add-on Code**



@ISBREQ1

**Required Add-on Code**



@SETUPE0

**\*\* Exit Setup**



#SETUPE1

**Enter Setup**

---

### Add-On Code Separator



@ISBSEP0

**\*\* Disable Add-on Code Separator**



@ISBSEP1

**Enable Add-on Code Separator**



#SETUPE0

**\*\* Exit Setup**



#SETUPE1  
**Enter Setup**

---

## ISSN

### Restore Factory Defaults



@ISSDEF  
**Restore the Factory Defaults of ISSN**

### Enable/Disable 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

## 2-Digit Add-on Code



@ISSAD20

**\*\* Disabled 2-Digit Add-on Code**



@ISSAD21

**\*\* Enabled 2-Digit Add-on Code**

## 5-Digit Add-on Code



@ISSAD50

**\*\* Disabled 5-Digit Add-on Code**



@ISSAD51

**Enabled 5-Digit Add-on Code**



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

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



#SETUPE0

**\*\* Exit Setup**



#SETUPE1  
**Enter Setup**

---

### **Add-on Code Required**



@SSREQ0  
**\*\* Not Required Add-on Code**



@SSREQ1  
**\*\* Required Add-on Code**



@SETUPE0  
**\*\* Exit Setup**



#SETUPE1

**Enter Setup**

## Industrial 25

### Restore Factory Defaults



@L25DEF

**Restore the Factory Defaults of Industrial 25**

### Enable/Disable 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**

## Set 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: 1)**



@L25MAX

**Set the Maximum Length (Default: 127)**



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.



### 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

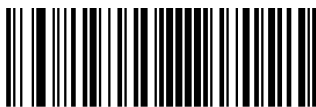


If the **Do Not Transmit Check Character After Verification** option is enabled, Industrial 25 barcodes with a length that is less than the configured minimum length after having the check character excluded will not be decoded. (For example, when the **Do Not Transmit Check Character After Verification** 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

### Restore Factory Defaults



@S25DEF  
**Restore the Factory Defaults of Standard 25**

### Enable/Disable Standard 25



@S25ENA1  
**\*\* Enable Standard 25**



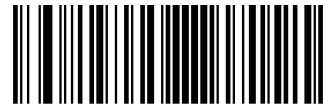
@S25ENA0  
**Disable Standard 25**



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**

## Set 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: 1)**

@S25MAX

**Set the Maximum Length (Default: 127)**

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.



**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

### Restore Factory Defaults



@PLYDEF  
**Restore the Factory Defaults of Plessey**

### Enable/Disable Plessey



@PLYENA1  
**\*\*Enable Plessey**



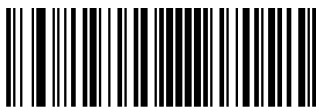
@PLYENA0  
**Disable Plessey**



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**

---

## Set 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: 1)**



@PLYMAX

**Set the Maximum Length (Default: 127)**



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.



**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

### Restore Factory Defaults



@MSIDEF  
**Restore the Factory Defaults of MSI-Plessey**

### Enable/Disable 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**

## Set 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: 1)**



**Set the Maximum Length (Default: 127)**

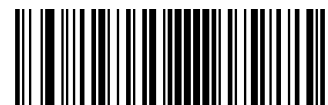


If minimum length is set to be greater than maximum length, the scanner only decodes MSI-Plessey barcodes with either the minimum or maximum length. If minimum length is same as maximum length, only MSI-Plessey barcodes with that length are to be decoded.



### 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**



#SETUPE1  
**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.



@MSICLK0  
**Disable**



@MSICLK1

**\*\* One Check Character, MOD10**



@MSICLK2

**Two Check Characters, MOD10/MOD10**

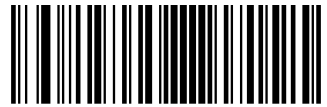


@MSICLK3

**Two Check Characters, MOD10/MOD11**



#SETUPE0  
**\*\* Exit Setup**



#SETUPE1

Enter Setup

---

### Transmit 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

### Restore Factory Defaults



@AIMDEF

**Restore the Factory Defaults of AIM 128**

### Enable/Disable 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**

## Set 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: 127)**

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**

---

**FNC1 Transmit**



@AIMFNC0

**Disable**



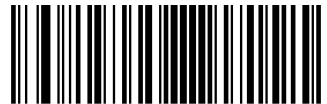
@AIMFNC1

**\*\* Enable**



#SETUPE0

**\*\* Exit Setup**



#SETUPE1  
**Enter Setup**

---

## ISBT 128

### Restore Factory Defaults



@IBTDEF

**Restore the Factory Defaults of ISBT 128**

### Enable/Disable ISBT 128



@IBTENA1

**Enable ISBT 128**



@IBTENAO

**\*\* 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

### Restore Factory Defaults



@C49DEF  
**Restore the Factory Defaults of AIM 49**

### Enable/Disable AIM 49



@C49ENA1  
**\*\* Enable AIM 49**



@C49ENA0  
**Disable AIM 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 AIM 49** barcode.



#SETUPE0  
**\*\* Exit Setup**



#SETUPE1

**Enter Setup**

## Set 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.



**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

### Restore Factory Defaults



@16KDEF

**Restore the Factory Defaults of Code 16K**

### Enable/Disable AIM 49



@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

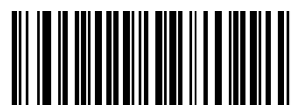
## Set Length Range for Code 16K

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**

---

## PDF417

### Restore Factory Defaults



@PDFDEF  
**Restore the Factory Defaults of PDF417**

### Enable/Disable 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**

## Set 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.



**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.



@PDFDOU0  
**\*\* Single PDF417 Only**



@PDFDOU1  
**Twin PDF417 Only**



@PDFDOU2  
**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**



#SETUPE0

**\*\* Exit Setup**



#SETUPE1  
Enter Setup

---

## PDF417 ECI Output



@PDFECI0  
\*\* Disable PDF417 ECI Output



@PDFECI1  
Enable PDF417 ECI Output

## Character Encoding



@PDFENC0  
\*\* Default



@PDFENC1  
UTF-8



@PDFENC2  
\*\* Automatically Select UTF-8 or Code Page



#SETUPE0  
\*\* Exit Setup



#SETUPE1

**Enter Setup**

---

## Micro PDF417

### Restore Factory Defaults



@MPDDEF

**Restore the Factory Defaults of Micro PDF417**

### Enable/Disable Micro PDF417



@MPDENA1

**Enable Micro PDF417**

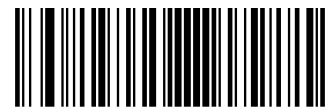


@MPDENA0

**\*\* 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**

## Set 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

### Restore Factory Defaults



@QRCDEF

**Restore the Factory Defaults of QR Code**

### Enable/Disable QR Code



@QRCENA1

**\*\* Enable QR Code**



@QRCENA0

**Disable QR Code**

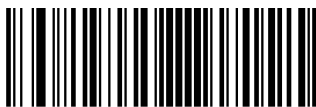


If the scanner fails to identify QR Code barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable QR Code** barcode.



