



# Newland

SCANNING MADE SIMPLE



## BS80 Piranha II 1D Handheld Scanners User Guide

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Fujian Newland Auto-ID Tech. Co., Ltd.  
No.1, Rujiang West Rd., Mawei, Fuzhou, Fujian, China 350015 <http://www.newlandaidc.com>

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## Revision History

Version	Description	Date
1.0.0	Initial release.	Oct 19, 2022
1.0.1	Updated <b>Modify 1D Symbologies</b> in Chapter 8	Oct 25, 2022
1.0.2	1, Added <b>Enable/ Disable Buttons; Transmit GS1 Application Identifier (GS1 AIs); Transmit GS1 Check Character</b> in the Chapter 3 and updated the Factory Default Table accordingly 2, Adjust the description of <b>Delete/Reset Button; Delete/Reset Button + Function Button; BS80 Scanner</b> in the Chapter 1	Oct 27, 2022
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1.0.4	1, Advised the setting barcode and description of Connecting BS80 to Smartphone/Tablet Chapter 1. 2, Changed the images of Set Date & Time in Chapter 3	Dec 6, 2022

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#SETUPE1  
Enter Setup

## Preface

### Introduction

This manual provides detailed instructions for setting up and using the BS80 wireless barcode scanner (hereinafter referred to as “**the scanner**”).

### Chapter Description

*Chapter 1 Getting Started:*

Gives a general description of BS80 scanner.

*Chapter 2 EasySet:*

Introduces a useful tool you can use to set up BS80 scanner and develop new applications.

*Chapter 3 System Settings:*

Introduces three configuration methods and describes how to configure general parameters of BS80 scanner.

*Chapter 4 USB Interface*

Describes how to configure USB communication parameters.

*Chapter 5 Wireless  
Communication*

Describes how to configure the parameters necessary for wireless communication between the scanner and host device.

*Chapter 6 Symbologies*

Lists all compatible symbologies and describes how to configure the relevant parameters.

*Chapter 7 Data Formatter*

Explains how to customize scanned data with the data formatter.

*Chapter 8 Prefix & Suffix*

Describes how to use prefix and suffix to customize scanned data.

*Chapter 9 Batch Programming*

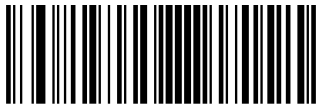
Explains how to integrate a complex programming task into a single barcode.

*Appendix*

Provides factory defaults table and a bunch of frequently used programming barcodes.



#SETUPE0  
Exit Setup



#SETUPE1

Enter Setup

---

## 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.



#SETUPE0

Exit Setup



#SETUPE1  
Enter Setup

## Chapter 1 Getting Started

### Introduction

The BS80 is a wireless pocket barcode scanner equipped with 1D or 2D scan engine to meet different needs. It is a great space-saver for busy or limited workspaces. It also supports iOS, Android, and Windows devices through Bluetooth HID or SPP or BLE communication.

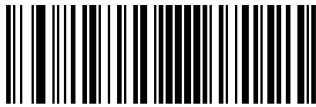
An illustrated introduction to the BS80 is included in this chapter. If you have the scanner at hand, make good use of it to develop a better understanding of this manual. This chapter is written for normal users, maintenance staff and software developers.

### Unpacking

Open the package and take out the scanner and its accessories. Check to make sure everything on the packing list is present and intact. If any contents are damaged or missing, please keep the original package and contact your dealer immediately for after-sales service.



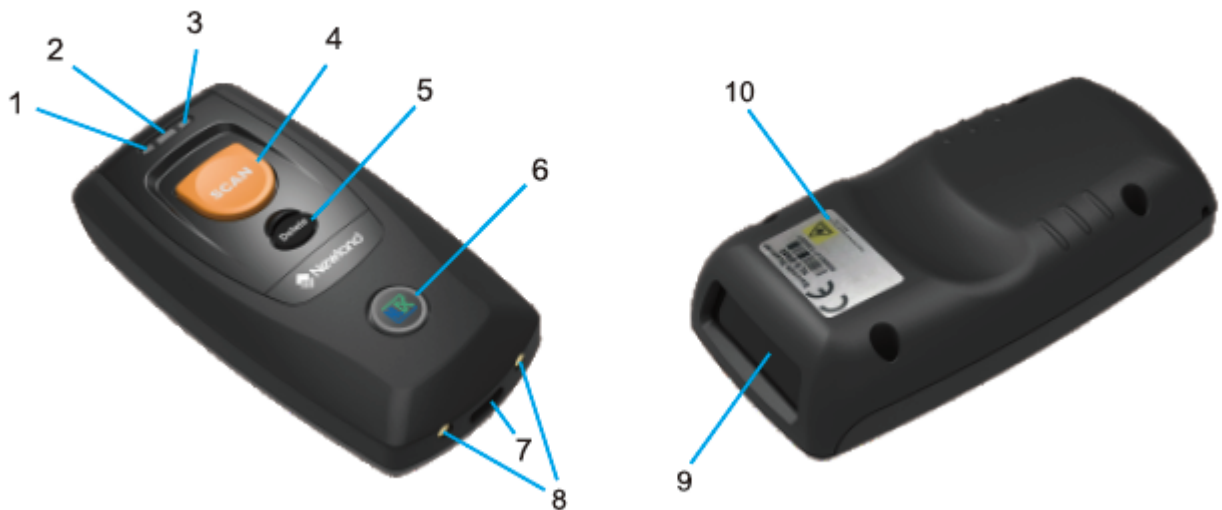
#SETUPE0  
Exit Setup



#SETUPE1

Enter Setup

## BS80 Scanner



1	Charging/Battery LED	2	Good Read LED
3	Data LED	4	Scan/Power Button
5	Delete/Reset Button	6	Function Button/Function LED
7	Type-c Port	8	Charging Cradle Contacts
9	Scan Window	10	Product Label



#SETUPE0

Exit Setup





#SETUPE1  
Enter Setup

## Button Functions

<b>Scan/Power Button</b>
<p>*Press the button to scan barcode.</p> <p>*Hold down the button for 3 seconds to power the scanner on.</p>
<b>Delete/Reset Button</b>
<p>*Press the button to remove the corresponding data from the flash memory in one of the following conditions before scanning the barcode to be deleted: (i) Bluetooth mode enabled but no Bluetooth connection established; (ii) Bluetooth mode &amp; Batch Transmission enabled; (iii) USB mode enabled but no USB cable connection made; or (iv) USB mode &amp; Batch Transmission enabled.</p> <p>*Hold down the button for 7 seconds to power off it.</p>
<b>Function Button</b>
<p>*Press the button to turn on or off the HID keyboard of the connected iOS device in the Bluetooth mode.</p> <p>*Hold down the button for 3s to start data transmission in either of the following conditions: (i) Bluetooth mode &amp; Batch Transmission enabled; or (ii) USB mode enabled and the scanner connected to PC via USB cable.</p>
<b>Scan/Power Button + Function Button</b>
<p>*Hold down the two buttons at the same time for 3 seconds to toggle between the Bluetooth mode and USB mode.</p>
<b>Delete/Reset Button + Function Button</b>
<p>*Press the two buttons at the same time to unpair the paired Bluetooth device from the scanner in Bluetooth mode and to make the scanner discoverable by other Bluetooth devices.</p>
<b>Scan/Power Button + Delete/Reset Button</b>
<p>*Press the two buttons at the same time to check the battery level with the Charging/Battery LED.</p> <p>*Hold down the two buttons at the same time for 3s to delete all stored data in the flash memory in either of the conditions: (i) Bluetooth mode enabled, Bluetooth connection established, and Batch Transmission &amp; Require Data Transmission Confirmation enabled; or (ii) USB mode enabled, the scanner connected to PC via USB cable and Require Data Transmission Confirmation enabled.</p>



#SETUPE0  
Exit Setup



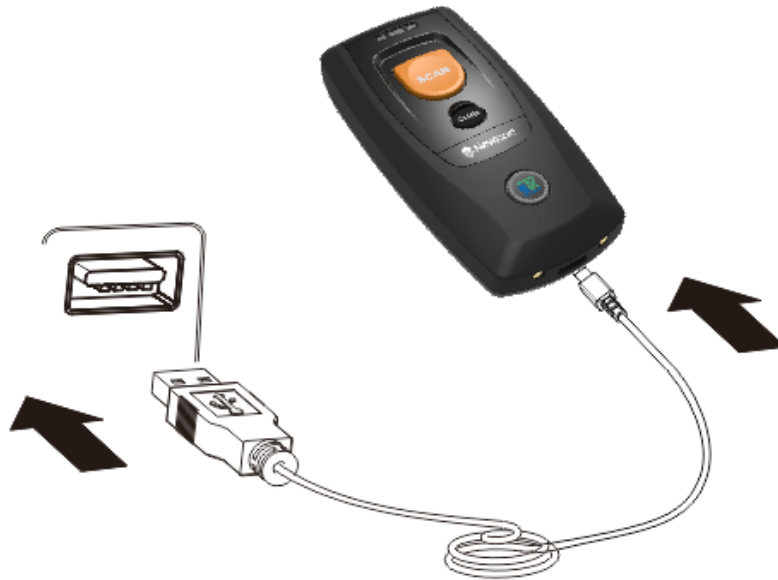
#SETUPE1

Enter Setup

---

## Charging the Battery

Charge the scanner by connecting it to a host device with Type C cable, as shown below.



Note: Low battery may result in failure or misoperation of the scanner. Before your first use, charge the battery for 3-4 hours. Make sure the scanner is full charged before the operation



#SETUPE0

Exit Setup



#SETUPE1  
Enter Setup

---

## Connecting the BS80 to Smartphone/Tablet

1. Make sure your device has HID or SPP or BLE profile.
2. Turn off the Power-Saving mode on your smartphone/tablet.
3. Scan the appropriate barcode below to choose HID or SPP or BLE profile before connecting the scanner to smartphone/tablet. If you don't know what profile your device is using, please try HID profile first, then SPP, at last BLE profile.