#SETUPE0

**\*\* Exit Setup**



#SETUPE1  
**Enter Setup**

## Set 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.

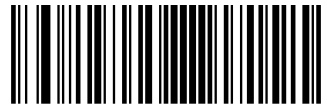
**E**  
*xample*

**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 two 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**



#SETUPE0  
**\*\* Exit Setup**



#SETUPE1

**Enter Setup**

---

## QR ECI Output



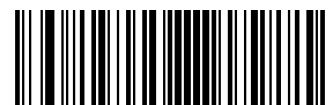
@QRCEC10

**Disable QR ECI Output**



@QRCEC11

**\*\*Enable QR ECI Output**



#SETUPE0

**\*\* Exit Setup**



#SETUPE1  
Enter Setup

---

## Character Encoding



@QRCENC0  
\*\* Default



@QRCENC2  
KOI8-R



@QRCENC1  
UTF-8



@QRCENC3  
\*\* Automatically Select UTF-8 or Code Page



#SETUPE0  
\*\* Exit Setup



#SETUPE1

**Enter Setup**

---

## URL QR Code



@QRCURL0

**Disable URL QR Code**



@QRCURL1

**\*\* Enable URL QR Code**

## Custom URL QR

You can append to the QR barcode data several user-defined strings (separated by “[ ”) that cannot exceed 64 characters, including separators (HEX values from 0x00 to 0xFF). When URL QR is enabled, the scanner will not read the QR code whose barcode data starts with custom strings.



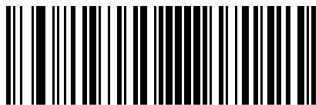
@QRCURS

**Custom URL QR**



#SETUPE0

**\*\* Exit Setup**



#SETUPE1

**Enter Setup**

---

## Micro QR Code

### Restore Factory Defaults



@MQRDEF

**Restore the Factory Defaults of Micro QR**

### Enable/Disable 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**

## Set 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 xample

**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

### Restore Factory Defaults



@AZTDEF

**Restore the Factory Defaults of Aztec Code**

### Enable/Disable 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**

## Set 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.



### 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**

---

## Read Multi-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**



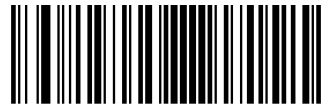
@AZTMOD2  
**Mode 2**



@AZTMOD3  
**Mode 3**



#SETUPE0  
**\*\* Exit Setup**



#SETUPE1  
Enter Setup

## Set the Number of Barcodes



@AZTMUL1  
\*\* 1



@AZTMUL2  
2



@AZTMUL3  
3



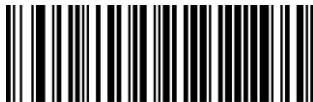
@AZTMUL4  
4



@AZTMUL5  
5



@AZTMUL6  
6



@AZTMUL7  
7



@AZTMUL8  
8



#SETUPE0  
\*\* Exit Setup



#SETUPE1  
**Enter Setup**

---

### **Aztec Inverse**

Regular barcode: Dark bars on a bright background. Inverse barcode: Bright bars on a dark background.



@AZTINV0

**\*\* Decode Regular Aztec Barcodes Only**



@AZTINV1

**Decode Inverse Aztec Barcodes Only**



@AZTINV2

**Decode Both**



#SETUPE0  
**\*\* Exit Setup**



#SETUPE1

**Enter Setup**

---

## Aztec ECI Output



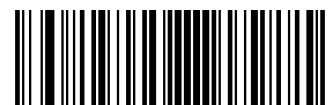
@AZTECI0

**\*\*Disable Aztec ECI Output**



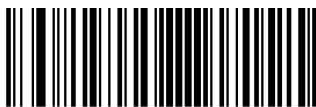
@AZTECI1

**\*\* Enable Aztec ECI Output**



#SETUPE0

**\*\* Exit Setup**



#SETUPE1

Enter Setup

---

## Character Encoding



@AZTENC0

\*\* Default



@AZTENC1

UTF-8

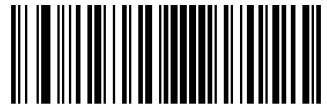


@AZTENC2

\*\* Automatically Select UTF-8 or Code Page



#SETUPE0



#SETUPE1  
**Enter Setup**

## Data Matrix

### Restore Factory Defaults



@DMCDEF

**Restore the Factory Defaults of Data Matrix**

### Enable/Disable Data Matrix



@DMCENA1

**\*\* Enable Data Matrix**



@DMCENA0

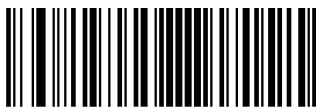
**Disable Data Matrix**



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



#SETUPE1  
**Enter Setup**

## Set 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.

**E**  
*xample*

**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,



@DMCREC1  
6\*14...14\*22.

### \*\* Enable Rectangular Barcode



@DMCREC0  
Disable Rectangular Barcode

## Data Matrix Inverse

Regular barcode: Dark bars on a bright

background. Inverse barcode: Bright bars on a



@DMCINV0  
dark background.