### 3.1 Scan Enter Setup



@SETUPE1

**Enter Setup**

### 3.2 Scan below barcode you need



@INTERF10

**\*\*Bluetooth HID**



@INTERF9

**Bluetooth SPP**



@INTERF11

**Bluetooth BLE**

### 3.3 Scan Exit Setup



@SETUPE0

**Exit Setup**



#SETUPE0

**Exit Setup**

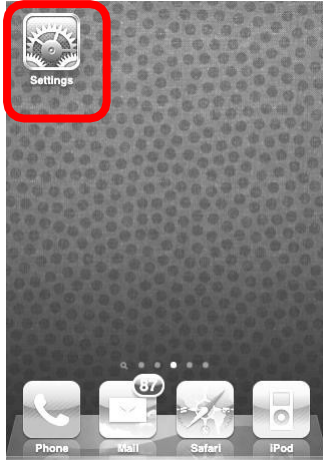


#SETUPE1

Enter Setup

4. Complete the following connection procedure (example: pairing with iPhone).

(1) Click "Settings".



(2) Click "General".



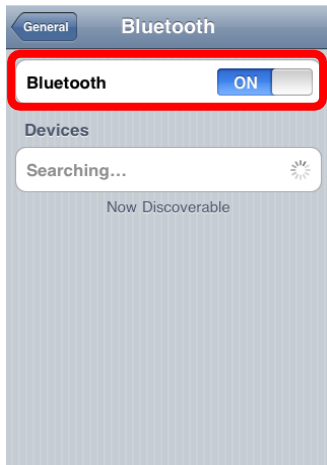
(3) Click "Bluetooth".



(4) Turn it on and search the devices.

(5) Select "BS80XXXX" to connect.

(6) The "Connected" message means the connection is OK.



5. After the connection is completed, the blue Function LED on the scanner will illuminate.

6. Before using WordPad file or relative APP, set keyboard language of the device to US English. Then, scan barcodes and the barcode data will show before current cursor position. If the data cannot be sent to smartphone/tablet, please scan the **Restore Factory Defaults** barcode (see Chapter 2).



#SETUPE0

Exit Setup



#SETUPE1  
Enter Setup

---

**Note:** This product complies with Bluetooth standards. The device that communicates with this product must support the same SPP or HID or BLE. For other Bluetooth devices with other profiles, we cannot guarantee a connection before the product has been tested.

The communication speed and range of the product may vary due to obstacles and radio wave condition between the product and device to which it is connected. Condition on the host device may also affect the communication speed and range of the scanner.



#SETUPE0  
Exit Setup



#SETUPE1

Enter Setup

### LED Notifications

Charging/Battery LED	
Red LED on	Charging in progress.
Green LED on	Fully charged.
Red and green LEDs flash alternately	Battery not found.
Red LED flashes	Low battery alert.
<b>When the scanner is on, pressing the Scan/Power button and Delete/Reset button at the same time can display the battery level with the Charging/Battery LED.</b>	
Green LED on	Battery level is high.
Green LED and red LED both on	Battery level is medium.
Red LED on	Battery level is low.

When the battery voltage is too low, the scanner will beep with flashing red Charging/Battery LED. Please charge it immediately before the scanner shuts down mandatorily. When it shuts down, please charge it fully before turning it back on.

Good Read LED	
Green LED flashes	Good read.
Data LED	
Red LED flashes	There is data in flash memory.
Red LED on	Flash memory depleted.
Function LED	
Blue LED flashes slowly with long LED OFF state	Bluetooth mode enabled, but no Bluetooth connection established and the BS80 undiscoverable.
Blue LED flashes slowly with long LED ON state	Bluetooth mode enabled, but no Bluetooth connection established and the BS80 discoverable.
Blue LED on	Bluetooth connection established.
Blue LED flashes quickly	Data transmission via Bluetooth in progress.
Red LED on	USB mode enabled.
Red LED flashes quickly	Data transmission via USB in progress.



#SETUPE0

Exit Setup



#SETUPE1  
Enter Setup

## Turning the BS80 On/Off

**Turn the scanner on:** Press the Scan/Power button for 3 seconds.

**Turn the scanner off:** By default, the scanner automatically powers off if no operation is performed on the scanner for 30 minutes. You can adjust the auto power-off timer. You can also turn off the scanner by scanning the **Power Off** barcode. For more information, see the “Automatic/Manual Power-Off” section in Chapter 2.

## Scanning Instructions

### Scanning 1D Barcode

Adjust the scan angle (Do not read barcode at vertical degree) or the distance between barcode and the scanner to ensure that the length of the scan line is roughly 8mm greater than that of the barcode, as shown below.



Right	Wrong



#SETUPE0  
Exit Setup

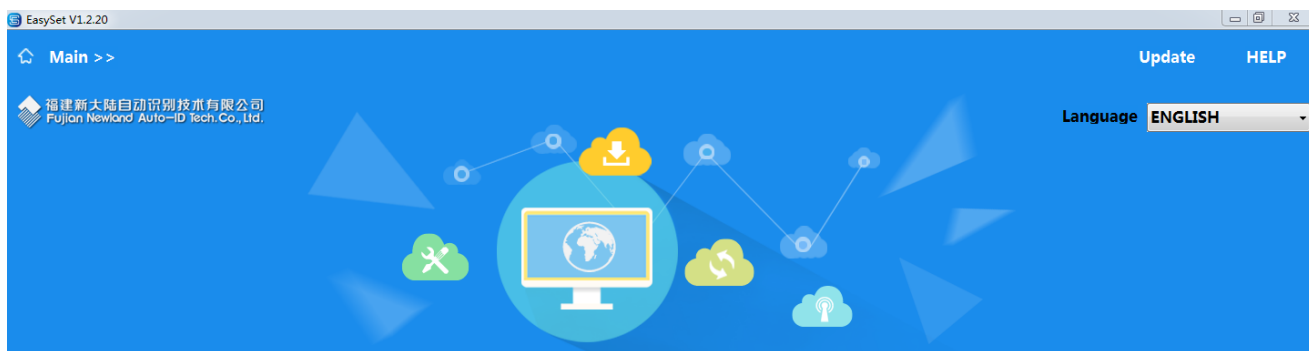


#SETUPE1

Enter Setup

## 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 including View device & configuration information of online device and send serial commands to online device and receive device response.



Online Device



Offline Device



Command Center



Batch update



#SETUPE0

Exit Setup





#SETUPE1  
Enter Setup

## Chapter 3 System Setting

### 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*.



#SETUPE0  
Exit Setup



#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.

\*\* indicates factory default setting

## 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



#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**

## Scanner Time



@WLSTMS

**\*\* Set Scanner Time**



@WLSTMQ

**Query Scanner Time**

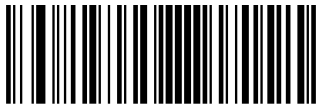
## Time Stamp

You can select whether to send date & time or not by enabling or disabling time stamp.



#SETUPE0

**Exit Setup**



#SETUPE1

Enter Setup

---



@WLSTSE0

**\*\*Disable Time Stamp**



@WLSTSE1

**Enable Time Stamp**

### Set Date Format



@WLSTSF0

**\*\* Format 1**

(YYYY/MM/DD,HH:MM:SS)



@WLSTSF1

**Format 2(DD/MM/YYYY,HH:MM:SS)**



@WLSTSF2

**Format 3**

(MM/DD/YYYY,HH:MM:SS)

### Set Date & Time

Step 1: Double click on BS80Setting.exe to run BS80 Date&Time Setting Tool. Then check the "Auto-sync date and time with the host" item on it.