### \*\* Decode Regular Data Matrix Barcodes Only



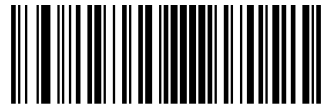
@DMCINV1  
Decode Inverse Data Matrix Barcodes Only



@DMCINV2  
Decode Both



#SETUPE0  
\*\* Exit Setup



#SETUPE1  
**Enter Setup**

---

## Character Encoding



@DMCENC0  
**\*\* Default Character Encoding**



@DMCENC1  
**UTF-8**

## Data Matrix ECI Output



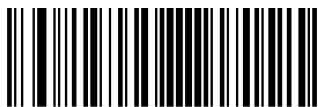
@DMCEC10  
**Disable Data Matrix ECI Output**



@DMCEC11  
**\*\* Enable Data Matrix ECI Output**



#SETUPE0  
**\*\* Exit Setup**



#SETUPE1

**Enter Setup**

---

## Maxicode

### Restore Factory Defaults



@MXCDEF

**Restore the Factory Defaults of Maxicode**

### Enable/Disable 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**

## Set 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.



@MXCMIN

**Set the Minimum Length (Default: 1)**



@MXCMAX

**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.

## **E** *sample*

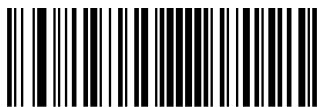
**Set the scanner to decode Maxicode barcodes containing between 8 and 12 characters:**

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 Restore Factory Defaults



@CSCDEF

**Restore the Factory Defaults of Chinese Sensible Code**

## Enable/Disable 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**

---

## Set 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.

## **E** *sample*

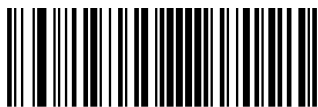
**Set the scanner to decode Chinese Sensible Code barcodes containing between 8 and 12 characters:**

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

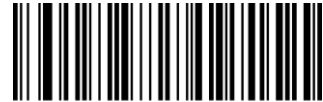
Regular barcode: Dark bars on a bright background.

Inverse barcode: Bright bars on a dark background.



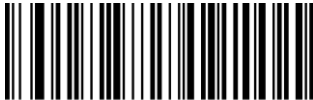
@CSCINV0

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



@CSCINV1

**Decode Inverse Chinese Sensible Barcodes Only**



@CSCINV2

**Decode Both**

## ECI Output



@CSCEC10

**Disable ECI Output**



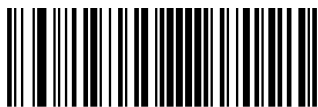
@CSCEC11

**\*\* Enable ECI Output**



@SETUPE0

**\*\* Exit Setup**



#SETUPE1

**Enter Setup**

---

## GM Code

**Restore Factory Defaults**



@GMCDEF

**Restore the Factory Defaults of GM**

## Enable/Disable 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**

---

## Set 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.



@GMCMIN

**Set the Minimum Length (Default: 1)**



@GMC MAX

**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.

## Example

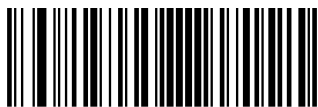
**Set the scanner to decode GM barcodes containing between 8 and 12 characters:**

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

**Restore Factory Defaults**



@ONEDEF

**Restore the Factory Defaults of Code One**

## Enable/Disable 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**

---

## Set 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.

## Example

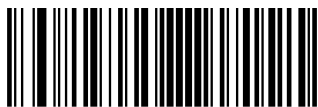
**Set the scanner to decode Code One barcodes containing between 8 and 12 characters:**

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

**Restore Factory Defaults**



@DOTDEF

**Restore the Factory Defaults of DotCode**

**Enable/Disable 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

### Restore Factory Defaults



@PNTDEF

**Restore the Factory Defaults of USPS Postnet**

### Enable/Disable 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.

### Transmit Check Character



@PNTCHK1

**Do Not Transmit USPS Postnet Check Character**



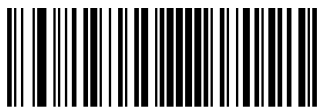
@PNTCHK2

**\*\* Transmit USPS Postnet Check Character**



@SETUPE0

**\*\* Exit Setup**



#SETUPE1

**Enter Setup**

---

## **USPS Intelligent Mail Restore Factory Defaults**



@ILGDEF

**Restore the Factory Defaults of USPS Intelligent Mail**

## **Enable/Disable 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 Restore Factory Defaults



@ROYDEF

**Restore the Factory Defaults of Royal Mail**

## Enable/Disable Royal Mail



@ROYENA1

**Enable Royal Mail**



@ROYENA0

**\*\* Disable Royal Mail**

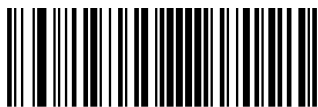


If the scanner fails to identify Royal Mail barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable Royal Mail** barcode.



@SETUPE0

**\*\* Exit Setup**



#SETUPE1

**Enter Setup**

---

## USPS Planet Restore Factory Defaults



@PLADEF

**Restore the Factory Defaults of USPS Planet**

## Enable/Disable USPS Planet



@PLAENA1

**Enable USPS Planet**



@PLAENA0

**\*\* Disable USPS Planet**



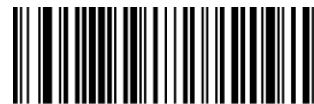
If the scanner fails to identify USPS Planet barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable USPS Planet** barcode.

## Transmit Check Character



@PLACHK1

**Do Not Transmit USPS Planet Check Character**



@PLACHK2

**\*\* Transmit USPS Planet Check Character**



@SETUPE0

**\*\* Exit Setup**



#SETUPE1

**Enter Setup**

---

## KIX Post Restore Factory Defaults



@KIXDEF

**Restore the Factory Defaults of KIX Post**

## Enable/Disable KIX Post



@KIXENA1

**Enable KIX Post**



@KIXENA0

**\*\* Disable KIX Post**

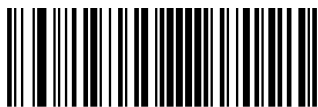


If the scanner fails to identify KIX Post barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable KIX Post** barcode.



@SETUPE0

**\*\* Exit Setup**



#SETUPE1

**Enter Setup**

---

## **Australian Postal Restore Factory Defaults**



@APLDEF

**Restore the Factory Defaults of Australian Postal**

## **Enable/Disable 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 Restore Factory Defaults



@JPPDEF

**Restore the Factory Defaults of Japan Post**

## Enable/Disable Specific Japan Post



@JPPENA1

**Enable Japan Post**



@JPPENA0

**\*\* Disable Japan Post**



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



@SETUPE0

**\*\* Exit Setup**



#SETUPE1  
**Enter Setup**

---

## Passport OCR

### Restore Factory Defaults



@PASDEF  
**Restore the Factory Defaults of Passport OCR**

### Enable/Disable 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**

---

## **Chinese ID Card OCR**

### **Restore Factory Defaults**



@IDCDEF

**\*\* Restore the Factory Defaults of Chinese ID Card OCR**

## **Enable/Disable Chinese ID Card OCR**



@IDCENA1

**Enable Chinese ID Card OCR**



@IDCENA0

**\*\* Disable Chinese ID Card OCR**



@SETUPE0

**\*\* Exit Setup**



#SETUPE1  
Enter Setup

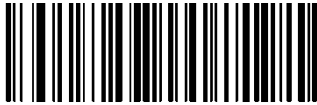
---

## China Travel Permit OCR Restore Factory Defaults

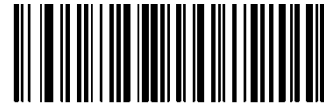


@CTPDEF  
\*\* Restore the Factory Defaults of China Travel  
Permit OCR

## Enable/Disable Chinese Travel Permit OCR



@CTPEN A1  
Enable Chinese Travel Permit OCR



@CTPEN A0  
\*\* Disable Chinese Travel Permit OCR



@SETUPE0  
\*\* Exit Setup



#SETUPE1

**Enter Setup**

## Chapter 7 Prefix & Suffix

### 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

### Enable/Disable All Prefixes/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.



@APSENA0  
**\*\* Disable All Prefixes/Suffixes**



@APSENA1  
**Enable All Prefixes/Suffixes**

## Prefix Sequence



@PRESEQ0  
**\*\* Code ID+ Custom +AIM ID**



@PRESEQ1  
**Custom + Code ID + AIM ID**



@SETUPE0  
**\*\* Exit Setup**



#SETUPE1  
**Enter Setup**

## Custom Prefix

### Enable/Disable Custom Prefix

If custom prefix is enabled, you are allowed to 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”.



**\*\* Disable Custom Prefix**



**Enable Custom Prefix**

### Set 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.



**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**



#SETUP E1

**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**

## Restore 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**

## Modify Code ID

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



#SETUP E0

**\*\* Exit Setup**



#SETUPE1

**Enter Setup**

**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**

---

## Modify 1D symbologies



@CID002  
**Modify Code 128 Code ID**



@CID004  
**Modify EAN-8 Code ID**



@CID006  
**Modify UPC-E Code ID**



**Modify Interleaved 2 of 5 Code ID**



@CID003  
**Modify GS1-128 Code ID**



@CID005  
**Modify EAN-13 Code ID**



@CID007  
**Modify UPC-A Code ID**



#SETUPE0  
**\*\* Exit Setup**



#SETUPE1  
**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**



@CID015  
**Modify Codabar Code ID**



@CID017  
**Modify Code 93 Code ID**



@CID019  
**Modify China Post 25 Code ID**



@CID020  
**Modify AIM 128 Code ID**



#SETUPE0  
**\*\* Exit Setup**



#SETUPE1

**Enter Setup**

---



@CID023

**Modify ISSN Code ID**



@CID025

**Modify Industrial 25 Code ID**



@CID027

**Modify Plessey Code ID**



@CID029

**Modify MSI Plessey Code ID**



@CID021

**Modify ISBT 128 Code ID**



@CID024

**Modify ISBN Code ID**



@CID026

**Modify Standard 25 Code ID**



@CID028

**Modify Code 11 Code ID**



#SETUPE0

**\*\* Exit Setup**



#SETUPE1

**Enter Setup**



@CID030

**Modify GS1 Composite Code ID**



@CID031

**Modify GS1 Databar (RSS) Code ID**



@CID132

**Modify Code 49 Code ID**



@CID133

**Modify 16K Code ID**



#SETUPE0

**\*\* Exit Setup**



#SETUPE1

**Enter Setup**

---

**Modify 2D  
symbolologies**



@CID035

**Modify Data Matrix Code ID**



@CID033

**Modify QR Code ID**



@CID032

**Modify PDF417 Code ID**



@CID042

**Modify Micro PDF417 Code ID**



@CID043

**Modify Micro QR Code ID**



#SETUPE0

**\*\* Exit Setup**



#SETUPE1  
**Enter Setup**

## Custom Suffix

### Enable/Disable Custom Suffix

If custom suffix is enabled, you are allowed to 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**

### Set Custom Suffix

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.



@CSUSET  
**Set Custom Suffix**

**E**  
*sample*

**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

### Enable/Disable 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.



@TSUENAO

Disable Terminating Character Suffix



@TSUENA1

**\*\*Enable Terminating Character Suffix**

### Set 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 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 **Illumination On, Sense Mode, Decode Session Timeout = 2s**:

1. Input the commands:

@ILLSCN1;SCNMOD2;ORTSET

2000;

2. Generate a batch barcode.

When setting up a 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**

## Create a Batch Command

A batch command may contain a number of individual commands each of which is terminated by a semicolon (;). For more information, refer to the “Use of Programming Command” section in Chapter 3.

## Create a Batch Barcode

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

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

1. Input the following commands:

@ILLSCN1;SCNMOD2;ORTSET

2000;

2. Generate a PDF417 batch barcode.



#SETUPE0

**\*\* Exit Setup**



## Use Batch Barcode

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





@SETUPE1  
Enter Setup

## Chapter 9 Maintenance

### Important Safety & Handling Information

1. Do not attempt to disassemble or retrofit the terminal yourself. Unauthorized disassembly or retrofit will void the warranty.
2. The device ensures reliable and efficient operation with minimal care and regular inspections.

### Cleaning Instructions

1. If the scanner window becomes dirty, scanning performance may decrease. Use a soft cloth or lens paper dampened with water (or a mild detergent-water solution) to clean the scanner window. The shell of the scanner and its cradle can also be cleaned using the same method.
2. The scanner's shell is not waterproof; do not immerse the scanner in water.
3. Avoid using abrasive wet wipes or tissues on the scanner, as they can scratch the scanner window.