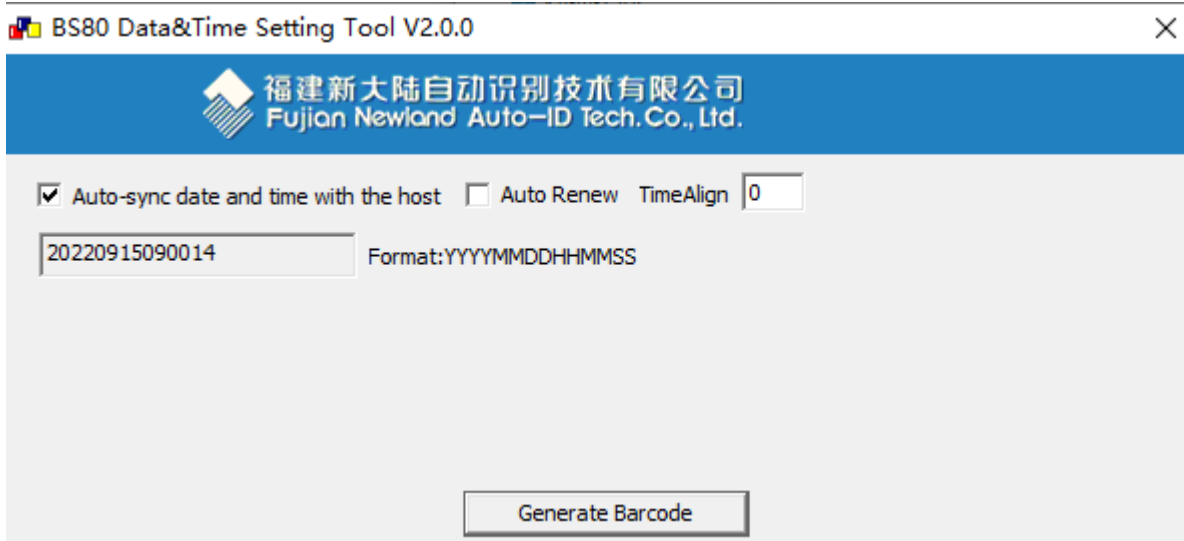


#SETUPE0

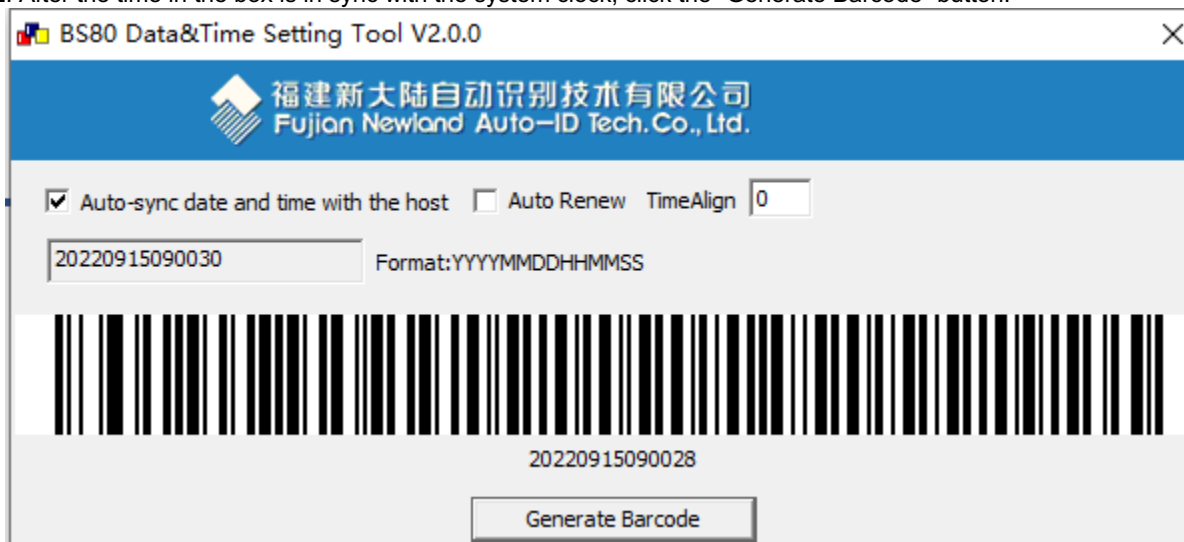
Exit Setup



#SETUPE1  
Enter Setup



Step 2: After the time in the box is in sync with the system clock, click the “Generate Barcode” button.



Step 3: Scan the barcode generated to set the date and time on the scanner.

Note: You need to run this tool on the Windows XP/WIN7/WIN10 operating system



#SETUPE0  
Exit Setup



#SETUPE1

Enter Setup

---

## Illumination



@ILLSCN1

\*\* On



@ILLSCN0

Off



#SETUPE0

Exit Setup



#SETUPE1  
Enter Setup

---

## 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



#SETUPE0  
Exit Setup



#SETUPE1

Enter Setup

---

## Good Read Beep

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



@GRBENA1

\*\* On



@GRBENA0

Off



#SETUPE0

Exit Setup





#SETUPE1  
Enter Setup

## Good Read Beep Duration

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



@GRBDUR40

**Short (40ms)**



@GRBDUR80

**\*\* Medium (80ms)**



@GRBDUR120

**Long (120ms)**



@GRBDUR

**Custom (20 – 300ms)**

**E**  
*sample*

### 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. The default setting is 2620Hz



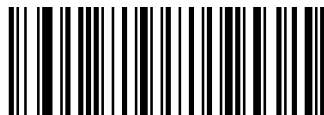
@GRBFRQ800

Extra Low (800Hz)



@GRBFRQ1600

\*\*Medium (2620Hz)



@GRBFRQ

Custom (20 - 20,000Hz)



@GRBFRQ1600

Low (1600Hz)



@GRBFRQ4200

High (4200Hz)

**E**  
*sample*

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

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



#SETUPE0

Exit Setup



#SETUPE1  
Enter Setup

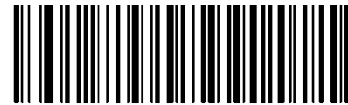
---

## Good Read Beep Volume

This parameter is programmable in 1 increments from 1 to 20



@GRBVLL20  
\*\* Loud



@GRBVLL12  
Medium



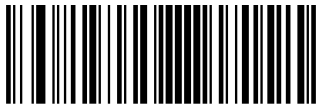
@GRBVLL5  
Low



@GRBVLL  
Custom(1-20)



#SETUPE0  
Exit Setup



#SETUPE1

Enter Setup

---

## Vibration

### Good Read Vibration



@GRVENA1

On



@GRVENA0

\*\*Off

### Good Read Vibration Duration

This parameter is programmable in 1ms increments from 100ms to 2000ms. The default setting is 300ms



@GRVDUR

Vibration Duration



#SETUPE0

Exit Setup



#SETUPE1  
Enter Setup

---

## Scan Mode

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



@SCNMOD0  
\*\* Level Mode



@SCNMOD2  
Sense Mode



@SCNMOD3  
Continuous Mode



#SETUPE0  
Exit Setup



#SETUPE1

Enter Setup

---

## Decode Session Timeout

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



@ORTSET

### Decode Session Timeout

**E**  
*example*

#### Set the decode session timeout to 1,500ms:

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



#SETUPE0

Exit Setup



#SETUPE1  
Enter Setup

---

## Image Stabilization Timeout (Sense Mode)

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



Image Stabilization Timeout

**E**  
*sample*

### Set the image stabilization timeout to 800ms:

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



#SETUPE0  
Exit Setup



#SETUPE1

Enter Setup

---

## Reread Timeout

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

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

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



@RRDENA1

**Enable Reread Timeout**



@RRDENA0

**\*\*Disable Reread Timeout**

The following parameter sets the 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



@RRDDUR

**Set Reread Timeout**

**E**  
*sample*

**Set the reread timeout to 1,000ms:**

1. Scan the **Enter Setup** barcode.
2. Scan the **Timeout between Decodes (Same Barcode)** barcode.
3. Scan the numeric barcodes “1”, “0”, “0” and “0” from the “Digit Barcodes” section in Appendix.
4. Scan the **Save** barcode from the “Save/Cancel Barcodes” section in Appendix.
5. Scan the **Exit Setup** barcode.

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.



#SETUPE0

Exit Setup





#SETUPE1  
Enter Setup

---



@RRDREN1  
Reread Timeout Reset On



@RRDREN0  
\*\* Reread Timeout Reset Off



#SETUPE0  
Exit Setup



#SETUPE1

Enter Setup

---

## Good Read Delay

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



@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**  
*example*

**Set the good read delay to 1,000ms:**

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



#SETUPE0

Exit Setup



#SETUPE1  
Enter Setup

## Surround GS1 Application Identifiers (AI's) with Parentheses

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



@GS1AIP0

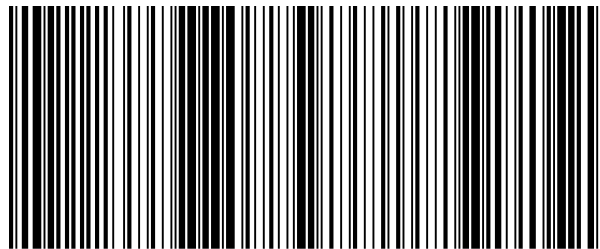
**\*\* Do Not Surround GS1 AI's with Parentheses**



@GS1AIP1

**Surround GS1 AI's with Parentheses**

**E**  
*xample*



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

If **Surround GS1 AI's with Parentheses** is selected, the barcode above is output as

(01)00614141999996(10)10ABCEDF123456.

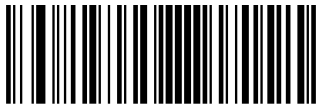
If **Do Not Surround GS1 AI's with Parentheses** is selected, the barcode above is output as

01006141419999961010ABCEDF123456.



#SETUPE0

Exit Setup



#SETUPE1

Enter Setup

---

### GS1 Application Identifiers (AI's)



@GS10AI0

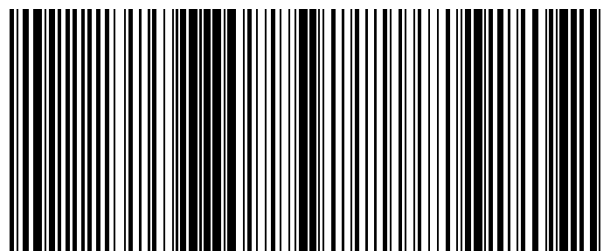
Disable GS1 Application Identifiers (AI's)



@GS10AI1

\*\* Enable GS1 Application Identifiers (AI's)

**E**  
*xample*



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

If **Enable GS1 Application Identifiers (AI's)s** selected, the barcode above is output as  
01006141419999961010ABCEDF123456.

If **Disable GS1 Application Identifiers (AI's)s** selected, the barcode above is output as  
0061414199999610ABCEDF123456



#SETUPE0

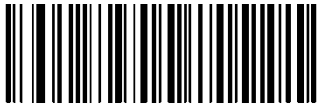
Exit Setup



#SETUPE1  
Enter Setup

---

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



@GS10A10

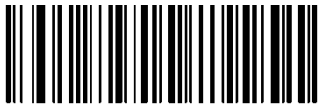
Do not Transmit **GS1 Application Identifier**  
(GS1 Als)



@GS10A11

**\*\* Transmit GS1 Application Identifier (GS1 Als)**

### GS1 Databar(RSS)



@GS10AR0

Do not Transmit **GS1 Application Identifier**  
(GS1 Als)



@GS10AR1

**\*\* Transmit GS1 Application Identifier (GS1 Als)**



#SETUPE0

Exit Setup



#SETUPE1

Enter Setup

---

### Transmit GS1 Check Character



@GS1OCK0

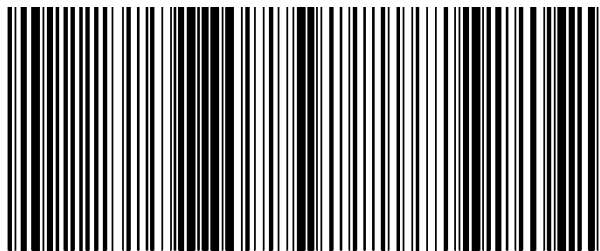
Do not transmit GS1 Check Character



@GS1OCK1

\*\* Transmit GS1 Check Character

**E**  
*xample*



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

If **Transmit GS1 Check Character** selected, the barcode above is output as  
01006141419999961010ABCEDF123456  
If **Do not Transmit GS1 Check Character** selected, the barcode above is output as  
0100614141999991010ABCEDF123456



#SETUPE0

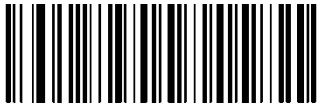
Exit Setup



#SETUPE1  
Enter Setup

---

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



@GS1OC10

Do not Transmit GS1 Check character



@GS1OC11

\*\* Transmit GS1 Check character

### GS1 Databar(RSS)



@GS1OCR0

Do not Transmit GS1 Check character



@GS1OCR1

\*\* Transmit GS1 Check character



#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 (11).



@SENLVL14

**Low Sensitivity**



@SENLVL11

**\*\* Medium Sensitivity**



@SENLVL8

**High Sensitivity**



@SENLVL5

**Enhanced Sensitivity**



@SENLVL

**Custom Sensitivity (1-20)**

**E**  
*sample*

### 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

## 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**  
*sample*

**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

Exit Setup



#SETUPE1  
Enter Setup

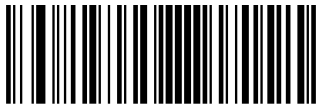
---

## 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.



#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).



@NGRENA0

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



@NGRENA1

**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”.



@NGRSET

**Set Bad Read Message**

**E**  
*sample*

**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

---

## Power Off



@PWROFF  
**Power Off Scanner**

## 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.



@FACDEF  
**\*\*Restore All Factory Defaults**

### Custom Defaults

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

Custom defaults are stored in the non-volatile memory.



@CUSSAV



#SETUPE0  
Exit Setup



#SETUPE1

Enter Setup

---

Save as Custom Defaults



@CUSDEF

Restore All Custom Defaults



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



#SETUPE0

Exit Setup



#SETUPE1  
Enter Setup

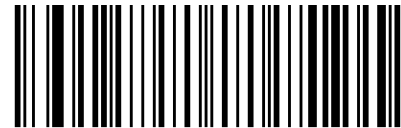
---

## Enable/Disable Buttons

Disable Buttons: the function button and delete button do not work



@DBFAFD0  
**\*\*Enable Buttons**



@DBFAFD1  
**Disable Button**

## 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



@QRYPD  
**Query Product Name**



#SETUPE0  
Exit Setup



#SETUPE1

Enter Setup

---

### Query Firmware Version



@QRYFW

Query Firmware Version

### Query Decoder Version



@QRYDCV

Query Decoder Version

### Query Bluetooth Version



#QRYBFW

Query Bluetooth Version

### Query Hardware Version



@QRYHWW

Query Hardware Version



#SETUPE0

Exit Setup





#SETUPE1  
Enter Setup

---

**Query Product Serial Number**



@QRYPN

**Query Product Serial Number**

**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**

**Query Battery Level**



@WLSQPW

**Query Battery Level**



#SETUPE0

**Exit Setup**



#SETUPE1

Enter Setup

## Chapter 4 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.

### 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)**



@KBWCTY1  
**Belgium**



@KBWCTY2  
**Brazil**



@KBWCTY3  
**Canada (French)**



@KBWCTY4  
**Czechoslovakia**



@KBWCTY5  
**Denmark**



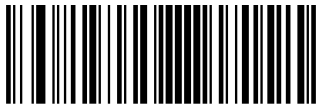
@KBWCTY6  
**Finland (Swedish)**



@KBWCTY7  
**French**



#SETUPE0  
Exit Setup



#SETUPE1

Enter Setup

---



@KBWCTY8

**Germany/ Australia**



@KBWCTY9

**Greece**



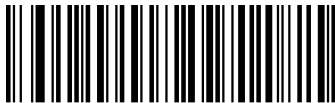
@KBWCTY10

**Hungary**



@KBWCTY11

**Israel (Hebrew)**



@KBWCTY12

**Italy**



@KBWCTY13

**Latin America/ South America**



@KBWCTY14

**Netherlands (Dutch)**

**France**



@KBWCTY15

**Norway**



#SETUPE0

Exit Setup



#SETUPE1  
Enter Setup

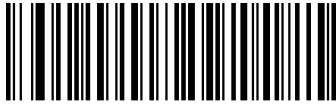
---



@KBWCTY16  
**Poland**



@KBWCTY18  
**Romania**



@KBWCTY21  
**Slovakia**



@KBWCTY23  
**Sweden**



@KBWCTY17  
**Portugal**



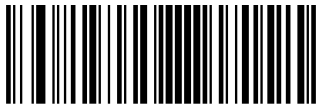
@KBWCTY19  
**Russia**



@KBWCTY22  
**Spain**



#SETUPE0  
Exit Setup



#SETUPE1

Enter Setup

---



@KBWCTY25

Turkey F



@KBWCTY27

Britain



@KBWCTY24

Switzerland (German)



@KBWCTY26

Turkey Q



@KBWCTY28

Japan



#SETUPE0

Exit Setup



#SETUPE1  
Enter Setup

## Beep on Unknown Character

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

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



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



**Beep on Unknown Character**

## Example

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.

## 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.



#SETUPE0  
Exit Setup



#SETUPE1

Enter Setup

---



@KBWALT0

\*\* Emulate ALT+Keypad OFF



@KBWALT1

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 "ADF" (65/208/70) is sent as below:

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

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

+ "ALT Break"

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



#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)**



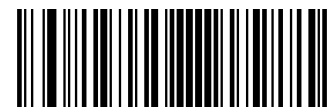
@KBWCPG4

**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)



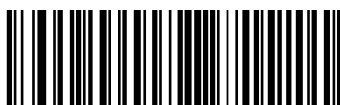
@KBWCPG8

Code Page 1258 (Vietnamese)



@KBWCPG9

Code Page 936 (Simplified Chinese,  
GB2312,GBK)



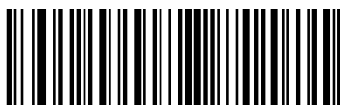
@KBWCPG10

Code Page 950 (Traditional Chinese,  
Big5)



@KBWCPG11

Code Page 874(Thai)



@KBWCPG12

Code Page 932 (Japanese,Shift-JIS)



#SETUPE0

Exit Setup



#SETUPE1  
Enter Setup

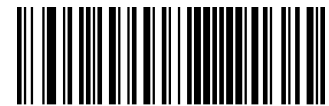
---

## Unicode Encoding

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



@KBWCPU0  
\*\* Off



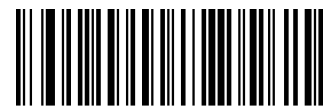
@KBWCPU1  
On

## 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.



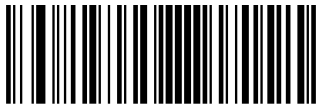
@KBWALZ1  
\*\* On



@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** *example*

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

"A" - Keystroke "A".

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

Break" "F" - Keystroke "F"

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

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

"A" - Keystroke "A".

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

Break" "F" - Keystroke "F"



#SETUPE0

Exit Setup



#SETUPE1  
Enter Setup

### ASCII Function Key Mapping Table

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



#SETUPE0  
Exit Setup



#SETUPE1

Enter Setup

### ASCII Function Key Mapping Table (Continued)

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

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



#SETUPE0

Exit Setup



#SETUPE1  
Enter Setup

---

## 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**



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



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



#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)



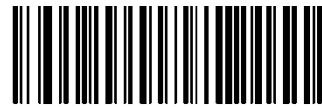
@KBWCAP1

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.

**E**  
*sample*

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

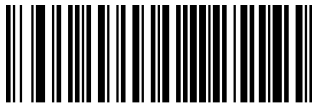


**Do Not Emulate Numeric Keypad 1:** Sending a number (0-9) is emulated as keystroke(s) on main keyboard.

**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**  
*sample*

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:

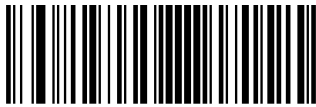
1. "A" is sent as is because it is not included in numeric keypad;
2. "4" is sent as the function key "Cursor Move to Left";
3. "." is sent;
4. "5" is not sent as it does not correspond to any function key.

Finally the host device will get ".A"



#SETUPE0

Exit Setup



#SETUPE1

Enter Setup

---

### 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**



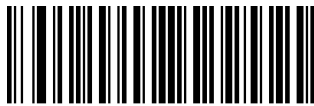
@KBWPOR1  
**2ms**



@KBWPOR2  
**3ms**



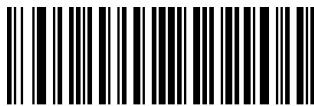
@KBWPOR3  
**\*\* 4ms**



@KBWPOR4  
**5ms**



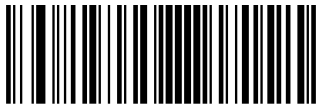
@KBWPOR5  
**6ms**



@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

## 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)
BS8080-1D	USB HID Keyboard	1322	4898
	USB CDC	0C06	3078



#SETUPE0  
Exit Setup



#SETUPE1

Enter Setup

---

## Chapter 5 Wireless Communication

### Operating Modes



@INTERF10

**\*\*Bluetooth HID**



@INTERF11

**Bluetooth BLE**



@INTERF9

**Bluetooth SPP**



#SETUPE0

Exit Setup





#SETUPE1  
Enter Setup

---

## Clear Pairing Info on Scanner



@WLSCLP

Clear Pairing Info on Scanner



#SETUPE0

Exit Setup



#SETUPE1

Enter Setup

---

## Batch Mode



@WLSST

Batch Mode Options

### Batch Mode Options

**Off:** The scanner attempts to transmit every barcode you scan. When you are out of service range, the scanned data will be lost.