@SETUPE0  
\*\* Exit Setup

# Appendix

## Digit Barcodes

0~9



@DIGIT0

0



@DIGIT1

1



@DIGIT2

2



@DIGIT3

3



@DIGIT4

4



@DIGIT5

5



@DIGIT6

6



@DIGIT7

7



@DIGIT8

8



@DIGIT9

9

---

**A~F**



@DIGITA

**A**



@DIGITB

**B**



@DIGITC

**C**



@DIGITD

**D**



@DIGITE

**E**



@DIGITF

**F**

---

## Save/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

| Parameters                               | Factory Default       | Remark        |
|------------------------------------------|-----------------------|---------------|
| <b>System Settings</b>                   |                       |               |
| <b>Hardware Settings</b>                 |                       |               |
| Good Read LED                            | On                    |               |
| Good Read LED Duration                   | Medium (120ms)        | 1-2,000ms     |
| Illumination                             | On                    |               |
| Aiming                                   | On                    |               |
| Good Read Vibration                      | Off                   |               |
| Good Read Vibration Duration             | 100                   | 1-2,000ms     |
| Image Flipping                           | Do Not Flip           |               |
| <b>Beep</b>                              |                       |               |
| Power On Beep                            | On                    |               |
| Good Read Beep                           | On                    |               |
| Good Read Beep Volume                    | High(20)              | 1-20          |
| Good Read Beep Duration                  | Medium (80ms)         | 20-300ms      |
| Good Read Beep Frequency                 | Medium (2730Hz)       |               |
| Reminder Beep Volume                     | Loud(20)              |               |
| Alert Beep Volume                        | Loud(20)              |               |
| BEL Beep                                 | Off                   |               |
| <b>Scan Settings</b>                     |                       |               |
| Barcode Programming                      | Disabled (Exit Setup) |               |
| Programming Barcode Data                 | Do not transmit       |               |
| Scan Mode                                | Level Mode            |               |
| Smart Stand Mode                         | Enabled               |               |
| Trigger Commands                         | Disabled              |               |
| Scan Interval                            | 0ms                   | 0-3,600ms     |
| After Successful Reading (Sensor Mode)   | Detection Status      |               |
| Image Stabilization Timeout (Sense Mode) | 200ms                 | 0-3,000ms     |
| Decode Session Timeout                   | 3,000ms.              | 0-3,600,000ms |
| Reread Timeout                           | Disabled              |               |
|                                          | 1500ms                | 1-3600000ms   |
| Reset Reread Timeout                     | Off                   |               |
| Reread Ignore Code Type                  | Disabled              |               |
| Good Read Delay                          | Disabled, 500ms       | 1-3600000ms   |
| Image Decoding Timeout                   | 500ms                 | 1-3,000ms     |
| Sensitivity                              | Medium (11)           | 1-20          |
| Scanning Preference                      | Normal                |               |
| Read Barcode                             | On                    |               |
| Image Luminance Limit                    | Disabled              |               |
| Custom Image Luminance                   | 80                    | 8-240         |
| Exposure parameter Limit                 | Disabled              |               |

|                                                      |                          |                  |
|------------------------------------------------------|--------------------------|------------------|
| Minimum Exposure Time                                | 50μs                     | 50-14,000μs      |
| Maximum Exposure Time                                | 2000μs                   | 50-14,000μs      |
| Gain Parameter Limit                                 | Disabled                 |                  |
| Maximum Gain                                         | 1600                     | 100-1600         |
| Minimum Gain                                         | 400                      | 100-1600         |
| Decode Area                                          | Whole Area Decoding      |                  |
| Transmit Bad Read Message                            | Disabled                 |                  |
| Modified Bad Read Message                            | NG                       |                  |
| Transmit Delay per Character for Febraban            | Disabled                 |                  |
| Custom Transmit Delay per Character for Febraban     | 70ms                     |                  |
| Transmit Delay per 12 Characters for Febraban        | Disabled                 |                  |
| Custom Transmit Delay per 12 Characters for Febraban | 500ms                    |                  |
| USB Data Transmission Failure Notification           | Disabled                 |                  |
| <b>Interface</b>                                     |                          |                  |
| Interface                                            | USB HID Keyboard         |                  |
| Interface Cables Auto Match                          | On                       |                  |
| <b>RS-232</b>                                        |                          |                  |
| Baud Rate                                            | 9600                     |                  |
| Parity Check                                         | None                     |                  |
| Data Bits                                            | 8                        |                  |
| Stop Bits                                            | 1                        |                  |
| Hardware Flow Control                                | Disabled                 |                  |
| <b>Keyboard</b>                                      |                          |                  |
| USB Country Keyboard                                 | US keyboard              | USB HID Keyboard |
| Emulate ALT+Keypad                                   | Off                      | USB HID Keyboard |
| Control Characters Output                            | Disabled                 | USB HID Keyboard |
| Inter-Keystroke Delay                                | No Delay                 | USB HID Keyboard |
| Caps Lock                                            | Off(Non Japanese Keypad) | 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 |
| Unicode Encoding                                     | Off                      | USB HID Keyboard |
| Beep on Unknown Character                            | Off                      | USB HID Keyboard |

|                                                  |                                          |                  |
|--------------------------------------------------|------------------------------------------|------------------|
| Emulate Keypad with Leading Zero                 | On                                       | USB HID Keyboard |
| Code Page                                        | Code Page 1252 (Latin, Western European) | USB HID Keyboard |
| <b>Symbologies</b>                               |                                          |                  |
| <b>1D Barcode</b>                                |                                          |                  |
| 1D Twin Code                                     | Single 1D Code Only                      |                  |
| 1D Inverse                                       | Regular                                  |                  |
| Parentheses Surround GS1 Application Identifiers | Disabled                                 |                  |
| Output GS1 Application Identifiers               | Enabled                                  |                  |
| GS1-128(UCC/EAN-13)                              | Output GS1 Application Identifiers       |                  |
| GS1-128 Composite                                | Output GS1 Application Identifiers       |                  |
| GS1 Databar(RSS)                                 | Output GS1 Application Identifiers       |                  |
| GS1 QR                                           | Output GS1 Application Identifiers       |                  |
| GS1 Data Matrix                                  | Output GS1 Application Identifiers       |                  |
| Transmit GS1 Check Character                     | Enabled                                  |                  |
| GS1-128(UCC/EAN-13)                              | Transmit GS1 Check Character             |                  |
| GS1-128 Composite                                | Transmit GS1 Check Character             |                  |
| GS1 Databar(RSS)                                 | Transmit GS1 Check Character             |                  |
| GS1 QR                                           | Transmit GS1 Check Character             |                  |
| GS1 Data Matrix                                  | Transmit GS1 Check Character             |                  |
| <b>Code 11</b>                                   |                                          |                  |
| Code 11                                          | Enabled                                  |                  |
| Maximum Length                                   | 127                                      |                  |
| Minimum Length                                   | 1                                        |                  |
| Check Character Verification                     | One Check Character, MOD11               |                  |
| Check Character                                  | Transmit                                 |                  |
| <b>Code 128</b>                                  |                                          |                  |
| Code 128                                         | Enabled                                  |                  |
| Maximum Length                                   | 127                                      |                  |
| Minimum Length                                   | 1                                        |                  |
| FNC1 Transmission                                | Enabled                                  |                  |
| Quiet Zone Size                                  | 6                                        | 1-20             |
| <b>Code 39</b>                                   |                                          |                  |
| Code 39                                          | Enabled                                  |                  |
| Maximum Length                                   | 127                                      |                  |
| Minimum Length                                   | 1                                        |                  |
| Check Character Verification                     | Disabled                                 |                  |
| Start/Stop Character                             | Do not transmit                          |                  |
| Code 39 Full ASCII                               | Enabled                                  |                  |
| Code 32 Pharmaceutical (PARAF)                   | Disabled                                 |                  |

|                              |                  |             |
|------------------------------|------------------|-------------|
| Code 32 Prefix               | Disabled         |             |
| Code 32 Start/Stop Character | Do not transmit  |             |
| Code 32 Check Character      | Do not transmit  |             |
| Quiet Zone Size              | 6                | 1-20        |
| <b>GS1-128(UCC/EAN-128)</b>  |                  |             |
| UCC/EAN-128                  | Enabled          |             |
| Maximum Length               | 127              |             |
| Minimum Length               | 1                |             |
| FNC1 Transmission            | Enabled          |             |
| <b>AIM 128</b>               |                  |             |
| AIM 128                      | Enabled          |             |
| Maximum Length               | 127              |             |
| Minimum Length               | 1                |             |
| FNC1 Transmission            | Enabled          |             |
| <b>ISBT 128</b>              |                  |             |
| ISBT 128                     | Disabled         |             |
| <b>Codabar</b>               |                  |             |
| Codabar                      | Enabled          |             |
| Maximum Length               | 127              |             |
| Minimum Length               | 1                |             |
| Check Character Verification | Disabled         |             |
| Start/Stop Character         | Do not transmit  |             |
|                              | ABCD/ABCD        | All capital |
| Quiet Zone Size              | 6                | 1-20        |
| <b>Code 93</b>               |                  |             |
| Code 93                      | Enabled          |             |
| Maximum Length               | 127              |             |
| Minimum Length               | 1                |             |
| Quiet Zone Size              | 6                | 1-20        |
| <b>UPC-A</b>                 |                  |             |
| UPC-A                        | Enabled          |             |
| Check Character              | Transmit         |             |
| 2-Digit Add-On Code          | Disabled         |             |
| 5-Digit Add-On Code          | Disabled         |             |
| Add-On Code Required         | Not Required     |             |
| Transmit Preamble Character  | System Character |             |
| <b>UPC-E</b>                 |                  |             |
| UPC-E                        | Enabled          |             |
| UPC-E0                       | Enabled          |             |
| UPC-E1                       | Disabled         |             |
| Check Character              | Transmit         |             |
| 2-Digit Add-On Code          | Disabled         |             |

|                                                    |                                |      |
|----------------------------------------------------|--------------------------------|------|
| 5-Digit Add-On Code                                | Disabled                       |      |
| Add-On Code Required                               | Not Required                   |      |
| Transmit Preamble Character                        | System Character               |      |
| Convert UPC-E to UPC-A                             | Disable UPC-E Extend           |      |
| Quiet Zone Size                                    | 6                              | 1-20 |
| <b>Coupon</b>                                      |                                |      |
| UPC-A/EAN-13 with Extended Coupon Code             | Off                            |      |
| Coupon GS1 DataBar Output                          | Off                            |      |
| <b>GS1 Composite</b>                               |                                |      |
| GS1 Composite                                      | Disabled                       |      |
| UPC/EAN Composite                                  | Disabled                       |      |
| <b>EAN-13</b>                                      |                                |      |
| EAN-13                                             | Enabled                        |      |
| Check Character                                    | Transmit                       |      |
| 2-Digit Add-On Code                                | Disabled                       |      |
| 5-Digit Add-On Code                                | Disabled                       |      |
| Add-On Code Required                               | Disabled                       |      |
| 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     |      |
| Quiet Zone Size                                    | 6                              | 1-20 |
| <b>EAN-8</b>                                       |                                |      |
| EAN-8                                              | Enabled                        |      |
| Check Character                                    | Transmit                       |      |
| 2-Digit Add-On Code                                | Disabled                       |      |
| 5-Digit Add-On Code                                | Disabled                       |      |
| Add-On Code Required                               | Not Required                   |      |
| Convert EAN-8 to EAN-13                            | Do Not Convert EAN-8 to EAN-13 |      |
| Quiet Zone Size                                    | 6                              | 1-20 |
| <b>ISBN</b>                                        |                                |      |
| ISBN                                               | Enabled                        |      |
| Set ISBN Format                                    | ISBN-10                        |      |