**Automatic Batch Mode:** When in service range, the scanner attempts to transmit every barcode you scan. When out of range, the scanner stores the scanned data in the flash memory. Once you are back to service range, the scanner will automatically transmit the stored data and then remove it from the flash memory after transmission is done.

**Manual Batch Mode:** Scanned data will be stored in the flash memory no matter whether you are in service range or not. You may send the stored data to the host in the following ways: scan the Transmit Stored Data barcode. The scanner will automatically remove the stored data from the flash memory after transmission is done if the Auto Clear Stored Data after Transmission feature is turned on.



@WLSBAT0

\*\* Off



@WLSBAT1

Automatic Batch Mode



@WLSBAT2

Manual Batch Mode



#SETUPE0

Exit Setup



#SETUPE1  
Enter Setup

---

## Query/Clear Stored Data in Flash



@WLSQFC

**Query the Number of Stored Barcodes**



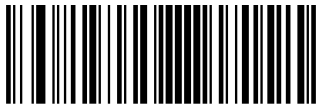
@WLSCLF

**Clear All Stored Data**



#SETUPE0

Exit Setup



#SETUPE1

Enter Setup

---

### Prevent Same Barcode Storage

This feature is available only when scanning barcodes in the Automatic or Manual Batch mode.

**On:** The scanner discards the data and generates an error beep when encountering a barcode that has existed in the flash memory.

**Off:** The scanner stores the data when encountering a barcode that has existed in the flash memory.



@WLSSE0

\*\* Off



@WLSSE1

On



#SETUPE0

Exit Setup



#SETUPE1  
Enter Setup

---

## Batch Mode Transmit Delay

Sometimes when multiple barcodes stored in the flash memory are sent to the host, the transmission of those barcodes is too fast for the application to process. To program a transmit delay between barcodes, scan one of the following delays.



@WLSBTD0

**\*\* No Transmit Delay (0ms)**



@WLSBTD50

**Short Transmit Delay (50ms)**



@WLSBTD100

**Medium Transmit Delay (100ms)**



@WLSBTD150

**Long Transmit Delay (150ms)**



@WLSBTD

**Custom Transmit Delay (0-10,000ms)**



#SETUPE0

Exit Setup



#SETUPE1

Enter Setup

---

## **E** *sample*

### **Set the batch mode transmit delay to 200ms:**

1. Scan the **Enter Setup** barcode.
2. Scan the **Custom Transmit Delay** 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

## End of Transmission Message for Batch Mode

You may scan the appropriate barcode below to select whether or not to send an end of transmission message (user-programmable) to notify the host when transmission of all stored data is done. This feature is only available to data transmission initiated manually under the Manual Batch mode.



@WLSBTT0

### \*\* End of Transmission Message Off



@WLSBTT1

### End of Transmission Message On

An end of transmission message can contain up to 10 characters (HEX values from 0x00 to 0xFF). To set an end of transmission message, scan the **Set End of Transmission Message** barcode, the numeric barcodes representing the hexadecimal values of desired character(s) and the **Save** barcode. The default setting is "EOT".



@WLSBTC

### Set End of Transmission Message

Set the end of transmission message to "END" (HEX: 0x45, 0x4E, 0x44):

**E**  
*sample*

1. Scan the **Enter Setup** barcode.
2. Scan the **Set End of Transmission Message** barcode.
3. Scan the numeric barcodes "4", "5", "4", "E", "4" 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

---

### Transmit Stored Data

You may scan the barcode below to send the stored data in the flash memory to the host. This feature is only available to the Manual Batch mode.



@WLSSBT

### Transmit Stored Data

You may scan the appropriate barcode below to choose whether to clear or keep the stored data in the flash memory after transmission. This feature is only available to the Manual Batch mode.



@WLSCLE0

\*\* Off



@WLSCLE1

On



#SETUPE0

Exit Setup





#SETUPE1  
Enter Setup

---

## Auto Power-Off Timeout

Auto Power-off Timeout specifies the amount of time it takes before the scanner automatically powers off from inactivity.



@WLSAPO0

**5 Minutes**



@WLSAPO1

**10 Minutes**



@WLSAPO2

**20 Mintues**



@WLSAPO3

**\*\*30 Mintues**



@WLSAPO4

**60 Minutes**



@WLSAPO5

**Disable Auto Power-off**



#SETUPE0

Exit Setup



#SETUPE1

Enter Setup

---

## Set Scanner Name

You may scan the below barcode to set the name of your scanner. The maximum length is 5 characters (HEX values from 0x20 to 0x7E). The default scanner name is "00000".



@WLSNAM

Scanner Name

**E**  
*sample*

If setting the scanner name as "0AB00":

1. Scan the Enter Setup barcode
2. Scan the Scanner Name barcode
3. Scan the numeric barcode "3" "0" "4" "1" "4" "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



#SETUPE0

Exit Setup



#SETUPE1  
Enter 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.



@ALLENA1  
Enable All Symbologies



@ALLENA0  
Disable All Symbologies

### Code 128

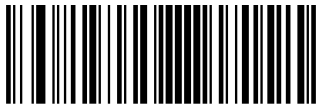
#### Restore Factory Defaults



@128DEF  
Restore the Factory Defaults of Code 128



#SETUPE0  
Exit Setup



#SETUPE1

Enter Setup

---

### 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.

### 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: 48)**



#SETUPE0

Exit Setup



#SETUPE1  
Enter Setup

---



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.



#SETUPE0  
Exit Setup



#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



#SETUPE0

Exit Setup



#SETUPE1  
Enter Setup

## 2-Digit Add-On Code

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



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



**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.

## 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



#SETUPE0  
Exit Setup



#SETUPE1

### Enter Setup

---

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.



#SETUPE0

### Exit Setup





#SETUPE1  
Enter Setup

### Add-On Code Required

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



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



**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.



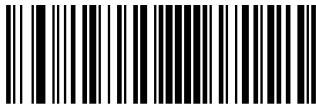
\*\* Do Not Convert EAN-8 to EAN-13



**Convert EAN-8 to EAN-13**



#SETUPE0  
Exit Setup



#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.

### Transmit Check Character



@E13CHK2

\*\* Transmit EAN-13 Check Character



#SETUPE0

Exit Setup



#SETUPE1  
Enter Setup



@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.

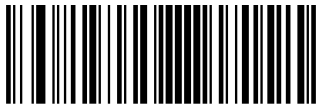
## 5-Digit Add-On Code

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.



#SETUPE0

Exit Setup



#SETUPE1

Enter Setup

---



@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.



#SETUPE0

Exit Setup



#SETUPE1  
Enter Setup

### Add-On Code Required

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



@E13REQ0

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



@E13REQ1

**EAN-13 Add-On Code Required**

### 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**



#SETUPE0

Exit Setup



#SETUPE1

Enter Setup

---

### **EAN-13 Beginning with 378/379 Add-On Code Required**

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

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

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



@E133780

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



@E133781

**Require Add-On Code**



#SETUPE0

Exit Setup



#SETUPE1  
Enter Setup

---

### **EAN-13 Beginning with 414/419 Add-On Code Required**

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

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

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



@E134140

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



@E134141

**Require Add-On Code**



#SETUPE0

Exit Setup



#SETUPE1

Enter Setup

---

### **EAN-13 Beginning with 434/439 Add-On Code Required**

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

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

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



@E134340

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



@E134341

**Require Add-On Code**



#SETUPE0

Exit Setup





#SETUPE1  
Enter Setup

---

### EAN-13 Beginning with 977 Add-On Code Required

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

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

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



@E139770

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



@E139771

**Require Add-On Code**



#SETUPE0

Exit Setup



#SETUPE1

Enter Setup

---

### **EAN-13 Beginning with 978 Add-On Code Required**

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

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

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



@E139780

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



@E139781

**Require Add-On Code**



#SETUPE0

Exit Setup



#SETUPE1  
Enter Setup

---

### **EAN-13 Beginning with 979 Add-On Code Required**

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

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

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



@E139790

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



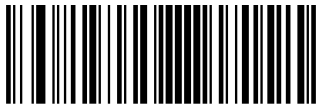
@E139791

**Require Add-On Code**



#SETUPE0

Exit Setup



#SETUPE1

Enter Setup

---

## UPC-E

### Restore Factory Defaults



@UPEDEF

Restore the Factory Defaults of UPC-E

### Enable/Disable UPC-E



@UPEENA1

\*\* Enable UPC-E



@UPEEN11

Enable UPC-E1



@UPEEN00

Disable UPC-E0



@UPEEN01

\*\* Enable UPC-E0



@UPEENA0

Disable UPC-E



@UPEEN10

\*\*Disable UPC-E1



#SETUPE0

Exit Setup



#SETUPE1  
Enter Setup

---



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

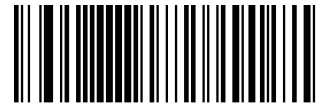
### Transmit Check Character

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.



**\*\* 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





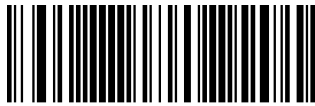
#SETUPE1  
Enter Setup

---

### 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.

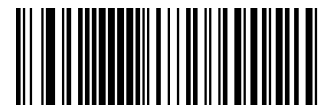
### Transmit Check Character

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.



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



**Enable 2-Digit Add-On Code**



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

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

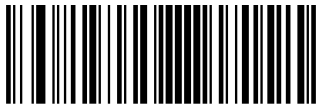
## 5-Digit Add-On Code

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.



#SETUPE0

Exit Setup



#SETUPE1

Enter Setup

---



@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.