|                              |                                                    |      |
|------------------------------|----------------------------------------------------|------|
| 2-Digit Add-On Code          | Disabled                                           |      |
| 5-Digit Add-On Code          | Disabled                                           |      |
| Add-On Code Required         | Not Required                                       |      |
| Add-On Code Separator        | Disable Add-on Code Separator                      |      |
| <b>ISSN</b>                  |                                                    |      |
| ISSN                         | Disabled                                           |      |
| 2-Digit Add-On Code          | Disabled                                           |      |
| 5-Digit Add-On Code          | Disabled                                           |      |
| Add-On Code Required         | Not Required                                       |      |
| <b>Interleaved 2 of 5</b>    |                                                    |      |
| Interleaved 2 of 5           | Enabled                                            |      |
| Maximum Length               | 127                                                |      |
| Minimum Length               | 1                                                  |      |
| Check Character Verification | Enable, But Do Not Transmit Check Character        |      |
| Febraban                     | Febraban Disabled                                  |      |
| Safety Level                 | Safety Level of Interleaved 2 of 5 is one.         |      |
| Quiet Zone Size              | 6                                                  | 1-20 |
| <b>Matrix 2 of 5</b>         |                                                    |      |
| Matrix 2 of 5                | Disabled                                           |      |
| Maximum Length               | 127                                                |      |
| Minimum Length               | 1                                                  |      |
| Check Character Verification | Enable, But Do Not Transmit Check Character        |      |
| <b>Industrial 25</b>         |                                                    |      |
| Industrial 25                | Enabled                                            |      |
| Maximum Length               | 127                                                |      |
| Minimum Length               | 1                                                  |      |
| Check Character Verification | Disabled                                           |      |
| <b>ITF-14</b>                |                                                    |      |
| ITF-14                       | Disabled                                           |      |
| <b>ITF-6</b>                 |                                                    |      |
| ITF-6                        | Disabled                                           |      |
| <b>Standard 25</b>           |                                                    |      |
| Standard 25                  | Disabled                                           |      |
| Maximum Length               | 127                                                |      |
| Minimum Length               | 1                                                  |      |
| Check Character Verification | Do Not Transmit Check Character After Verification |      |
| <b>China Post 25</b>         |                                                    |      |
| China Post 25                | Disabled                                           |      |
| Maximum Length               | 127                                                |      |

|                                     |                                     |  |
|-------------------------------------|-------------------------------------|--|
| Minimum Length                      | 1                                   |  |
| Check Character Verification        | Disabled                            |  |
| <b>Deutsche 14</b>                  |                                     |  |
| Deutsche 14                         | Disabled                            |  |
| <b>Deutsche 12</b>                  |                                     |  |
| Deutsche 12                         | Disabled                            |  |
| <b>MSI-Plessey</b>                  |                                     |  |
| MSI-Plessey                         | Enabled                             |  |
| Maximum Length                      | 127                                 |  |
| Minimum Length                      | 1                                   |  |
| Check Character Verification        | One Check Character, MOD10          |  |
| Check Character                     | Enabled                             |  |
| <b>Plessey</b>                      |                                     |  |
| Plessey                             | Disabled                            |  |
| Maximum Length                      | 127                                 |  |
| Minimum Length                      | 1                                   |  |
| Check Character Verification        | Disabled                            |  |
| <b>GS1 Databar</b>                  |                                     |  |
| GS1 Databar                         | Enabled                             |  |
| Application Identifier "01"         | Transmit                            |  |
| GS1 DataBar Omnidirectional (RSS14) | Enabled                             |  |
| GS1 DataBar Limited                 | Enabled                             |  |
| GS1 DataBar Expand                  | Enabled                             |  |
| <b>Code 49</b>                      |                                     |  |
| Code 49                             | Disabled                            |  |
| Maximum Length                      | 80                                  |  |
| Minimum Length                      | 1                                   |  |
| <b>Code 16K</b>                     |                                     |  |
| Code 16K                            | Disabled                            |  |
| Maximum Length                      | 80                                  |  |
| Minimum Length                      | 1                                   |  |
| <b>2D Barcode</b>                   |                                     |  |
| <b>PDF417</b>                       |                                     |  |
| 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                   | Disabled                            |  |
| <b>QR Code</b>                      |                                     |  |
| 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                                        |  |
| URL QR Code                     | Enabled                                        |  |
| Custom URL QR                   | 48545450 68747470                              |  |
| <b>Aztec Code</b>               |                                                |  |
| Aztec Code                      | Disabled                                       |  |
| Maximum Length                  | 3832                                           |  |
| Minimum Length                  | 1                                              |  |
| Set the Number of Barcodes      | 1                                              |  |
| Read Multi-barcodes on an Image | Mode 1                                         |  |
| Character Encoding              | Default Character Encoding                     |  |
| Aztec ECI Output                | Enabled                                        |  |
| <b>Data Matrix</b>              |                                                |  |
| 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                                        |  |
| <b>Maxi Code</b>                |                                                |  |
| Maxi Code                       | Disabled                                       |  |
| Maximum Length                  | 150                                            |  |
| Minimum Length                  | 1                                              |  |
| <b>Chinese Sensible Code</b>    |                                                |  |
| Chinese Sensible Code           | Disabled                                       |  |
| Maximum Length                  | 7827                                           |  |
| Minimum Length                  | 1                                              |  |
| Chinese Sensible Code Twin Code | Single Chinese Sensible Code Only              |  |
| Chinese Sensible Code Inverse   | Decode Regular Chinese Sensible Bar Codes Only |  |
| <b>GM Code</b>                  |                                                |  |
| GM Code                         | Disabled                                       |  |
| Maximum Length                  | 2751                                           |  |
| Minimum Length                  | 1                                              |  |
| <b>Micro PDF417</b>             |                                                |  |
| Micro PDF417                    | Disabled                                       |  |
| Maximum Length                  | 366                                            |  |
| Minimum Length                  | 1                                              |  |
| <b>Micro QR Code</b>            |                                                |  |

|                                     |                         |  |
|-------------------------------------|-------------------------|--|
| Micro QR Code                       | Enabled                 |  |
| Maximum Length                      | 35                      |  |
| Minimum Length                      | 1                       |  |
| <b>Code One</b>                     |                         |  |
| Code One                            | Disabled                |  |
| Maximum Length                      | 3550                    |  |
| Minimum Length                      | 1                       |  |
| <b>Dot Code</b>                     |                         |  |
| Dot Code                            | Disabled                |  |
| Maximum Length                      | 2048                    |  |
| Minimum Length                      | 1                       |  |
| Dot Code Inverse                    | Dot Code Both           |  |
| <b>OCR</b>                          |                         |  |
| <b>Passport OCR</b>                 |                         |  |
| Passport OCR                        | Disabled                |  |
| <b>Chinese ID Card</b>              |                         |  |
| Chinese ID Card                     | Disabled                |  |
| <b>China Travel Permit OCR</b>      |                         |  |
| China Travel Permit OCR             | Disabled                |  |
| <b>Postal</b>                       |                         |  |
| <b>USPS Postnet</b>                 |                         |  |
| USPS Postnet                        | Disabled                |  |
| Transmit Check Character            | Transmit                |  |
| <b>USPS Intelligent Mail</b>        |                         |  |
| USPS Intelligent Mail               | Disabled                |  |
| <b>Royal Mail</b>                   |                         |  |
| Royal Mail                          | Disabled                |  |
| <b>USPS Planet</b>                  |                         |  |
| USPS Planet                         | Disabled                |  |
| Transmit Check Character            | Transmit                |  |
| <b>KIX Post</b>                     |                         |  |
| KIX Post                            | Disabled                |  |
| <b>Australian Postal</b>            |                         |  |
| Australian Postal                   | Disabled                |  |
| <b>Japan Post</b>                   |                         |  |
| Japan Post                          | Disabled                |  |
| <b>Code ID Prefix</b>               | Disabled                |  |
| <b>Prefix &amp; Suffix</b>          |                         |  |
| Prefix Sequence                     | Code ID+ Custom +AIM ID |  |
| Custom Prefix                       | Disabled                |  |
| AIM ID Prefix                       | Disabled                |  |
| Custom Suffix                       | Disabled                |  |
| Terminating Character Suffix        | Enabled                 |  |
| Modify Terminating Character Suffix | 0D                      |  |
| <b>Data Formatter</b>               |                         |  |

|                                           |                      |  |
|-------------------------------------------|----------------------|--|
| Data Format                               | Disabled Data Format |  |
| Change Data Format                        | Data Format 0        |  |
| Non-Match Error Beep                      | Enabled              |  |
| Data Packing                              | Disabled             |  |
| <b>Driver License Decoding</b>            |                      |  |
| Advanced Formatting/Label Editing Scripts | Disabled             |  |
| Extract Elements                          | Disabled             |  |

## AIM ID Table

| Symbology             | AIM ID | Possible AIM ID Modifiers (m) |
|-----------------------|--------|-------------------------------|
| Code128               | JC0    |                               |
| GS1-128 (UCC/EAN-128) | JC1    |                               |
| EAN-8                 | JE4    |                               |
| EAN-8 with Addon      | JE3    |                               |
| EAN-13                | JE0    |                               |
| EAN-13 with Addon     | JE3    |                               |
| UPC-E                 | JE0    |                               |
| UPC-E with Addon      | JE3    |                               |
| UPC-A                 | JE0    |                               |
| UPC-A with Addon      | JE3    |                               |
| Interleaved 2 of 5    | JIm    | 0, 1, 3                       |
| ITF-14                | JIm    | 1, 3                          |
| ITF-6                 | JIm    | 1, 3                          |
| Matrix 2 of 5         | JX0    |                               |
| Code 39               | JAm    | 0, 1, 3, 4, 5, 7              |
| Codabar               | JFm    | 0, 2, 4                       |
| Code 93               | JG0    |                               |
| China Post 25         | JX0    |                               |
| AIM 128               | JC2    |                               |
| ISBT 128              | JC4    |                               |
| ISSN                  | JX0    |                               |
| ISBN                  | JX0    |                               |
| Industrial 25         | JS0    |                               |
| Standard 25           | JR0    |                               |
| Plessey               | JP0    |                               |
| Code 11               | JHm    | 0, 1, 3                       |
| MSI Plessey           | JMm    | 0, 1                          |
| GS1 Composite         | Jem    | 0-3                           |
| GS1 Databar (RSS)     | Je0    |                               |
| Code 49               | JT0    |                               |
| Code 16K              | JK0    |                               |
| COOP 25               | JX0    |                               |
| PDF417                | JLm    | 0-2                           |
| QR Code               | JQm    | 0-6                           |
| Aztec                 | Jzm    | 0-9, A-C                      |
| Data Matrix           | Jdm    | 0-6                           |
| Maxicode              | JUm    | 0-3                           |
| Chinese Sensible Code | JX0    |                               |
| GM                    | Jgm    | (0~9)                         |
| Micro PDF417          | JL0    |                               |
| Micro QR              | JQ1    |                               |
| Code One              | JX0    |                               |
| DotCode               | JJm    | 0~5                           |

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|                         |     |  |
|-------------------------|-----|--|
| USPS Postnet            | JX0 |  |
| USPS Intelligent Mail   | JX0 |  |
| Royal Mail              | JX0 |  |
| USPS Planet             | JX0 |  |
| KIX Post                | JX0 |  |
| Australian Postal       | JX0 |  |
| Japan Post              | JX0 |  |
| Specific OCR-B          | Jo2 |  |
| Passport OCR            | Jo2 |  |
| Chinese ID Card         | Jo2 |  |
| China Travel Permit OCR | Jo2 |  |

**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               | 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       |
| 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 |
| Passport OCR            | O |
| Chinese ID Card         | S |
| China Travel Permit OCR | S |

## Symbology ID Number

| 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                 | 013       |
| Codabar                 | 015       |
| Code 93                 | 017       |
| China Post 25           | 019       |
| AIM 128                 | 020       |
| ISBT 128                | 021       |
| COOP 25                 | 022       |
| ISSN                    | 023       |
| ISBN                    | 024       |
| Industrial25            | 025       |
| Standard25              | 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       |
| GM Code                 | 040       |
| Micro PDF417            | 042       |
| Micro QR                | 043       |
| Code One                | 048       |
| DotCode                 | 050       |
| Chinese ID Card         | 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 |
| Deutsche 14           | 160 |
| Deutsche 12           | 161 |

## ASCII Table

| Hex | Decimal | Value                         |
|-----|---------|-------------------------------|
| 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)          |
| 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 | ( (Right / Closing 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)                  |
| 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) |
| 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

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

105 Key European Style Keyboard

# SCANNING MADE SIMPLE

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