### 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**



#SETUPE0

Exit Setup



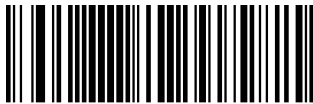
#SETUPE1  
Enter Setup



@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

---

## 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.



Set the Minimum Length (Default: 6)



Set the Maximum Length (Default: 80)



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



**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.



@125CHK0

**\*\*Disable**



@125CHK1

**Do Not Transmit Check Character After Verification**



@125CHK2

**Transmit Check Character After Verification**



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



#SETUPE0

Exit Setup





#SETUPE1  
Enter Setup

## ITF-14

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

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

### 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

## Deutsche 14 Restore Factory Defaults



@D14DEF  
**\*\* Restore Factory Defaults  
Deutsche 14**

## Enable/Disable Deutsche 14



@D14ENA0  
**\*\* Disable Deutsche 14**



@D14ENA1  
**Enable Deutsche 14.  
do not transmit  
character verification**



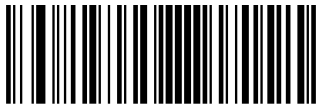
@D14ENA2  
**Enable Deutsche 14.  
transmit character  
verification**



If the scanner can't decode Deutsche 14, please scan **Enable Deutsche 14** and try again



#SETUPE0  
Exit Setup



#SETUPE1

Enter Setup

---

## Deutsche 12 Restore Factory Defaults



@D12DEF

**\*\* Restore Factory Defaults  
Deutsche 12**

## Enable/Disable Deutsche 12



@D12ENA0

**\*\* Enable Deutsche 12**



@D12ENA1

**Disable Deutsche 12, do not transmit  
character verification**



@D12ENA2

**Enable Deutsche 12, transmit character  
verification**



If the scanner can't decode Deutsche 12, please scan **Enable Deutsche 12** and try again



#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.



@M25MIN

**Set the Minimum Length (Default: 4)**



@M25MAX

**Set the Maximum Length (Default: 80)**



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



**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.

### 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)



#SETUPE0

Exit Setup





#SETUPE1  
Enter Setup



@C39MAX

**Set the Maximum Length (Default: 48)**



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

**E**  
*sample*

**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.



\*\* Do Not Transmit Start/Stop Character



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.



\*\* Disable Code 39 Full ASCII



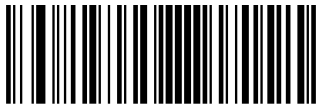
Enable Code 39 Full ASCII

### 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.



#SETUPE0  
Exit Setup



#SETUPE1

Enter Setup

---



@C39E320

**\*\* Disable Code 32**



@C39E321

**Enable Code 32**



#SETUPE0

Exit Setup



#SETUPE1  
Enter Setup

---

### 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**

### 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**



#SETUPE0

Exit Setup



#SETUPE1

Enter Setup

---

### 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

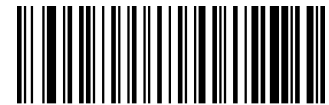
Restore the Factory Defaults of Codabar

## 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: 2)**



@CBAMAX

**Set the Maximum Length (Default: 60)**



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



#### 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.

## 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.



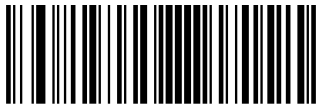
@C93MIN

Set the Minimum Length (Default: 1)



#SETUPE0

Exit Setup



#SETUPE1

Enter Setup



@C93MAX

Set the Maximum Length (Default: 48)



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



**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.

### Check Character Verification

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

**Disable:** The scanner transmits Code 93 barcodes as is.

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

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



#SETUPE0

Exit Setup



#SETUPE1  
Enter Setup



@C93CHK0  
Disable



@C93CHK1

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



@C93CHK2

**Transmit Check Character After Verification**



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



#SETUPE0

Exit Setup



#SETUPE1

Enter Setup

---

## 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.

## 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.



#SETUPE0

Exit Setup



#SETUPE1  
Enter Setup



@GS1MIN

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



@GS1MAX

**Set the Maximum Length (Default: 48)**



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



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

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



#SETUPE0

Exit Setup



#SETUPE1

Enter Setup

---

## GS1 Databar (RSS) Restore Factory Defaults



@RSSDEF

Restore the Factory Defaults of GS1 Databar

## Enable/Disable GS1 Databar



@RSSENA1

\*\* Enable GS1 Databar



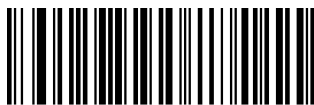
@RSSENA0

Disable GS1 Databar



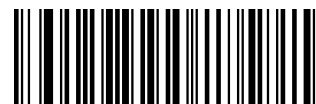
If the scanner fails to identify GS1 Databar barcodes, you may first try this solution by scanning the **Enter Setup** barcode and then **Enable GS1 Databar** barcode.

## Transmit Application Identifier "01"



@RSSTAI1

\*\* Transmit Application Identifier "01"



@RSSTAI0

Do Not Transmit Application Identifier "01"

## Code 11

---



#SETUPE0

Exit Setup





#SETUPE1  
Enter Setup

---

## 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.

## 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: 4)



#SETUPE0

Exit Setup



#SETUPE1

Enter Setup



@C11MAX

Set the Maximum Length (Default: 48)



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



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.

### 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



#SETUPE0

Exit Setup



#SETUPE1  
Enter Setup



@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)**

### Transmit Check Character



@C11TCK0

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



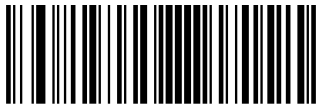
@C11TCK1

**Transmit Code 11 Check Character**



#SETUPE0

Exit Setup



#SETUPE1

Enter Setup

---



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.

### Set ISBN Format



@ISBT101

\*\* ISBN-10



@ISBT100

ISBN-13



#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

## 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.

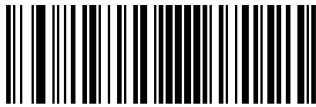
## Set Length Range for Industrial 25

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.



#SETUPE0

Exit Setup



#SETUPE1

Enter Setup

---



@L25MIN

Set the Minimum Length (Default: 6)



@L25MAX

Set the Maximum Length (Default: 48)



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

**E**  
*xample*

**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.

### 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



#SETUPE0

Exit Setup





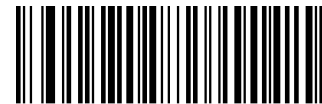
#SETUPE1  
Enter Setup

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.

## 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.



#SETUPE0

Exit Setup



#SETUPE1  
Enter Setup



@S25MIN

**Set the Minimum Length (Default: 6)**



@S25MAX

**Set the Maximum Length (Default: 48)**



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



**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.

### 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.



#SETUPE0

Exit Setup



#SETUPE1

### Enter Setup

---

**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.

## 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.



#SETUPE0

Exit Setup



#SETUPE1

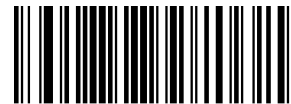
Enter Setup

---



@PLYMIN

Set the Minimum Length (Default: 4)



@PLYMAX

Set the Maximum Length (Default: 48)



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



**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.

### 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



#SETUPE0

Exit Setup



#SETUPE1  
Enter Setup

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



@MSIDF

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.

## 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.



#SETUPE0

Exit Setup





#SETUPE1  
Enter Setup



@MSIMIN

**Set the Minimum Length (Default: 4)**



@MSIMAX

**Set the Maximum Length (Default: 48)**



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



**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.

### 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.



#SETUPE0

Exit Setup



#SETUPE1

Enter Setup

---



@MSICLK0

Disable



@MSICLK1

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



@MSICLK2

**Two Check Characters, MOD10/MOD10**



@MSICLK3

**Two Check Characters, MOD10/MOD11**

### 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.

## 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



#SETUPE0

Exit Setup



#SETUPE1

Enter Setup

---

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



@AIMMAX

**Set the Maximum Length (Default: 48)**



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

**E**  
*sample*

**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

## Chapter 7 Data Formatter

### Introduction

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

Normally, when you scan a barcode, it gets outputted automatically; however, when you create a format, you must use a "send" command (see the "Send Commands" section in this chapter) within the format programming to output data. Multiple data formats can be programmed into the scanner. The maximum size of all data formats created is 2048 characters. By default, the data formatter is disabled. Enable it when required. If you have changed data format settings, and wish to clear all formats and return to the factory defaults, scan the **Default Data Format** code below.



**\*\*Default Data Format**

### Add a Data Format

Data format is used to edit barcode data. When you create a data format, you must select one of the four labels (Format\_0, Format\_1, Format\_2 and Format\_3) for your data format, specify the application scope of data format (such as barcode type and data length) and include formatter commands. Multiple data formats may be created using the same label. When scanned data does not match your data format requirements, you will hear the non-match error beep (if the non-match error beep is ON).

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

#### Programming with Barcodes

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

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

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



#SETUPE0  
Exit Setup



#SETUPE1

Enter Setup

---



@DFMADD

Add Data Format

**Step 3:** Select a label (Format\_0 or Format\_1 or Format\_2 or Format\_3).

Scan a numeric barcode **0** or **1** or **2** or **3** to label this data format Format\_0 or Format\_1 or Format\_2 or Format\_3.

**Step 4:** Select formatter command type.

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

**Step 5:** Set interface type

Scan **999** for any interface type.

**Step 6:** Set Symbology ID Number

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

**Step 7:** Set barcode data length

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

**Step 8:** Enter formatter command

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

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

## **E** *example*

Program a Format\_0 data format using formatter command type 6, Code 128 containing 10 characters applicable, send all characters followed by “A”.

1. Scan the **Enter Setup** barcode
2. Scan the **Add Data Format** barcode
3. Scan the **0** barcode
4. Scan the **6** barcode
5. Scan the **9** barcode three times
6. Scan the barcodes **002**



#SETUPE0

Exit Setup



#SETUPE1  
Enter Setup

7. Scan the barcodes **0010**
8. Scan the alphanumeric barcodes **F141**
9. Scan the **Save** barcode

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

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

## Programming with Serial Commands

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

The syntax consists of the following elements:

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

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

**Add Data Format Command:** “DFMADD” (HEX: **44 46 4D 41 44 44**), 6 characters.

**Data format label:** “0” (HEX: **30**) or “1” (HEX: **31**) or “2” (HEX: **32**) or “3” (HEX: **33**), 1 character. “0”, “1”, “2” and “3” represent Format\_0, Format\_1, Format\_2 and Format\_3 respectively.

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

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

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

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

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

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



#SETUPE0  
Exit Setup



#SETUPE1

## Enter Setup

---

**Example:** Program a Format\_0 data format using formatter command type 6, Code 128 containing 10 characters applicable, send all characters followed by "A".

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

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

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

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

## Enable/Disable Data Formatter

When Data Formatter is disabled, the barcode data is outputted to the host as read, including prefixes and suffixes.



@DFMENA0

**\*\* Disable Data Formatter**

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

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

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

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

**Enable Data Formatter, Not Required, Drop Prefix/Suffix:** Scanned data that meets your data format requirements



#SETUPE0

## Exit Setup





#SETUPE1  
Enter Setup

---

is modified accordingly and gets outputted without prefixes and suffixes (even if prefix and suffix are enabled). Barcode data that does not match your data format requirements is transmitted as read along with prefixes and suffixes (if prefix and suffix are enabled).



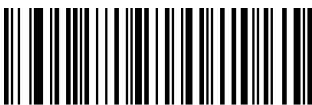
@DFMENA1

**Enable Data Formatter, Required, Keep Prefix/Suffix**



@DFMENA3

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



@DFMENA2

**Enable Data Formatter, Required, Drop Prefix/Suffix**



@DFMENA4

**Enable Data Formatter, Not Required, Drop Prefix/Suffix**



#SETUPE0

Exit Setup



#SETUPE1

Enter Setup

---

## Non-Match Error Beep

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



@DFMTON0

**Non-Match Error Beep Off**



@DFMTON1

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

## Data Format Selection

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

The default setting is Format\_0.



@DFMUSE0

**\*\* Format\_0**



@DFMUSE1

**Format\_1**



@DFMUSE2

**Format\_2**



@DFMUSE3

**Format\_3**



#SETUPE0

Exit Setup



#SETUPE1  
Enter Setup

## Change Data Format for a Single Scan

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

For example, you may have set your scanner to use the data format you saved as Format\_3. You can switch to Format\_1 for a single trigger pull by scanning the **Single Scan – Format\_1** barcode below. The next barcode that is scanned uses Format\_1, then reverts back to Format\_3.

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



@DFMSIN0  
**Single Scan – Format\_0**



@DFMSIN1  
**Single Scan – Format\_1**



@DFMSIN2  
**Single Scan – Format\_2**



@DFMSIN3  
**Single Scan – Format\_3**

## Clear Data Format

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

Delete one data format: Scan the **Clear One** barcode, a numeric barcode (0-3) and the **Save** barcode. For example, to delete Format\_2, you should scan the **Clear One** barcode, the **2** barcode and the **Save** barcode

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



#SETUPE0  
Exit Setup



#SETUPE1

Enter Setup

---



@DFMCAL

Clear All



@DFMCLR

Clear One

## Query Data Formats

You may scan the appropriate barcode below to get the information of data format(s) created by you or preset by manufacturer. For instance, if you have added Format\_0 as per the example in the “Add a Data Format” section in this chapter, scanning the **Query Current Data Formats** barcode, you will get the result: **Data Format0:069990020010F141;**.



@DFMQCU

Query Current Data Formats



@DFMQFA

Query Preset Data Formats



#SETUPE0

Exit Setup



#SETUPE1  
Enter Setup

## Chapter 8 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

### 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



#SETUPE0

Exit Setup



#SETUPE1

Enter Setup

---

## Prefix Sequence



@PRESEQ0

\*\* Code ID+ Custom +AIM ID



@PRESEQ1

Custom + Code ID + AIM ID

## 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”.



@CPRENA0

\*\* Disable Custom Prefix



@CPRENA1

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.



@CPRSET

Set Custom Prefix



#SETUPE0

Exit Setup



#SETUPE1  
Enter Setup

---

**E**  
*sample*

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

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



#SETUPE0  
Exit Setup



#SETUPE1

Enter Setup

---

## AIM ID Prefix

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



@AIDENA0

**\*\* Disable AIM ID Prefix**



@AIDENA1

**Enable AIM ID Prefix**



AIM ID is not user programmable.



#SETUPE0

Exit Setup





#SETUPE1  
Enter Setup

---

## Code ID Prefix

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



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



@CIDENA1  
**Enable Code ID Prefix**



#SETUPE0  
Exit Setup



#SETUPE1

Enter Setup

---

### 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.

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

**E**  
*Example*

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



@CID003

Modify GS1-128 (UCC/EAN-128) Code ID



@CID005

Modify EAN-13 Code ID



@CID006

Modify UPC-E Code ID



@CID007

Modify UPC-A Code ID



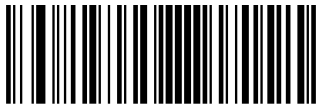
@CID008

Modify Interleaved 2 of 5 Code ID



#SETUPE0

Exit Setup



#SETUPE1

Enter Setup

---



@CID010

Modify ITF-6 Code ID



@CID128

Modify Deutsche 12 Code ID



@CID013

Modify Code 39 Code ID



@CID017

Modify Code 93 Code ID



@CID009

Modify ITF-14 Code ID



@CID129

Modify Deutsche 14 Code ID



@CID011

Modify Matrix 2 of 5 Code ID



@CID015

Modify Codabar Code ID



#SETUPE0

Exit Setup



#SETUPE1  
Enter Setup

---



@CID020

**Modify AIM 128 Code ID**



@CID024

**Modify ISBN Code ID**



@CID023

**Modify ISSN Code ID**



@CID026

**Modify Standard 25 Code ID**



@CID025

**Modify Industrial 25 Code ID**



@CID028

**Modify Code 11 Code ID**



@CID027

**Modify Plessey Code ID**



@CID029

**Modify MSI Plessey Code ID**



@CID031

**Modify GS1 Databar (RSS) 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**  
*Example*

**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**

## 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.



@TSUENA0

**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.



#SETUPE0

Exit Setup





#SETUPE1  
Enter Setup



@TSUSET

**Set Terminating Character Suffix**



@TSUSET0D

**\*\* Set Terminating Character to CR (0x0D)**



@TSUSET0D0A

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

**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 9 Batch Programming

### Introduction

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

Listed below are batch programming rules:

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

Example: Create a batch barcode for **Normal Illumination, Sense Mode, Decode Session Timeout = 2s, Disable Interleaved 2 of 5:**

1. Input the commands:

```
@ILLSCN1;SCNMOD2;ORTSET2000;I25ENA0;
```

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

### 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.



#SETUPE0

Exit Setup



#SETUPE1  
Enter Setup

---

## Create a Batch Barcode

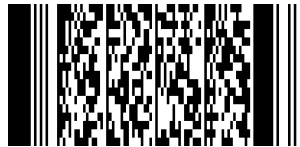
Batch barcodes can be produced in the format of PDF417, QR Code or Data Matrix.

Example: Create a batch barcode for **Normal Illumination, Sense Mode, Decode Session Timeout = 2s, Disable Interleaved 2 of 5:**

1. Input the following commands:

```
@ILLSCN1;SCNMOD2;ORTSET2000;I25ENA0;
```

2. Generate a PDF417 batch barcode.



## Use Batch Barcode

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



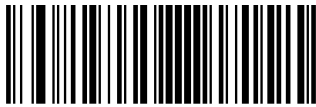
@SETUPE1  
Enter Setup



@BATCHE  
Enable Batch Barcode



#SETUPE0  
Exit Setup



#SETUPE1

Enter Setup

---



Batch Barcode



@SETUPE0

Exit Setup



#SETUPE0

Exit Setup



#SETUPE1  
Enter Setup

## Appendix

### Digit Barcodes

0~9



@DIGIT0  
0



@DIGIT2  
2



@DIGIT4  
4



@DIGIT1  
1



@DIGIT3  
3



@DIGIT5  
5



#SETUPE0  
Exit Setup



#SETUPE1

Enter Setup

---



@DIGIT6

6



@DIGIT7

7



@DIGIT8

8



@DIGIT9

9

A~F



@DIGITA

A



@DIGITB

B



@DIGITC

C



@DIGITD



#SETUPE0

Exit Setup



#SETUPE1  
Enter Setup

---

D



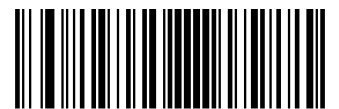
@DIGITE  
E



@DIGITF  
F



@DIGIVB  
'



#SETUPE0  
Exit Setup



#SETUPE1

Enter Setup

---

## 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.



@DIGSAV

Save



@DIGCAN

Cancel



@DIGDEL

Delete the Last Digit



@DIGDAL

Delete All Digits



#SETUPE0

Exit Setup





#SETUPE1  
Enter Setup

## Factory Defaults Table

Parameter	Factory Default	Remark
<b>System Settings</b>		
Barcode Programming	Disabled (Exit Setup)	
Programming Barcode Data	Do not transmit	
Illumination	On	
Power On Beep	On	
Good Read Beep	On	
Good Read Beep Duration	Medium (80ms)	
Good Read Beep Frequency	2620Hz	
Good Read Beep Volume	Loud	
Good Read Vibration	Off	
Good Read Vibration Duration	300ms	
Scan Mode	Level Mode	
Decode Session Timeout	3,000ms.	1-3,600,000ms
Image Stabilization Timeout (Sense Mode)	200ms	0-3,000ms
Reread Timeout	Disabled	
	1500ms	1-3,600,000ms
Reset Reread Timeout	Off	
Good Read Delay	Off	
	500ms	
Surround GS1 AI's with Parentheses	Off	
Transmit GS1 Application Identifier (GS1 AIs)	Transmit	
GS1-128(UCC/EAN-128)	Transmit GS1 Application Identifier (GS1 AIs)	
GS1 Databar(RSS)	Transmit GS1 Application Identifier (GS1 AIs)	
Transmit GS1 Check Character	Transmit	
GS1-128(UCC/EAN-128)	Transmit GS1 Check Character	
GS1 Databar(RSS)	Transmit GS1 Check Character	
Sensitivity	Medium Sensitivity	
Trigger Commands	Disabled	
Read Barcode	On	
Bad Read Message	Off	
	NG	
Enable/Disable Buttons	Enable	



#SETUPE0  
Exit Setup



#SETUPE1

Enter Setup

Default Interface	Bluetooth HID	
<b>USB Interface</b>		
USB Country Keyboard	US keyboard	USB HID Keyboard
Beep on Unknown Character	Off	USB HID Keyboard
Emulate ALT+Keypad	Off	USB HID Keyboard
Code Page	Code Page 1252 (West European Latin)	USB HID Keyboard
Unicode Encoding	Off	USB HID Keyboard
Emulate Keypad with Leading Zero	On	USB HID Keyboard
Function Key Mapping	Disable	USB HID Keyboard
Inter-Keystroke Delay	No Delay	USB HID Keyboard
Caps Lock	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
<b>Wireless Communication</b>		
Batch Mode	Off	
Prevent Same Barcode Storage	Off	
Batch Mode Transmit Delay	Off	
Query/Clear Stored Data in Flash	Off	
End of Transmission Message for Batch Mode	Off	
Scanner Time	Setting scanner time	
Time Stamp	Off	
Time Stamp Format	Format 1 (YYYY/MM/DD,HH:MM:SS)	
Auto Power-off	30 minutes	
<b>Symbologies</b>		
<b>Code 128</b>		
Code 128	Enabled	
Maximum Length	48	
Minimum Length	1	
<b>EAN-8</b>		
EAN-8	Enabled	



#SETUPE0

Exit Setup



#SETUPE1  
Enter Setup

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	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	Do Not Require Add-On Code	
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	
<b>UPC-E</b>		
<b>UPC-E</b>	Enabled	
UPC-E0	Enabled	
UPC-E1	Disable	
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	Disabled	
<b>UPC-A</b>		
UPC-A	Enabled	



#SETUPE0  
Exit Setup



#SETUPE1

## Enter Setup

Check Character	Transmit	
2-Digit Add-On Code	Disabled	
5-Digit Add-On Code	Disabled	
Add-On Code Required	Not Required	
Transmit Preamble Character	Do not transmit	
<b>Interleaved 2 of 5</b>		
Interleaved 2 of 5	Enabled	
Maximum Length	80	
Minimum Length	6	
Check Character Verification	Disabled	
<b>ITF-14</b>		
ITF-14	Disabled	
<b>ITF-6</b>		
ITF-6	Disabled	
<b>Deutsche 14</b>		
Deutsche 14	Disabled	
<b>Deutsche 12</b>		
Deutsche 12	Disabled	
<b>Matrix 2 of 5</b>		
Matrix 2 of 5	Enabled	
Maximum Length	80	
Minimum Length	4	No less than 4
Check Character Verification	Disable	
<b>Code 39</b>		
Code 39	Enabled	
Maximum Length	48	
Minimum Length	1	
Check Character Verification	Disabled	
Start/Stop Character	Do not transmit	
Code 39 Full ASCII	Disabled	
Code 32 Pharmaceutical (PARAF)	Disabled	
Code 32 Prefix	Disabled	
Code 32 Start/Stop Character	Do not transmit	
Code 32 Check Character	Do not transmit	
<b>Codabar</b>		
Codabar	Enabled	



#SETUPE0

## Exit Setup



#SETUPE1  
Enter Setup

Maximum Length	60	
Minimum Length	2	
Check Character Verification	Disabled	
Start/Stop Character	Do not transmit	
	ABCD/ABCD	All capital
<b>Code 93</b>		
Code 93	Disabled	
Maximum Length	48	
Minimum Length	1	
Check Character Verification	Do Not Transmit Check Character After Verification	
<b>UCC/EAN-128</b>		
UCC/EAN-128	Enabled	
Maximum Length	48	
Minimum Length	1	
<b>GS1 Databar</b>		
GS1 Databar	Enabled	
Application Identifier "01"	Transmit	
<b>Code 11</b>		
Code 11	Disabled	
Maximum Length	48	
Minimum Length	4	No less than 4
Check Character Verification	One Check Character, MOD11	
Check Character	Transmit Check Character	
<b>ISBN</b>		
ISBN	Enabled	
Set ISBN Format	ISBN-10	
<b>ISSN</b>		
ISSN	Disabled	
<b>Industrial 25</b>		
Industrial 25	Enabled	
Maximum Length	48	
Minimum Length	6	No less than 4
Check Character Verification	Disabled	
<b>Standard 25</b>		
Standard 25	Enabled	
Maximum Length	48	



#SETUPE0  
Exit Setup



#SETUPE1

### Enter Setup

Minimum Length	6	No less than 4
Check Character Verification	Disabled	
<b>Plessey</b>		
Plessey	Disabled	
Maximum Length	48	
Minimum Length	4	No less than 4
Check Character Verification	Disabled	
<b>MSI-Plessey</b>		
MSI-Plessey	Disabled	
Maximum Length	48	
Minimum Length	4	No less than 4
Check Character Verification	One Check Character, MOD10	
Check Character	Transmit	
<b>AIM 128</b>		
AIM 128	Disabled	
Maximum Length	48	
Minimum Length	1	
<b>Data Formatter</b>		
Data Formatter	Disabled	
Data Format Selection	Format_0	
Non-Match Error Beep	On	
<b>Prefix &amp; Suffix</b>		
All Prefixes/Suffixes	Disabled	
Prefix Sequence	Code ID+ Custom +AIM ID	
Custom Prefix	Disabled	
AIM ID Prefix	Disabled	
Code ID Prefix	Disabled	
Custom Suffix	Disabled	
Data Packing	Disable Data Packing	
Terminating Character Suffix	Enable <CR>(0x0D)	



#SETUPE0

### Exit Setup



#SETUPE1  
Enter Setup

### AIM ID Table

Symbology	AIM ID	Possible AIM ID Modifiers (m)
Code128	]C0	
GS1-128 (UCC/EAN-128)	]C1	
EAN-8	]E4	
EAN-8 with Addon	]E3	
EAN-13	]E0	
EAN-13 with Addon	]E3	
UPC-E	]E0	
UPC-E with Addon	]E3	
UPC-A	]E0	
UPC-A with Addon	]E3	
Interleaved 2 of 5	]Im	0, 1, 3
ITF-14	]Im	1, 3
ITF-6	]Im	1, 3
Deutsche 14 Deutsche 12	]X0	
Matrix 2 of 5	]X0	
Code 39	]Am	0, 1, 3, 4, 5, 7
Codabar	]Fm	0, 2, 4
Code 93	]G0	
AIM 128	]C2	
ISSN	]X0	
ISBN	]X0	
Industrial 25	]S0	
Standard 25	]R0	
Plessey	]P0	
Code 11	]Hm	0, 1, 3
MSI Plessey	]Mm	0, 1
GS1 Databar (RSS)	]e0	

**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.



#SETUPE0  
Exit Setup



#SETUPE1

Enter Setup

---

### 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
Deutsche 14	w
Deutsche 12	l
Matrix 2 of 5	v
Code 39	b
Codabar	a
Code 93	i
AIM 128	X
ISSN	g
ISBN	B
Industrial 25	l
Standard 25	f
Plessey	n
Code 11	H
MSI Plessey	m
GS1 Databar (RSS)	R



#SETUPE0

Exit Setup





#SETUPE1  
Enter Setup

## 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
Deutsche 14	128
Deutsche 12	129
Matrix 2 of 5	011
Code 39	013
Codabar	015
Code 93	017
AIM 128	020
ISSN	023
ISBN	024
Industrial25	025
Standard25	026
Plessey	027
Code11	028
MSI-Plessey	029
GS1 Databar (RSS)	031



#SETUPE0  
Exit Setup



#SETUPE1

Enter Setup

### ASCII Table

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



#SETUPE0

Exit Setup



#SETUPE1  
Enter Setup

Hex	Dec	Char
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	( (Left/ Opening Parenthesis)
29	41	) (Right/ Closing Parenthesis)
2a	42	* (Asterisk)
2b	43	+ (Plus)
2c	44	, (Comma)
2d	45	- (Minus/ Dash)
2e	46	. (Dot)
2f	47	/ (Forward Slash)
30	48	0
31	49	1
32	50	2
33	51	3
34	52	4
35	53	5
36	54	6
37	55	7
38	56	8
39	57	9
3a	58	: (Colon)
3b	59	; (Semi-colon)
3c	60	< (Less Than)
3d	61	= (Equal Sign)
3e	62	> (Greater Than)



#SETUPE0  
Exit Setup



#SETUPE1

Enter Setup

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



#SETUPE0

Exit Setup



#SETUPE1  
Enter Setup

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)



#SETUPE0  
Exit Setup



#SETUPE1

Enter Setup

### 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



#SETUPE0

Exit Setup



# Newland

SCANNING MADE SIMPLE

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Newland EMEA HQ  
+31 (0) 345 87 00 33  
[info@newland-id.com](mailto:info@newland-id.com)  
[newland-id.com](http://newland-id.com)

Need more info? Contact us or one of  
our partners at [newland-id.com/partners](http://newland-id.com/partners)